

Thank You, MIT



Cambridge Mayor Alfred E. Vellucci, right, presented a City Council resolution acknowledging MIT's contributions toward easing the Cambridge housing shortage, to Walter L. Milne, assistant to the chairman of the MIT Corporation and special assistant to the MIT president for urban affairs, at a testimonial to MIT given by tenants of the Miller's River apartment house in East Cambridge Friday, March 26. The resolution read in part: "This City Council wishes to join with the Tenant Council of the Miller River Apartments to record for all time, their admiration to MIT for their response to a critical housing shortage which resulted in the construction of 684 units of housing at Miller's River, the Daniel F. Burns Apartments in North Cambridge and the Lyndon B. Johnson Apartments on Erie Street, an effort by a private institution which is unparalleled anywhere in New England and matched by few in the entire United States." —Photo by Ed Pacheco

General Enrollment Open For MIT Health Plan

Open enrollment in the MIT Health Plan will be available to all Institute, Lincoln Laboratory and Draper Laboratory personnel from April 1-May 28, 1976.

The MIT Health Plan is a prepaid comprehensive health care program offered by the MIT Medical Department in cooperation with Blue Cross and Blue Shield as an alternative to Master Medical insurance. Through the Health Plan, members obtain medical care services coordinated by a physician of their choice on the staff of the MIT Medical Department.

For a fixed monthly payment, members are entitled to treatment for illness or injury, periodic examinations, diagnostic tests, immunizations and injections and in-hospital services when needed. Most services are given at the MIT Medical Department.

The current cost for membership in the Plan is \$1.50 more for individual coverage and \$4 more for family coverage than Master Medical coverage.

This general enrollment period provides an opportunity for all present employees to join the Health Plan, whereas new employees are eligible upon employment. Membership includes the spouse and children (if any) of the employee.

The Health Plan recently enrolled 75 employees who had been on the waiting list, bringing total membership to approximately 4,200. A new waiting list will be started June 1, 1976, following the general enrollment period.

Those interested in joining may visit or call the Health Plan office (first floor, Medical Department, x3-1322) for applications and further information.

Faster and Drier

Traditional Tech Dinghies to Get New Look this Spring

The third generation of MIT Tech Dinghies—the familiar 12½-foot racing boats that have graced the Charles River for 40 years—will be delivered to the MIT sailing pavilion in late May, the Alumni Fund Office has announced.

The 26 dinghies and four additional Larks represent a major portion of the ongoing MIT Sailing Fund Program for a new fleet and pavilion. Gifts and pledges to fund the effort now exceed \$220,000, according to George Warren Smith, '26, chairman

of the fundraising committee.

He said that because of inflated labor and construction costs, the campaign would be extended to the end of this fiscal year, in an attempt to raise an additional \$50,000.

The sailboats, which are now undergoing some design changes, were constructed by Olaf Harken of Vanguard Sailboat Co., Peewaukee, Wis., builders of the racing boats to be used in the 1976 Summer Olympics.

Original designer of the Tech

Cygnus X-1, astronomers' most popular candidate for a "black hole," may be nothing but an obese neutron star, according to a new theory advanced by two physicists at MIT.

Professor Kenneth Brecher and graduate student George J. Caporaso report that it is physically possible for a neutron star—a collapsed star about 10 miles across—to be as much as five times more massive than the sun.

Cygnus X-1, an x-ray source in the constellation Cygnus, is generally thought to be between three and eight times more massive than the sun.

Since previous calculations for the maximum allowable mass for a neutron star ranged between 1.7 and three solar masses, some physicists had argued that Cygnus X-1 must be a black hole: matter with a gravitational field so strong that nothing can escape it.

The MIT work, reported in a recent issue of *Nature*, and funded in part by the National Science Foundation, weakens that argument.

"For all we know, Cygnus X-1 is a neutron star," Professor Brecher said.

If it is possible to have such a massive neutron star, why didn't physicists realize it sooner? The answer, Professor Brecher said, is that previous calculations were based on the

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Washington Conference to Discuss Technology, Economic Development

Has the United States lost the initiative to other nations in developing new technology?

If not, how does this country more fully realize its potential for innovative technology and thereby retain its political and economic leadership in the last quarter of the 20th century?

These questions form the central issue to be posed at a major symposium to be held April 19 and 20 in Washington, D.C. under the sponsorship of MIT and the MIT Club of Washington.

The symposium will bring together prominent researchers and policy-makers from MIT, government, other universities and industry who are knowledgeable about technological and industrial developments and their implications for government policies and programs.

Under the heading, "Technological Innovation and Economic Development: Has the US Lost the Initiative?", they will meet in two day-

long sessions in the Shoreham-American Hotel, in Washington. The conference is supported in part by the Energy Research and Development Administration.

Conference speakers will include

Marshall B. Dalton Dies, Senior Corporation Member

Marshall B. Dalton, one of MIT's most active and respected alumni leaders who with 39 years as a member of the MIT Corporation was the senior member of the Institute's governing body in terms of continuous service, died Monday (March 29) at his winter home in Winter Park, Fla. He was 83.

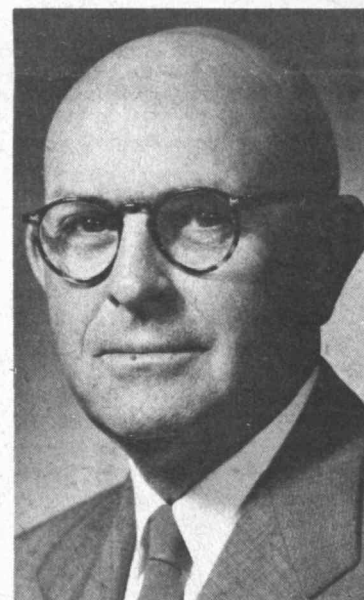
A memorial service for Mr. Dalton will be held at the Union Congregational Church, Peterborough, N.H., at 2:30pm Sunday (April 4). Mr. Dalton's summer home was in Peterborough.

Mr. Dalton, a 1915 graduate of MIT in civil engineering, was the honorary chairman of the board of the Arkwright-Boston Manufacturers Mutual Insurance Co. with headquarters in Waltham, Mass., and was recognized as an early pioneer and national leader in the application of engineering principles to casualty insurance.

Howard W. Johnson, chairman of the MIT Corporation, in a letter to the Corporation informing them of

Elliot Richardson, Secretary of Commerce, and William P. Clements, Jr., Deputy Secretary of Defense. Secretary Richardson will be the luncheon speaker at noon Mon-

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Mr. Dalton's death, described Mr. Dalton as a devoted alumnus whose total involvement in the committees

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Letter Contents Repeated

A letter from President Jerome B. Wiesner and Chancellor Paul E. Gray concerning alleged reports of surveillance of campus activists was reproduced in the March 24 issue of *Tech Talk*.

Because many people were away when the letter appeared, its contents are repeated below.

"To Members of the MIT Community:

"We have asked Dr. Louis Menand, III to inquire into alleged reports that a student taking photographs at a recent SACC Forum on Taiwan was performing some surveillance function for the government of the Republic of China on Taiwan.

"Stimulated by these events, we wish to reaffirm to members of the

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Dinghy was Professor George Owen '94, whose specifications for MIT's first fleet of wooden dinghies were modified at Herreshoff Boatyards of Bristol, R.I.—founded by Nathaniel Herreshoff of the Class of 1871. A second generation of fiberglass boats was launched in 1953 and has served both men's and women's sailing teams for the past 23 years.

MIT's new boats, which are considerably drier and faster than previous models, are also a modification of the prototype—this time by Halsey

C. Herreshoff, '60, grandson of Nathaniel.

MIT Sailing Master Gerald M. Reed '34 and Harold Brown, Jr., associate director of the program, spoke about design differences between the new sailboats and their predecessors after a set of recent tests off the icy waters at Cottage Park Yacht Club in Winthrop, Mass.

"They are 75 pounds lighter and ride much higher in the water," said Brown. "A major advantage is the counterweight lifting facility which

will allow us to store them upright in the pavilion. Previous boats have been damaged by constant turning over for storage. Another difference is the new boat's higher bow and sides, which make for drier sailing when sailing to windward."

MIT students Paul Erb, a senior in ocean engineering from Corpus Christi, Tex., and Barbara Belt, a junior in chemical engineering from Severna Park, Md., captains respectively of the men's and women's sail-

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Washington Alumni Conference

(Continued from page 1)
day, April 19, and Secretary Clemens will speak at the symposium luncheon at noon, Tuesday, April 20. Participating in the symposium will be Dr. Jerome B. Wiesner, president of MIT; Dr. Paul A. Samuelson, Institute Professor at MIT and 1970 recipient of the Nobel Memorial Prize; Dr. J. Herbert Hollomon, director of the MIT Center for Policy Alternatives who served as Assistant Secretary of Commerce for Science and Technology under President Kennedy; Dr. Charles P. Kindleberger, Ford Professor of Economics at MIT and an authority on international money matters; and Dr. Ithiel de Sola Pool, an authority in political communications and behavior who is the Arthur and Ruth Sloan Professor of Political Science at MIT.

The issues to be confronted at the symposium, according to the conference organizers, arise in the context of recent claims that the United States has lagged in the development and application of new civilian technology and that its once unchallenged scientific and technological superiority may be deteriorating. Technological innovation in industry appears to be receiving less financial support—both public and private, they said, and in fact may be on the decline.

The United States' ability to maintain a position of international leadership, however, is closely tied to the country's success in sustaining the development of innovative technologies, they said. The symposium is being convened, they said, because the magnitude of the issues creates a pressing need for examination of the policies and policy mechanisms that might stimulate the technological innovation and industrial productivity required to help meet international competition and stimulate economic growth.

The symposium will deal with US economic development, use of new technology in industry, government regulation affecting industry, national policies and programs and their impact on specific industries, and a discussion of policies of the US and Japan.

Dr. Wiesner will give the keynote address at the conference opening at 9am Monday, April 19.

Two introductory speakers—Dr. Kindleberger and Dr. John W. Kendrick, professor of economics, George Washington University—will discuss technological change and American economic development, highlighting current trends and problems in productivity and growth.

Technological innovation and the entrance of technology into the industrial firm will be discussed by Dr. James M. Utterback, research associate in the MIT Center for Policy Alternatives and visiting associate professor, Harvard University.

Dr. Michael J. Piore, MIT professor of economics, will speak on constraints and factors influencing technological innovation.

Dr. Christopher T. Hill, associate professor of chemical engineering, Washington University, St. Louis, will discuss effects of government health and safety regulations aimed at industrial action or goods.

The impact of governmental policy and programs on technological change and innovation in industry will be discussed by a panel, including Dr. Jordan J. Baruch, professor of business administration and professor of engineering, Dartmouth College; Dr. Samuelson; and Edward O. Vetter, former executive vice president, Texas Instruments.

Issues of the symposium will be discussed also in the context of specific American industries.

The nutrition and food industry panel will include Dr. John Schnittker, president, Schnittker Associates, and Dr. Steven R. Tannenbaum, professor of nutrition and food science, MIT.

Members of the energy industry panel will be Dr. Robert S. Pindyck, associate professor of management, MIT; Dr. Martin B. Zimmerman, lecturer in the Sloan School of Management, MIT; and Dr. Ted R.I. Greenwood, MIT assistant professor of political science.

On the information systems panel will be Dr. Michael L. Dertouzos, director of MIT's internationally known Laboratory for Computer Science (formerly Project MAC); and Dr. Stuart E. Madnick, assistant professor of management science at MIT.

The communications panel will include Dr. Ithiel de Sola Pool and Dr. Paul Polishuk, president, Horizon House International.

Policies affecting technological change in two free-market countries will be examined by Dr. T. Dixon Long, associate professor of political science, Case Western Reserve University, who will discuss Japan, and Dr. Robert G. Gilpin, Jr., professor of politics and international affairs,

Princeton University, who will deal with the US.

Conference discussions will be summarized by Dr. J. Herbert Hollomon.

Dr. Kenneth Gordon, of the Department of Commerce Office of Telecommunications, is general chairman of the symposium. Dr. Polishuk is chairman of the program committee.

In conjunction with the symposium, the 100-member MIT Symphony Orchestra under the direction of composer-conductor David Epstein will present its first concert in the nation's capitol at 8:30pm, Monday, April 19, in the Kennedy Center for the Performing Arts.

Symphony Orchestra to Play Concert at Kennedy Center

The MIT Symphony Orchestra will present a concert in the Kennedy Center for the Performing Arts in Washington, DC, during its annual spring tour in April.

It will be the first concert in the nation's capitol for the orchestra, which in recent years has traveled widely throughout the US and Canada.

The 100-member orchestra, under the direction of conductor-composer David Epstein, will perform in the Kennedy Center at 8:30pm Monday, April 19. The concert is sponsored by the Council on the Arts at MIT and the MIT Club of Washington.

The concert will be given in conjunction with a major two-day symposium in Washington sponsored by MIT and the MIT Club of Washington. The symposium on April 19-20 in the Shoreham-Americana Hotel will focus on the topic, "Technological Innovation and Economic Development: Has the US Lost the Initiative?"

The Program for the Kennedy Center performance will include Brahms' Academic Festival Overture, the Fantasia on a Theme by Thomas Tallis for Double Stringed Orchestra, by Vaughan Williams, Aaron Copland's Dance Symphony, and *Der Schwanendreher*, by Paul Hindemith. Marcus Thompson, violist and member of the MIT music faculty, will be soloist in the Hindemith work.

In recent years, the MIT Symphony Orchestra has played to large audiences in major metropolitan concert halls across America. Its spring tours have taken the orchestra twice to Carnegie Hall, through several eastern states, to Montreal, and to colleges and universities elsewhere in Canada. In 1973 the orchestra made its first national tour, performing for audiences totaling nearly 10,000 persons in the principal concert halls of Philadelphia, Chicago, Dallas, San Francisco, and Los Angeles.

The orchestra has received increasing attention and acclaim for the high level of its performances.

Of one concert, the *New York Times* said: "Shades of Leonardo! There is a new Renaissance in the making. The Massachusetts Institute of Technology Symphony Orchestra played at Carnegie Hall . . . and it was hard to tell the engineers, physicists, chemists or whatever from the musicians, everyone played so well. It was a concert that would have been a credit to a professional orchestra."

During the national tour, Marilyn Tucker of the *San Francisco Chronicle* found that "the orchestra is on a par with the best of the country's metropolitan orchestras."

Following the tour, a concert at MIT was videotaped by WGBH-TV, Channel 2, and given national distribution over stations of the Public Broadcasting System. The television broadcast brought a virtual crescendo of acclaim for the orchestra and with it several invitations to present concerts.

The invitations came from the Eastern Division of the Music Teachers National Association, for which the orchestra played a special concert, and from the State University of New York at Buffalo, from McMaster University, Hamilton, Ont.,

and from the University of Western Ontario, London, Ont., which were visited by the orchestra during its 1974 spring tour.

Of the concert in Buffalo's Kleinhans Music Hall, Thomas Putnam wrote in the *Buffalo Courier Express*: "The orchestra passed the real test of music commitment in its performance of Mahler's Symphony No. 1, which Epstein shaped beautifully. The music sounded with shining warmth, lilt, and power which belied the amateur status of the source."

The orchestra will also give concerts this year at Wellesley College on April 8, at Phillips-Andover Academy on April 11, and at Dover-Sherborn High School on April 13.

Violist Thompson Wins Accolade

(Violist Marcus Thompson, who will be soloist with the MIT Symphony Orchestra in its April 19 concert in the Kennedy Center in Washington, DC, performed with the Symphony of the New World in a concert Feb. 15 in New York City. Following is an excerpt of a review of that concert by Irving Kolodin in the April 13, 1976, issue of *Saturday Review*.)

"Solo players of the viola are rarely able to claim a place on a symphonic program (save by being members of the orchestra), and black solo violists all but never. Marcus Thompson, Juilliard-trained, and now a professor of humanities at MIT, is one who deserved the opportunity that came to him—to perform in Walter Piston's concerto for viola and orchestra in a Carnegie Hall concert by the Symphony of the New World. Thompson has assurance, temperament, and major mastery of his instrument . . ."

Music Librarians To Meet Here

The semi-annual meeting of the New England chapter of the Music Library Association will be held at MIT Saturday, April 3, in the Bush Room.

About 50 MLA members are expected to attend the all-day meeting which was last held at MIT in 1967.

Mr. Jay K. Lucker, MIT director of libraries, will begin the day's program by welcoming MLA members to MIT. The rest of Saturday morning will be devoted to a workshop on microforms and their use in music. The three workshop speakers and their topics are: Lawrence Mowers of Harvard University, "Current State of Music Microforms;" Robert Evensen of Brandeis University, "Problems in Acquisition of Foreign Music Microfilms;" and Francis Gramenz of Boston University, "Problems with Establishing a Union List of Music Microforms."

After a luncheon break, the meeting will resume with a tour of the MIT Music Library. A business meeting will also be held.

Linda Solow, MIT music librarian, is on the board of directors of MLA.

INSTITUTE NOTICES

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.

Summer UROP: First Call

UROP will have a summer program again this year. Eligibility will be limited to undergraduates who are continuing ongoing UROP projects. Support for research, personal expenses or for overhead waiver will be awarded according to the usual UROP proposal procedures and negotiations. Such proposals are now welcome, and should be submitted through the UROP Coordinator of your faculty supervisor's department. Award decisions will not begin until late in April. Proposals will receive priority according to the date of receipt in the UROP office and according to tangible evidence of faculty enthusiasm for the proposed activity. If you apply for UROP's own funds for all or part of your summer wages, remember that payment will be limited to a maximum amount of \$1500 total for your UROP summer. New UROP wage rate: \$3/hr. Probably you should reread the How to Participate section of the UROP Directory.

Chemical Engineering Department

"Cold Power"

An undergraduate is invited to explore the feasibility of using Liquid Air as an automotive fuel to serve as the working fluid in an open Rankine cycle engine that draws all its heat from the atmosphere. Of particular interest is the design of heat exchangers with permanent frost-covered surfaces. Preliminary studies suggest that liquid air is less costly than electric batteries for automobile propulsion. Contact Professor M. Sussman, Rm 66-569, x3-6517.

Dept. of Materials Science and Engineering

Students interested in the physics of games, specifically the interaction of human anatomy and mechanical objects, are encouraged to investigate the ideal technique of putting in golf. Some funds are available for construction or modification of putters. Contact Professor Thomas B. King, Rm 8-106, x3-3307.

Mechanical Engineering

Analysis and Design of a Rowing Ergometer

The US Olympic Committee would like to improve upon a design of a device used to measure the horsepower output of a rower. This has created an opportunity for an undergraduate to modify an existing design, analyze this new design and construct a prototype to improve upon devices now used to select oarspeople. Contact Mr. Jack Frailey, Rm 5-119, x3-4974 or the UROP office. Pay available.

Peter Bent Brigham Hospital Boston, Ma.

Research in this laboratory centers on the physical-chemistry and biophysics of important lipids, particularly understanding the structure and function of lipids of the alimentary tract in both health and disease. Specific interest is in the molecular properties of normal bile, the mechanism of bile formation and bile secretion, and the derangements that occur in gallstones. Projects include: 1) The use of physical techniques to study the micellar characteristics of bile salts and other alimentary tract membranes. 2) The use of surface chemical techniques to characterize

CABLE TV SCHEDULE

April 1-7

Channel 8

Friday, April 2:

9:00am Decision Analysis #8—Dr. Myron Tribus

Monday, April 5:

9:00am Decision Analysis #8—Dr. Myron Tribus

8:00pm Electromagnetic Fields and Energy (6.013), Prof. H. Haus (live)

Tuesday, April 6:

8:00pm Electromagnetic fields and Energy (6.013), Prof. H. Haus (repeat)

Channel 10:

Thursday, April 1:

12:30pm-4:30pm MITV News

the interaction of lipids in bile, gut luminal content and membranes. 3) The phase equilibria of digestive tract lipids and the relation with fat maldigestion. Interested students should have a strong background in the physical sciences and interest in the application of physical techniques and physical-chemical rationale in solving biological problems at a molecular level.

Dial-A-Ride Bus System

A Mass. State Representative would like to work with a student in designing and evaluating a small dial-a-ride bus system. Currently the service operates some days a week as a many-to-many service and other days as an intertown express bus system. The object of the current project is to develop an improved proposal in order to seek a firmer funding support from the towns involved.

Cambridge Thermionics Cambridge, Ma.

Cambridge Thermionics is an electronics firm manufacturing electronic hardware, integrated circuits, and micro-processors. The firm would like an undergraduate to work with them on a mathematical model analysis of an infinite number of small magnets which are rigidly immobilized. Electronic applications for such an array of small magnets will also be studied. Pay available.

Research Consulting Associates

Research Consulting Associates is conducting research on loadings of overhead transmission lines. Among these loadings are the deadweight of the lines and conductors, the structure itself, ice, the transverse load of wind, and the unbalanced loads of unequal spans of ice and broken conductors. The project will involve construction of a scale model consisting of several designs. The model design is to be based between dead ends, and other factors. Pay or credit available for spring and summer terms.

Graduate Studies

Woodrow Wilson Research Grants for Doctoral Candidates in Women's Studies

The Woodrow Wilson National Fellowship Foundation is offering research grants to encourage original and significant research about women on such topics as the evolution of women's role in society and particularly contemporary America, women in history, the psychology of women, and women as seen in literature. Students in doctoral programs at graduate schools in the US in any field of study who have completed all pre-dissertation requirements are eligible. Winners will receive grants of \$500 to \$1,000 to be used for research connected with the dissertation. The deadline for the receipt of applications is April 5, 1976. For further information contact the Graduate School Office, Room 3-136.

Echoes

50 Years Ago

Camp Technology, near East Machias, Maine, was announced as the site of a new seismographic and geodetic station to be built in the coming summer.

The fourth annual Tech Circus opened on April Fool's Day with a circus complete with steam calliope, wild animals and clowns.

40 Years Ago

Ozzie Nelson and Harriet Hilliard were announced as the entertainers for the Spring IFC Dance.

In their first trials, two Tech dinghies capsized because of the gusty winds, but despite the mishap, all concerned were pleased with their performance.

25 Years Ago

Dr. Manson Benedict, specialist in nuclear engineering, was appointed Professor of Chemical Engineering.

Publication of the first two volumes of *The Letters of Theodore Roosevelt* marked the Institute's entry into the field of historical research. The project, a cooperative effort with Harvard and the Roosevelt Memorial Association, was headed by Professor Elting E. Morison of the Department of English and History.

Prepared by the Ethel I. Newell, MIT Historical Collections, x3-4444.

TECH TALK

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Emergency Control Project To be Supported by ERDA

MIT has received a three-year \$500,000 grant from the US Energy Research and Development Administration to improve emergency control techniques for the nation's electric power system.

The three faculty members directing the project say that improved techniques are needed to reduce the possibility of major power failures like the 1965 northeast blackout.

Professor Gerald Wilson, one of the three directors, said that the need is critical because of the electric power system's shrinking safety margin—the amount of extra electricity that existing generators could produce to meet increased demands.

"In the last six or seven years there has been a tremendous reduction in the number of generators being built," he said.

In addition, he said, the rising cost of oil and natural gas will probably increase the demand for electricity in the United States, as people switch from oil and gas to electricity. (Electricity can be produced by burning cheaper, relatively abundant coal.)

"If that happens, there will be a real crunch until new plants get built, and the safety margin will become dangerously small."

The work on control techniques will be conducted in the MIT Electric Power Systems Engineering Laboratory, under the joint direction of Dr. Fred C. Schweppe, professor of electrical engineering; Dr. Wilson, MIT's Philip Sporn Associate Professor of Energy Processing, and Dr. David N. Wormley, associate professor of mechanical engineering.

The award was granted by ERDA's Division of Electric Energy Systems, which is responsible for ensuring that technology will be available to satisfy the nation's future

needs for electrical power.

Projects supported by the division include research and development of higher capacity transmission lines (both overhead and underground); improved load management; improved controls for future systems, and demonstration and testing of newly developed devices and systems.

In their work on control techniques, the MIT professors will work with a miniature electric power system recently built at the laboratory, containing three generators and their control systems, and 400 miles of simulated transmission lines.

The system can be connected with the Cambridge power system so that engineers can study, in miniature, networks of generators and transmission lines similar to those that produce and distribute electricity throughout the United States.

Electric power companies now have control computers—perhaps one for every two or three states—that send signals to each plant, in order to direct the most economical production and transmission of electric power within its region.

The MIT researchers plan to design an expanded computer network that could prepare the electric power system for possible emergencies.

They envisage a system in which each plant uses a small information processor to report to an emergency control computer, telling the control computer how much additional electricity the plant could produce, and how fast. Other computers would tell the control computer how much additional power could be transmitted to different locations.

"The control computer would use this information to visualize the worst conditions that could occur," Professor Wilson said.

"Then it would modify control settings at each plant so that each plant could help out the most during an emergency."

The computer would also send advance instructions to the distribution system, which would reduce electrical supply to certain customers during an emergency—to keep a power shortage from developing into a widespread blackout.

Should an emergency occur, information from all of the power plants would be sent to the central control computer. It would then take over control of the power plants and transmission system, sending out instructions to the plants in order to minimize the magnitude of the crisis.

To simplify this whole process, the researchers will use modern control theory techniques.

"One can't have all the computers sending all possible information to the central control computer," Professor Wilson said. "You have to condense the information to that which is most important."

Working with the three professors will be staff researchers Dr. Stephen Umans and David Otten, and graduate students Glenn Y. Masada of Waipahu, Hawaii, Patrick B. Usoro of Ikot, Nigeria, and Clement B. Somuah of Kumasi, Ghana.

Scrambled Eggs and Discussion

Ellen King's Literary Lunchroom

By PATRICIA M. MARONI
Staff Writer

Few women in the early history of MIT managed to achieve a reputation for such business acumen and extraordinary friendship as Ellen A. King, an early manager of the MIT lunchroom.

At her death in 1949—at the age of 96—she counted among her many friends seven MIT presidents and alumni from every graduating class from 1890 through 1933.

For 18 years, this Hingham, Mass., native earned student and faculty acclaim for her famous scrambled eggs and discussions of Thackeray, Dickens and Ibsen. In 1941 she was officially honored with the rarely bestowed rank of honorary member of the MIT Alumni Association.

Next month the 26th annual Ellen King Prize for Freshman Writing will be awarded by the Department of Humanities to a first-year student of outstanding literary achievement. The Ellen King Prize was established by her family and friends as a memorial in 1951.

It is noteworthy that this year an original manuscript of Mrs. King, recording her early insight into modern cafeteria management, was located by MIT Historical Collections in material received from the Association of MIT Alumnae (AMITA).

The informally written document is a blend of apprehension about the duties of her job and admiration for the discipline of some of MIT's first science and technology students.

Mrs. King was 38 when she began her career in the basement lunchroom of the Rogers Building on MIT's old Boston campus. Using a long lunch table as her desk in the back corner of the room, she often worked up to 12 hours a day, attending to bookkeeping details and supply orders.

"With but an elementary knowledge of cooking and no understanding of business requirements or of public service I became part of the [lunchroom] experiment, being suddenly faced with the problem of earning money

to support my home . . ." she wrote. "There were few possibilities of public work for women but they were more available for one who had no training or experience.

"There was so much to learn. I was given the commission to buy kitchen utensils, dishes for the dining room, to find tradesmen for groceries, butter, milk, formulas

for making coffee and chocolate for many; how to order, how to wash dishes with skill and neatness, and other details."

In passages filled with culinary imagery and reflections on student customs of the day, Mrs. King sketched a lively picture of the evolution of modern dining services.

"[The practice of] calling dessert 'deadly' for dieting was unheard of for healthy young people, and 'counting calories' was in its infancy as far as the public was concerned. No one hesitated to eat a large amount of rich plum pudding with two kinds of sauce. There were big cups of coffee and baskets of apples . . ."

A typical MIT lunch in the early 1900s cost 20 cents.

In order to accommodate a student body of 1,011 and a teaching staff of 107, Mrs. King was required to prepare extensive daily sheets of all the various tasks in-

olved in her work, with their respective times of day. "We learned a surprising amount from that small practice," she wrote. "We learned 'What Time is' when a luncheon must be ready at 11:30. Students' schedule cards have been of great interest ever since."

In 1908, after the lunchroom had grown beyond Mrs. King's "London coffeehouse atmosphere," she accepted a position with MIT's Twentieth Century Club. During World War I, she was put in charge of the Naval Recreation Building and later took charge of libraries and reading rooms in the Walker Memorial building.

She retired from MIT in 1933, proud of having "made it" as a manager by way of the kitchen. Mrs. King's 23-page manuscript is on file in MIT Historical Collections.



FRIEND AND ADVISOR to MIT's early students, Ellen A. King supervised the Tech Lunchroom for 18 years. The annual undergraduate writing prize established in her honor 25 years ago will be awarded to a first-year student next month.

Charles to Give Williams Lectures

Dr. Richard J. Charles, a ceramist whose research has contributed to the understanding of ceramics and glasses, will give the Robert S. Williams Lectures at MIT on April 7 and 8 under sponsorship of the MIT Department of Materials Science and Engineering.

"The Problem of High Temperature Stress Rupture Prediction for Metals and Ceramics" is the topic of Dr. Charles's first lecture on Wednesday, April 7, 4pm in Room 9-150. On Thursday, April 8 at 4pm in Room 6-120, he will speak on "The Potential of Ceramics in High Temperature Rotating Machinery."

Dr. Charles received the ScD degree in metallurgy from MIT in 1954. Since 1968 he has been with General Electric Company where he is now manager of the Ceramics Branch, General Electric Corporate Research and Development Center, Schenectady, NY.

The Robert S. Williams Lectures were established in 1946 upon the retirement of Dr. Williams, the first head of the MIT Department of Metallurgy, the forerunner of today's Department of Materials Science and Engineering.

MIT Study Indicates Need For Greater Prison Capacity

Increasing the capacity of prisons is the key to reducing crime in Massachusetts, according to a study group at MIT's Sloan School of Management.

The group, whose activities are coordinated by former Boston mayor John F. Collins, a consulting professor of urban affairs at the Sloan School, based its conclusions on a computer simulation model of the state's criminal justice system.

Greater prison capacity will permit the average sentence served—which declined from about 20 months in 1955 to about 10 months in 1971—to increase to about 25 months, Mr. Collins told a meeting of the MIT Club of Boston Wednesday night (March 24). His speech was the first public discussion of the two-year-old study in which William A. Shaffer, a doctoral candidate at the Sloan School, is a major participant.

"An increase in sentences," Mr. Collins said, "coupled with the normal increases in police and judges, will produce an increase in deter-

rence which can reverse the trend in crime . . . As crime decreases the system becomes less overloaded and deterrence increases, further reducing crime."

If prison capacity is not increased, Mr. Collins warned, "Massachusetts' criminal justice system may stagnate at a low value of deterrence and a high volume of crime."

Mr. Collins said prison population has held nearly constant, nationally and in Massachusetts, as crime increased sharply.

There were 203,000 people in prison in the United States in 1967 and 204,000 in 1973, a period during which crime nationally increased 126 percent, he said. In Massachusetts, prison population—state and county combined—went from 5220 in 1967 to 5278 in 1971, a period during which crime increased 160 percent in the state, he said.

"The police, courts, and prisons are divided among a host of jurisdictions and often lack effective cooperation or coordination. Nevertheless, they form a system. As crime

increases, each component places demands on the others, hindering their effectiveness."

The MIT study focuses on the "system" aspect of criminal justice, he continued.

"Using system dynamics as a methodology, we have consulted with experts in the field, including judges, lawyers, prosecutors and penologists in developing their model. The model was then exposed to criticism and revised."

Mr. Collins pointed out that a computer model is not "a perfectly accurate representation of reality that can be trusted to make decisions more reliably than people. Instead, a model is a flexible tool that forces the people who use it to think hard and to confront one another, their common problems and themselves, directly and factually." The model is a most helpful aid to the intuition of the experts, Mr. Collins said.

Recommending an increase in prison capacity is not "a lock-'em-up-and-throw-away-the-key" approach, Mr. Collins said.

"Increasing the capacity of prisons does not preclude reforms of other kinds. Increasing capacity could be part of a program of prison modernization. Increased prison capacity represents a balanced and responsible approach to the criminal justice system—viewed as a system."

It makes little sense, Mr. Collins said, to increase the size of police departments or the capacity of the courts "when the correctional agencies cannot handle the additional offenders thus committed to prison."

Adding to prison capacity, he said, will provide "a buffer which uncouples the flow of total offenders imprisoned and the average effective sentence. With excess capacity, if crimes begin to rise again, causing an increase in offenders imprisoned, the increase can be absorbed by utilizing the excess capacity instead of reducing the average sentence served.

"Thus, excess capacity improves the stability of the criminal justice system as a whole."



ELLEN A. KING'S lunchroom as it existed in the early 1900's in the basement of the Pierce Building on MIT's old Copley Square campus.

King, Boit Entries Sought

In addition to the Ellen King Prize (described above) awarded in May, entries are now being accepted for the Robert A. Boit Writing Prize and the Boit Manuscript Prize. The awards, given by the Department of Humanities, are open only to undergraduates, who are limited to two separate entries in each competition.

Professor Robert R. Rathbone, who is in charge of the competition, said no single entry or parts of an entry could be submitted to more than one competition. The deadline for all manuscripts is April 16, 1976.

A list of the winners will be posted in the Humanities Office, Rm. 14N-409, on or about May 14. A luncheon for winners and judges, followed by an open reading of the prize-winning writings, will be scheduled at the close of the spring term.

THE INSTITUTE CALENDAR

March 31
through
April 11

Events of Special Interest

Alternative Energy Sources Symposium* – Sponsored by Industrial Liaison Program, Sigma Xi & UROP, Wed, Mar 31. Registration 12:30pm, Rm 9-150. Introduction by James D. Bruce, electrical engineering, associate dean, School of Engineering. Undergraduates presenting projects: Coal Gasification, Kevin Bennet, Chem E, 1:15pm. Fuel Gas from Seaweed, Ralph Troiano, Chem E, 2pm. Darrius Windmill for Small Power Requirements, Tom Davidson, ME, 3pm. Thermic Diode Solar Panels, Gerald W. Fly, ME, 3:45pm.

April Fools Day Open Reading* – Sponsored by Writing Program of the Humanities Department. Everyone is invited to come read their work or listen to others. Thurs, Apr 1, 5-7pm, Rm 14E-304. Refreshments 4:30pm, Rm 14E-310. Info: x3-7894.

Physics Department Open House – For freshmen and sophomores considering physics as a major and/or career. Mon, Apr 5, 4-7pm, Rm 37-252. Faculty members will talk about current research, faculty and students will answer questions. Refreshments.

TWO Crafts & Bake Sale – Thurs, Apr 8, all day, Sala. Baked goods and hand-made crafts made by Technology Wives Organization members.

Food Day Benefit Dinner* – Thurs, Apr 8, 6:30pm, Sala. International meatless dishes. Tickets \$1.50, available Bldg 10 Lobby thru Tues, Apr 6. After dinner speaker: James Levinson, international nutrition, director of International Nutrition Planning Group Program.

Seminars and Lectures

Wednesday, March 31

Optimization Methods in Computer-Aided Design* – E. Polack, electrical engineering & computer sciences, University of California, Berkeley. EE & CS Systems & Control Seminar. 11am, Rm 39-500.

Holistic Teaching-Learning* – Alvin White, visiting scientist, DSRE. DSRE Luncheon Seminar. 12n, Rm 20C-117. Lunch \$1.

Pressure and Velocity Measurements in the Florida Straits* – Carl Wunsch, physical oceanography. Oceanography Sack Lunch Seminar. 12n, Rm 54-311. Bring lunch, coffee available.

A Technology of Social Production: Modern Management and the Expansion of Engineering* – D. Noble, postdoctoral fellow in humanities & engineering. Technology Studies Seminar. 4pm, Rm 20D-205. Coffee 3:30pm.

Construction of 150 KV Pulsed Supply for a Duoplasmatron* – Alan Forbes, G. Nuclear Engineering Plasma & Controlled Fusion Seminar. 3pm, Rm 38-136.

Grain Boundaries in Ceramics* – Rowland Cannon, ceramics. Materials Science Panel Seminar. 4pm, Rm 13-5101. Refreshments 3:30pm, Rm 13-5002.

Nuclear Engineering Seminar* – Eric C. Guyer, G. 4pm, Rm NW12-222.

Particles* – Francis Low, Karl Taylor Compton Professor of Physics, director of Center for Theoretical Physics. Undergraduate Physics Colloquium. 4:15pm, Rm 4-339. Social hour follows.

Thursday, April 1

Electrical Breakdown of Single and Polycrystalline Al₂O₃ at Temperatures of 0-1,400° C* – Masa Yoshimura, post-doctoral, materials science; **Particle Rearrangement During Liquid Phase Sintering*** – Eric Skaar, G. Ceramics Seminar Series. 11am, Rm 3-464.

Laser Raman Spectroscopy of Biomolecules* – Richard C. Lord, chemistry, director of Spectroscopy Laboratory. 11am, Rm 10-105. Coffee 10:30am.

The Lummer-Gehrcke Interferometer Modified for the Spectroscopy of Thin Dielectric Films* – Cardinal Warde, electrical engineering. EE & CS Optics Seminar. 2pm, Rm 36-428.

Technical Briefing on the B-1 Bomber* – Major Fritz, manager, B-1 program development, Wright Patterson Air Force Base. AFROTC Seminar. 3pm, Stu Ctr Rm 407. Coffee.

Materials Supplies and Public Policy* – J. Herbert Holomon, engineering, director of Center for Policy Alternatives. Seminar on Materials Resource Policy. 3pm, Rm 13-5101.

Flame Radiative Feedback and the Burning of Horizontal and Vertical Surfaces* – Ashok T. Modak, Factory Mutual Research Corp. Mechanical Engineering Thermal-Fluids Seminar. 4pm, Rm 5-234. Coffee 3:45pm.

Artificial Intelligence: the Computer Concept of Mind** – Herbert A. Simon, Richard King Mellon Professor of Computer Science & Psychology, Carnegie-Mellon University. Humanitas Seminar. 4pm, Rm 9-150. Refreshments after, Stu Ctr Mezzanine Lge.

Spin Labels as Macromolecular Probes* – Walter Herlihy, G. Analytical Chemistry Seminar. 4pm, Rm 8-105.

Design of Water-Quality Sampling Programs for River Networks* – Graeme C. Dandy, G. Ralph M. Parson Laboratory Water Resources and Environmental Engineering Seminar. 4pm, Rm 48-416. Coffee 3:45pm, Rm 48-410.

Giant Atoms* – Daniel Kleppner, physics. Physics Colloquium. 4:15pm, Rm 26-100. Refreshments 3:45pm, Rm 26-110.

Diving in Whales and Man* – John Kanwisher, WHOI. Migrants in the Sea: Sharks and Man, Lecture sponsored by New England Aquarium and MIT Sea Grant Program. 7pm, NE Aquarium auditorium.

Discussion of Life on a Kibbutz* – Don Tocker, American immigrant to Israel, part of group which founded Kibbutz Ketura. Sponsored by Hillel. 7pm, Burton Hse conference rm. Call Hillel, x3-2982, if plan to attend.

Friday, April 2

Computer-Aided Design Optimization Techniques and Related Topics* – Ernest D. Eason, University of California, Berkeley. Mechanical Engineering Special Seminar. 10am, Rm 3-465.

The Relationship Between Nutrition and Fertility Control* – Dr. Cicely Williams, emeritus professor of nutrition, mother & child health and nursing, Tulane School of Public Health. Nutrition & Food Science Seminar. 10:30am, Rm 37-252.

Incremental Per Diem* – Carl Martland, DSR staff, civil engineering. Center for Transportation Studies Luncheon/Seminar. Buffet 12n (\$1), lecture 12:45pm (free), Stu Ctr Mezzanine Lge.

Adoption, Distribution and Management of Population Control Services in Developing Countries* – Dr. Cicely Williams, emeritus professor of nutrition, mother & child health and nursing, Tulane School of Public Health. Nutrition & Food Science Seminar. 1:30pm, Rm 37-252.

Some Thoughts on Process Synthesis* – Arthur W. Westerberg, University of Florida. Chemical Engineering Seminar. 2pm, Rm 66-110. Coffee.

Poetry Reading* – Robert Pinsky, English, Wellesley College; author of *Sadness and Happiness* and *Contemporary Poetry and its Traditions*, will read from his works. Sponsored by Humanities Department & I. Austin Kelley 3rd Fund. 3pm, Rm 4-156.

Computer Studies of Radial Transport in Tokamaks* – Paul Rutherford, Princeton University. RLE Plasma Dynamics Seminar. 4pm, Rm 36-261.

Recent Research in (SM)_x at IBM* – William E. Rudge, IBM Research Laboratory, San Jose, Calif. Materials Science Colloquium. 4pm, Rm 9-150. Refreshments 3:30pm.

Satellite Oceanography* – E.L. Mollo-Christensen, oceanography. Ocean Engineering Department Tankard Seminar. 3pm, Rm 3-446. Refreshments 4pm, Rm 5-314.

Parallax: Perspectives on Photography* – Elliott Erwit, photographer. Sponsored by MIT Creative Photography Gallery & Polaroid Foundation in conjunction with Hayden Gallery exhibit. 8pm, Rm 26-100. Free.

Monday, April 5

Understanding the Probabilistic Behavior of Algorithms* – Andrew Yao, applied mathematics. Applied Mathematics Colloquium. 4pm, Rm 2-338. Coffee 3:30pm, Rm 2-349.

A Hybrid Finite Element Method for Three-Dimensional Wave Scattering* – Dick K.P. Yue, G. Ralph M. Parsons Laboratory Water Resources and Environmental Engineering Seminar. 4pm, Rm 48-316. Coffee 3:45pm, Rm 48-410.

Nonequilibrium Superconducting States* – D. Scalapino, University of California, Santa Barbara. Materials Science Colloquium. 4pm, Rm 9-150. Tea 3:30pm.

The Rationality of Voting* – Max Black, Cornell University. Philosophy, Technology & Culture and Technology Studies Seminar. 4pm, Rm 4-145.

Energetics of Active Sodium Transport – The Equivalent Circuit Model* – Alvin Essig, MD, physiology, research professor of medicine, Boston University School of Medicine. Harvard-MIT HST Interdisciplinary Program in Biomaterials Science Seminar. 4:30pm, Rm 37-212. Coffee 4pm.

Lecture by Jean Shepherd* – LSC lecture by the well known humorist. 8pm, Kresge. Tickets: \$1, available at LSC movies, LSC office, Bldg 10 Lobby & at door.

Tuesday, April 6

Current Problems in Strong Turbulence Theory* – David Tetreault, G. Plasma Theory Seminar. 11am, Rm 36-261.

Physical Containment and Biological Safety* – Dr. W. Emmet Barkley, director, Office of Biohazard Safety, National Cancer Institute. Biology Workers' Health & Safety Committee Lecture. 12n, Rm 16-310. Special smaller meetings; 11:30am-12n, Rm 56-408, for kitchen staff & custodians; 1-2pm, Rm 16-310, for technical assistants & graduate students; 2-4pm, Rm 56-520, for faculty, post-doctoral students, safety officers, etc.

Describing Function Analysis of Freight Car Rock-and-Roll Behavior* – Joseph Beaman, G. Mechanical Engineering Systems and Design Division Seminar. 12n, Rm 3-465. Bring lunch, coffee & tea provided.

Some Applications of Catastrophe Theory in Mechanics* – Hans S. Troger, Institute für Mechanik at Technische Universität, Vienna. Applied Mechanics Seminar. 3pm, Rm 3-133. Coffee 4pm, Rm 1-114.

Aero/Astro General Seminar* – Speaker and topic TBA. 4pm, Rm 35-225. Coffee 3:30pm, Rm 33-222.

Survival Diet – Eating Healthfully on \$.25 Per Day* – Members of Hippocrates Health Institute. Sponsored by groups participating in Food Day. 4pm, Rm 10-105.

Evidence for Different Species of Alpha Motoneurons and its Possible Relevance to Neuromuscular Disease in Humans* – Dale A. Harris, instructor of physiology, Harvard Medical School. Harvard-MIT Rehabilitation Engineering Center Seminar. 4pm, Rm 1-236. Refreshments 3:30pm.

DNA Renaturation Kinetics Theory* – Lynn Klotz, biochemistry & molecular biology, Harvard University. Seminar in Physical Chemistry. 4pm, Rm 4-370. Coffee 3:45pm, Rm 6-321.

Tensions Between Humanism and Technology* – Max Black, Cornell University. Philosophy, Technology & Culture and Technology Studies Seminar. 4pm, Rm 9-150.

Hydrogen Embrittlement – A Surface Analytical Approach* – Ronald M. Latanision, materials science & engineering, Materials Science Seminar. 4pm, Rm 4-163. Refreshments 3:30pm.

Duterium in the Galaxy* – Arno A. Penzias, Bell Telephone Labs. Astrophysics Colloquium. 4:15pm, Rm 37-252. Coffee 3:45pm.

Wednesday, April 7

Deep Ocean Mining** – Judith T. Kildow, ocean policy. Women's League Seminar. 11am, Rm 10-340. Followed by sherry, 12:30pm, & luncheon, 1pm. Cost: \$2.25. Reservations: Mary Pinson, Rm 10-342.

Psychoanalytic Politics and Social Institutions* – Sherry Turkle, research fellow, humanities. DSRE Luncheon Seminar. 12n, Rm 20C-117.

Plasma and Controlled Fusion Seminar* – Nat Ceglio, G. Nuclear Engineering Seminar. 3pm, Rm 38-136.

Towards a Critical Theology of Technology in Contemporary Culture* – E. Klaaren, religion, Wesleyan University. Technology Studies Seminar. 4pm, Rm 20D-205. Coffee 3:30pm.

The Problem of High Temperature Stress Rupture Prediction for Metals and Ceramics* – Richard Charles, General Electric. Materials Science Williams Lecture. 4pm, Rm 9-150. Refreshments 3:30pm.

Probabilistics Analysis of the Consequences of Nuclear Reactor Accidents* – M. Maekawa, G. Nuclear Engineering Seminar. 4pm, Rm NW12-222.

Magnetism Among Stars* – Stanislaw Olbert, physics. Undergraduate Physics Colloquium. 4:15pm, Rm 4-339. Social hour follows.

Science, Technology, Morality, Reflection after the Holocaust* – Irving Greenberg, chairman, Jewish studies, CCNY. Hillel Lecture. 7:30pm, Rm 9-150.

Thursday, April 8

Microbial Secondary Metabolites and Possible Involvement of Plasmids in their Biosynthesis* – Hamao Umezawa, director, Microbial Chemistry Research Foundation, Institute of Microbial Chemistry, Tokyo, Japan. Organic Chemistry Seminar. 2pm, Rm 2-390.

Human Fetal Malnutrition* – Dr. Jack Metcalf, pediatrics & biochemistry, University of Oklahoma. Harvard-MIT Nutrition & Food Science Seminar. 3pm, Rm 16-310. Sherry following, Rm 16-311.

Conscious Cookery* – Members of Golden Mountain Conscious cookery. Talk on philosophy, samples of food. Sponsored by groups participating in Food Day. 3pm, Rm 3-133.

Raw Materials Requirements of the US Steel Industry* – John Elliott, metallurgy. Materials Resource Policy Seminar. 3pm, Rm 13-5101.

The Implications of Linguistics for Contemporary Literature ** – George Steiner, Churchill College, Cambridge; literature & comparative literature, University of Geneva. Humanitas Seminar. 4pm, Rm 9-150. Refreshments after, Stu Ctr Mezzanine Lge.

Design and Analytical Applications of A Repetitively Scanning UV Spectrophotometer* – Linda Anthony, G. Analytical Chemistry Seminar. 4pm, Rm 8-105.

Inhibition of Hepatic Mixed Function Oxidases by Thionol-sulfur-Containing Compounds* – Andrea Hunter, biochemistry, Vanderbilt University. Nutrition & Food Science Seminar. 4pm, Rm 16-134.

Turbulence, A Tempest in a Teapot* – Paul Martin, Harvard University. Physics Colloquium. 4:15pm, Rm 26-100. Refreshments 3:45pm, Rm 26-110.

The Brain of the Whales: The Anatomy of Intelligence* – Peter Morgane, Worcester Foundation for Experimental Biology. Migrants in the Sea: Sharks, Whales and Man, Lecture sponsored by New England Aquarium and MIT Sea Grant Program. 7pm, NE Aquarium auditorium.

Friday, April 9

World Nutrition: Political and Economic Aspects* – Ambassador Edwin M. Martin, chairman, consultative group for food production & investment in developing countries. Nutrition & Food Science Seminar. 1:30pm, Rm 37-252.

Enzymatic ATP Regeneration Reactors* – M.I. Nemet, G. Chemical Engineering Seminar. 2pm, Rm 66-110.

Electron Microscopic Visualization of Low Density Lipoprotein in the Arterial Wall* – J.J. Schnitzer, G. Chemical Engineering Seminar. 3pm, Rm 66-110.

History of Seafaring* – W.A. Baker, ocean engineering, curator of Hart Nautical Museum. Ocean Engineering Tankard Seminar. 3pm, Rm 3-446. Refreshments 4pm, Rm 5-314.

Real Time Ultra Sound Imaging in Cardiovascular Diagnosis* – Frederick Thurestone, biomedical & electrical engineering, Duke University. Mechanical Engineering Seminar. 3pm, Rm 3-133. Coffee 4pm, Rm 1-114.

The Positron as a Probe in Metal Physics: a Progress Report* – Stephan Berko, Brandeis University. Materials Science Colloquium. 4pm, Rm 9-150. Refreshments 3:30pm.

Parallax: Perspectives on Photography* – Henry Holmes Smith, photographer. Sponsored by Creative Photography Gallery & Polaroid Foundation in conjunction with Hayden Gallery exhibit. 8pm, Rm 26-100. Free.

Patriotism and the Need for Roots** – Connor Cruise O'Brien, minister for posts and telegraphs, Ireland; pro-chancellor of the University of Dublin; Micheal Walzer, government, Harvard University. Simone Weil Lecture. 8pm, Rm 9-150.

Community Meetings

Food Day/Week* – Planning meeting for participating organizations Wed, Mar 31, 7:30pm, Rm 1-136. Info: x3-4170 or x5-5256 Dorm. eggs. Sale of vegetarian lunches and books on food Mon, Apr 5-Wed, Apr 7, Bldg 10 Lobby, 11:30-1:30pm. Recipes available.

Sale of Original Prints* – Sponsored by MIT Students Art Association. Prints of lithographs, silk screens, woodcuts & etching from Ferdinand Roten Galleries. Wed, Mar 31, 11am-6pm, Sala.

Oneg Shabbat* – Sponsored by Hillel. Daniel Shevitz, Hillel director at Northeastern, will speak on "Kabbalah." 9:30pm. Ashdown crafts lge.

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

Jewish Women's Group - Speaker will be Susan Shevitz. Mon, Apr 5, 7:30pm, McCormick Hall.

Massachusetts State ERA* - Gail Ehrlich, Commission to Ratify the Massachusetts State ERA, will conduct a meeting to discuss the ERA and what can be done to insure its passage. Sponsored by Sojourner. Tues, Apr 6, 8pm, Rm 6-321.

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

Social Events

Israeli Party* - Wed, Mar 31, 8:30pm, Rm 10-105. Housus & falafel, music & dancing. Sponsored by Hillel. Movie, "Walls of Jerusalem," will be shown. Bring your friends.

Aero/Astro Annual Spring Picnic - Sat, Apr 3, Draper Laboratory Flight Facility. Undergraduate & graduate in Course XVI, first year students and undesignated sophomores are invited. Food, conversation, and working demonstration of research related equipment, including model rockets & laser holography, will be featured. Transportation provided. Reservations: Mrs. Marks, x3-4926 (Rm 33-119) or David Akin, x3-2278 (Rm 33-222) by noon, Apr 2.

Trip to Newport - Sponsored by Hillel, Bentley College and other area universities, Sun, Apr 4. Will include trip to Trourou Synagogue. Info: Bob Schloss, x5-9623 Dorm or x3-2982.

Strat's Rat - Sat, Apr 10, 8:30pm, Sala or Lobdell. Free, light & dark beer sold (\$.35/16 oz glass). Bottles of wine & coke also available. WTBS providing live announcer & records. College ID required.

Cafe Keshet - Coffee house sponsored by Hillel with live entertainment, Israeli folk music, falafel, etc. Sat, Apr 10, 9pm, 312 Memorial Dr. Admission \$1.50, \$1 Hillel members.

24 Hour Coffeehouse* - Enjoy relaxing conversation, piano playing, inexpensive food, candy & drinks. Open 24 hours per day, 7 days per week, Stu Ctr 2nd fl lge.

Movies

Lady in the Lake (Montgomery)** - Film Section. Wed, Mar 31, 7pm, Rm E21-010.

Surface Tension; Low Reynolds Number Flow* - Fluid Mechanics Films. Thurs, Apr 1, 4pm, Rm 33-319. Free.

Lion in Winter ** - LSC. Fri, Apr 2, 7 & 10pm, Rm 10-250. Admission \$.75, MIT or Wellesley ID required.

Mother (Pudovkin) - Film Society. Fri, Apr 2, 7:30 and 9:30pm, Rm 6-120. Admission \$1.

The Magnificent Seven** - MidNite Movie. Fri, Apr 2, 12m, Lobdell or Sala. Free, MIT or Wellesley ID required. Bring blanket to sit on.

The Fortune** - LSC. Sat, Apr 3, 7 & 9:30pm, Rm 26-100. Admission \$.75, MIT or Wellesley ID required.

Twelve Angry Men** - LSC. Sun, Apr 4, 6:30 & 9pm, Rm 26-100. Admission \$.75, MIT or Wellesley ID required.

An Interview with G.I. Taylor; Theological Behavior of Fluids* - Fluid Mechanics Films. Mon, Apr 5, 4pm, Rm 33-319. Free.

Rules of the Game** - Humanities Film. Mon, Apr 5, 7:30pm, Rm 14N-0615. Free.

Panola (Pincus); Happy Mothers Day (Leacock); One Step Away (Pincus)** - Film Section. Tues, Apr 6, 7pm, Rm E21-010. Free.

An Interview with G.I. Taylor; Rheological Behavior of Fluids* - Fluid Mechanics Films. Thurs, Apr 8, 4pm, Rm 33-319. Free.

Return of the Tall Blonde** - LSC. Fri, Apr 9, 7 & 9:30pm, Rm 10-250; 11pm, Rm 26-100. Admission \$.75, MIT or Wellesley ID required.

Billy Liar (Schlesinger)* - MIT Film Society. Fri, Apr 9, 7:30 & 9:30pm, Rm 6-120. Admission \$1.

Carnal Knowledge** - MidNite Movie. Fri, Apr 9, 12m, Sala or Lobdell. Admission free, MIT or Wellesley ID required. Bring blanket to sit on.

The Eiger Sanction** - LSC. Sun, Apr 10, 7 & 10pm, Rm 26-100. Admission \$.75, MIT or Wellesley ID required.

Scaramouche ** - LSC. Sun, Apr 11, 6:30 & 9pm, Rm 26-100. Admission \$.75, MIT or Wellesley ID required.

Lobby 7 Events

Suitcase Circus* - With Hank Chapin and Amy Darley. Wed, Mar 31, 12n, Bldg 7 Lobby. Free.

Lobby 7 Is A Sundial* - By Marc Faverman. Mon, Apr 5-Fri, Apr 9, Bldg 7 Lobby.

MIT Brass Choir* - Wed, Apr 7, 12n, Bldg 7 Lobby. Free.

Music

Improvisation on the Oud* - Lecture and demonstration by Fawzi Sayeb, leading interpreter of early Arabic music. Joel Cohen, director of Boston Camerate, translator. Sponsored by Music Library. Wed, Mar 31, 5:15pm, Music Library.

Clavichord Recital* - Bernard Brauchli. Noon Hour Concert Series. Thurs, Apr 1, 12n, Chapel. Free.

Noon Hour Concert* - Marian Ruhl, organ recital. Thurs, Apr 8, 12n, Chapel. Free.

Chamber Music Society Concerts* - Wed, 5:15pm, music library. Bldg 14E. Free. Info: x3-4892.

Theatre and Shows

MIT Dramshop Auditions - Auditions for major spring production, Tennessee Williams' *The Night of the Iguana*, directed by Joseph Everingham. Wed, Mar 31, 7:30pm, Kresge Little Theatre.

Fiddler on the Roof* - MIT Musical Theatre Guild production. Performances Apr 2, 3, 9 & 10 at 8pm; Apr 4 & 10 at 2pm; Kresge. Tickets: \$3.50, \$2.50 with MIT ID, \$2 children under 12 with an adult. Reservations & info: x3-6294 or x5-9155 Dorm.

Dance

Advanced Swing (Jitterbug) Workshop* - MIT Ballroom Dancing Club. Will review basic steps & learn more complex ones. Beginners

welcome. Sun, Apr 4, 2-5pm, Sala. Info: Sharon Pastoriza, x5-8667 Dorm.

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

Exhibitions

Center for Advanced Visual Studies* - Works by Bart Johnson & Aljandro Sina. Tues, Mar 16-Fri, Apr 2, Bldg W11. Hours: Mon-Fri, 9am-5pm. Free.

Photographic Exhibition* - Hayden Corridor Gallery exhibit in conjunction with lecture series, Parallax: Perspectives on Photography, cosponsored by MIT Creative Photography Gallery and Polaroid Foundation. This week's lecture: Fri, Apr 2: Elliott Erwitt. See Seminar listings.

Helene Aylon: Paintings that Change in Time* - Public opening Fri, Mar 12, 8pm, Exhibit Sat, Mar 13-Sat, Apr 10, Hayden Gallery. Hours: 10am-4pm, Mon-Sat.

Creative Photography Gallery Exhibit* - David Ulrich and Jim Haberman. Thru Tues, Apr 20, Mon-Fri, 10am-6pm, Weekends 12n-6pm, 120 Mass Ave.

Center for Advanced Visual Studies Exhibit* - Works by John Newman and John Goodyear. Tues, Apr 6-Fri, Apr 23, Mon-Fri, 9am-5pm, 40 Mass Ave.

Strobe Alley* - High speed photography by Harold E. Edgerton, Institute Professor and Professor of Electrical Measurement, Emeritus. Bldg 4, 4th fl.

Music of the Celestial Deities* - Music library exhibit of manuscript facsimiles & pictures. Daily, Bldg 14E.

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

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

Athletics

Wednesday, April 7 - V Rifle. Wentworth, 4pm, duPont Rifle Range.

Soccer Officiating* - People interested in becoming high school of FIFA certified soccer referees should contact Tom Stagliano, x3-2433, before Fri, Apr 2.

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 Apr 7 through Apr 18 to the Calendar Editor, Room 5-111, Ext. 3-3279, before noon Friday, Apr 2.

New Dinghies To Join Fleet

(Continued from page 1)

ing teams, skippered and crewed the boats during the recent tests.

"With many MIT alumni interested in the progress of these teams, we have had an extraordinary show of support," Mr. Smith said. "Two members of the international yachting world who have been especially helpful are Dan Strohmeier ('34), a retired vice president of Bethlehem Shipbuilding, Inc., and Huey Long ('47), who owns 'Ondine II'—one of the fastest racing yachts afloat. They recently won the prestigious Capetown (South Africa)-to-Rio race in record time."

Another longtime MIT benefactor who has recently directed his energy to the sailing fund is I. Austin Kelly III '26, president of the National Employee Relations Institute and Executive Compensation Consultants of New York.

MIT's new sailing pavilion will be named in honor of Walter C. "Jack" Wood '17, MIT's first sailing master and founder of the Intercollegiate Yacht Racing Association's Hall of Fame at the US Naval Academy. Mr. Wood, who now resides in San Diego, Calif., is honorary chairman of the Sailing Pavilion Sponsoring Committee.

It was under his guidance that MIT, as the pioneer in American collegiate sailing programs, became a model for Harvard, BU and other area schools that lacked their own facilities 40 years ago.

Olin J. Stephens II, '30, designer of the last five America's Cup winners, will be honored with the Olin J. Stephens II Commodore's Room in the new MIT sailing pavilion.

Mr. Smith said the balance of funds needed to complete the build-



Testing the new prototype dinghy (sail 26) against a dinghy from the present fleet (sail 25) took place in February at Cottage Park Yacht Club in Winthrop.

ing program and fleet refurbishing will be collected largely through area telethons and alumni club speaking programs. The first of

these will be a talk by fleet designer Halsey C. Herreshoff to the MIT Club of Fairfield County, Ct., on Wednesday, April 28.

Guatemala Drive Raised \$3,343

The MIT community has given CARE a total of \$3,343.35 to be used in aiding earthquake ravaged Guatemala.

Of this total, \$2,125.06 was raised by members of Alpha Phi Omega, the MIT service fraternity. The remaining \$1,218.29 was raised by campus events held during Guatemala Relief Week, February 17-22, by contributions from the MIT Catholic community, and by indi-

vidual contributions. Lionel Toriello, a graduate student in management from Guatemala City, Guatemala, organized campus relief efforts with the assistance of the Foreign Student Office.

Checks, payable to CARE-Guatemalan Relief Fund, may still be sent to CARE-Guatemala Earthquake Fund, 581 Boylston St., Boston, Mass. 02116.

Wiesner, Innovation Center Featured At Design Engineers Conference

MIT President Jerome B. Wiesner will give the keynote address at the 1976 Clapp and Poliak Design Engineering Conference to be held April 5-8, 1976, in Chicago.

Dr. Wiesner's speech, "Is the Sun Setting on American Technological Leadership?" will be one of two plenary sessions at the conference sponsored by the American Society of Mechanical Engineers.

The second plenary session will consider "Future Design Problems in Space Colonization."

The 1976 Design Engineering Show, at which more than 400 companies will display their products, will accompany the conference. The

Faculty Urged To Join USP

Members of the MIT Faculty and teaching staff interested in offering seminars as part of the 15-year-old Undergraduate Seminar Program have been invited by Professor Ernest G. Cravalho, chairman of USP, to submit written descriptions by April 2.

The innovative program was designed to foster a more personal and informal learning situation involving faculty and small groups of students, but especially freshmen. Although the decision to offer a seminar is strictly voluntary, faculty members who participate in the program must have the approval of their department heads.

"We are particularly interested in developing seminars that offer opportunities for students to learn a skill or technique to complement their academic curricula," he said. Further information about the program is available from Professor Cravalho at x3-3282 or the Undergraduate Seminar Office, x3-3261.

MIT Innovation Center will have an exhibit at the show, demonstrating how students have developed ideas into products with marketplace potential.

Both conference and show promote development of new products of every type and improvement of products already in the marketplace.

Some of the MIT-devised products that will be part of the Innovation Center exhibit are a line of extremely light aluminum framesets for racing bicycles, an automated energy-saving heating, ventilation and air conditioning (HVAC) system, and a group of electronic games, including the highly successful "TV Tennis."

Representing the Center will be Professor Y.T. Li, director; Lamar Washington, Jr., general manager of the Innovation Co-op group, and Ogden H. Hammond III of the MIT Energy Laboratory, a member of the Innovation Education Council.

Robert Pinsky To Read Poetry

Poet Robert Pinsky, professor of English at Wellesley College, will read a selection of his works at 3pm April 2 in Rm. 4-156.

He is the author of *Sadness and Happiness*, recently published by Princeton University Press as the first in a series of poetry books it will bring out, and of the critical work, *Contemporary Poetry and Its Traditions*, soon to be published by Princeton University Press.

Professor Pinsky will be presented by the Department of Humanities and the I. Austin Kelly 3rd Fund.

CLASSIFIED ADS

Ads are limited to one per person per issue and may not be repeated in successive issues. All ads must be accompanied by full name and Institute extension. Only Institute extensions may be listed. Members of the community who have no extensions may submit ads by coming in person to the Tech Talk office, Room 5-111, and presenting Institute identification. Ads may be telephoned to Ext. 3-3270 or mailed to Room 5-111. Please submit all ads before noon, Friday, Apr 2. They will be printed on a first come, first served basis as space permits.

For Sale, Etc.

Wint or mahog: 2 sidebrds, lg bkscse, mag rack, ovrstuffed chr, hassock, pntgs, 35 mm camera. Car, x3-5551.

Pr Goodrich tires, G78x14, v gd spares but not much tread, \$6/pr. Bob, x3-3990.

Schwinn m bike, 26 x 1.75 tires, looks like sgl spd but has 3, caliper brakes, \$50 nego. Dan, x3-2422.

Hooker mod Danish desk, oiled wint, 1/2 bkscse front, cane back covering 2 of 5 drwrs, mtch uphol chr, v stylish & exc cond. Ken, x108 Linc.

AKC reg 2 yr newfoundland dog, frndly, eats v little, free to fam who can give plenty of love; antique school hse desk, red/wht/blu, \$12. Call 369-5811.

GE refrig, lg frzr, \$40; toaster oven, \$30; dbl brnr hotplate, \$25; all exc cond. x5-7172 Dorm bef 12m.

Snipe class sailboat, 15 1/2', all fbrglas alum boom, ctrbrd & mast, Harken blocks, \$1,300 w/o trlr, \$1,600 w/ alum trlr. Sue, x3-5792.

Dinette set w/2 chrs, \$25; phone tbl, \$10. Audrey, x3-4437.

Apt sale, everything must go, plants, furn. Ross, 628-9178.

Stone lndry sink, 3 sections, 6' L, 24" W, 14" D overall, take away free. Mike, x3-7955.

Polaroid SZ-70 land camera, unused, \$155; also 3 films, \$5/ea. Call 494-8882, evgs.

Teac 350 cassette deck w/wrnty cards, must sell, best. x5-7444 Dorm.

Aquar w/access, 2, 10 gal, \$15/ea; stand, \$5; f med wetsuit, \$20. Jane, x3-2916, aft.

McIntosh MC-2105 stereo power amp, highest qual construction, improved perf w/any spkrs, nw \$800, best over \$485. Bob, x252 Linc.

Colonial pewter: sugar & creamer, \$20; salt/pepper, \$8; gravy bowl, \$10; 2 lg Mex bskts, \$2/ea; set 12 wine glasses & carafe, \$5; Omjara budvase, \$10. Carol, x3-1332.

Refinished 7 drwr dresser, exc cond; free non-viable TV to fix & keep; studio 45 man Olivetti typwrtr, prac nw, case, 1/2 space, \$60. Call 261-2442.

Marantz 16 stereo power amp, 100 W RMS/ch at 8 ohms, mint cond, real classic, \$295. Dave, x3-4218, lve msg.

Singer sew mach, old port mdl, no fancy stitches but all attach, \$20. Merry, x3-7379.

Citadel bike lock, nw, orig \$35, \$25. Terry, x3-5769.

Patriot's Day fast approaches, have U ordered your hand-crocheted Bicentennial poncho yet? Avail all sizes. Diane, x8-1766 Draper.

Chest drwrs, 45" hi, \$30 or best. x3-2220.

Tennis rckts: 2 wd beg, \$5/ea; Wilson T3000, med, \$20; all exc cond. Frank, x3-6814.

Tires, (3) 6.20x13 mtd on whls, gd tread, \$20/lot. Art, x8-4190 Draper.

Tapes, 87, 1 1/2 mil polyester, 1/2" X 1, 200', variety brands, \$.50/ea. x5-8663 Dorm.

Edison 5DJ AC, 5,000 BTU, hrdly used, \$120 or best; adj elec wndw screen fan, \$10; Singer E-12 vac & parts, \$20; f 3 spd Phillips bike, bskts, nw tires & tubes, \$20; GE steam iron, \$2. Vivian, x3-7115.

B nw Abbott 2 qt cooker-fryer w/controlled ht, auto signal light, cost \$22, \$14. Susan, x3-2285.

Stl belt radials, 4, on rims to fit '72 Ford Torino, almost nw, sz G78x14 & F70x14, \$125. Angelo, x5437 Linc.

Pr tekts Sarah Caldwell's Montezuma, Apr 4 mat, \$14/ea. Ken, x3-4426.

Solid oak 5 pc BR set, \$200 or best. x7307 Linc.

Chldm back yard swing set w/swinging ladder, slide, 2 swings, nds paint, \$10. Dick, x3-1708.

Sears 7.5 hp outbrd motor, yr left on 2 yr wrnty, delux mdl w/twist grip control & clutch drive, \$150. x3-4368.

Pentax Spotmatic camera, 50 mm f1.4, super Takumar lenses 35 mm f2, 1.35 mm f3.5, 200 mm f4, fltrs, tripod, etc,

\$550; 3 hp Sears marine outbrd, \$90. D. White, x139 Linc.

Sears m 27" 10 spd bike, compl access, used few times; Sears 2 bike carrier; \$90/all. Victoria, x3-4519.

Antique wd balances, 2, best. Ross, 494-0060, lve msg.

Eng lounge sofa, gd cond, \$65. Call 862-5784.

Wedding dress, spr or sum, wht laced, sz 16, \$50; quilted full sz bdsprd, cream w/pink floral design, b nw, was \$22, unused, \$15. x3-4239.

Beaut antique baby grand piano, nice tune, \$550. Mary, 472-3137, evgs.

VW bug roof carrier, lk nw, \$20 firm. Joe, x8-3453 Draper.

M 10 spd bike, 23" Raleigh Record, gd cond, \$75. Michael, 876-2920.

British officer's chr cover set, olive grn canvas, nvr used, \$10; Ital china salt shaker & pepper grinder, nw, 4 1/2" hi, \$3. Eleanor, x3-1714.

Motorola 21" b&w TV, exc cond, \$50; mod workbench sofabed, little used, \$210. x3-1550.

Car amfm radio, ideal foreign cars, incl rear spkr, exc cond, \$70 or best. x5-7657 Dorm, evgs.

Wrought iron balc & stair railing, exc cond, \$25. x3-3367.

Pr nw tires w/whls for Chrysler, spare G78x14, \$60. x3-5894, 1-3pm.

Youth bed w/vinyl matt, box spr, Harv frame; director's chr; desk lite; lg K tbl; editing unit for movie films; lvg cntry, must sell, best. Call 494-9073.

Canada Dry ginger ale bottles, 1,170, 10 oz, \$100 or best. x5-6569 Dorm.

Raleigh Grand Prix 10 spd bike, 21" frame, Suntour rear derailleur, \$110; old mdl Kryptonite lock, \$10. Louis, x3-5881.

Bulkhead door covers, 47x68", \$25 or best; old wd school desk w/attach arm, \$10; 2 U Haul crdbd wardrobes, used once, \$3/ea; formica & chrome K tbl, 4 chrs, \$15 or best. Donna, x3-4271.

Clark Wallabee's, f sz 7N, b nw, worn 2X, too sm, brn leath, exc cond, were \$34, \$27 or best; Canon F-1 body w/28mm f2.8 wide angle lens, 2X extend, cases, looks nw, exc cond, \$339. Barry, x3-6526.

G78x15 tires, ww, mtd, exc cond, less 2 mos old, \$40/pr. Larry, x8-1226 Draper.

Zenith stereo w/amfm radio & spkr cabs, exc cond. Call 522-3036.

M 5 spd bike, bd cond, best. Matti, x8-1370 Draper.

Moving, nd to sell mod tweeded striped couch. Cheri, x3-4316.

Vehicles

'64 Mercedes 220S, classic, body exc, nds some mech work, \$1,500 or wr trade for VW sqbk. Call 877-2315, aft 6pm.

'65 VW bug, sunrf, gd cond, \$350. Luis, x3-6849.

'67 Saab 96 V4, gd run cond, ask \$525. Kris, x3-2843.

'67 Saab 95 wgn, poor cond but still runs well, \$200 or best. Jerry, x7075 Linc.

'67 Camaro conv w/'70 350 LT 1 motor, nds work, best over \$400. Call 643-0758.

'67 Chevy, nds muff, otherwise gd cond, best. Blair, x3-2889.

'67 Le Mans conv, a classic, V8, p st & br, radio, exc top, exc int, body gd, tires gd, nds some eng work, \$300 or best. x3-4588.

'68 Rambler Amer, auto, 6 cyl, 4 nw tires, 74 K, orig ownr, gd run cond, \$450 nego. Peggy, x3-2305.

'68 Triumph Spitfire, 2 tops, amfm radio, radials, lugg rack, \$700 or best. Ann, 862-7638.

'69 Saab 99, nw in '71, 43 K, exc cond, sgl ownr, must sell, \$1,200. Carol, x3-4351.

'69 Intl Travelall, 25 K, 4 whl drive, best. x3-4532.

'69 Datsun 510, 4 dr sed, auto, AC, 73 K, nw snows, nds work, \$350. x3-5831.

'70 Mercedes Benz 280SE, red sed, auto, exc cond, AC, p st & br, sunrf, ctr armrest & ctr front seat, non-slip differential, Becker Europa radio, L, BC, SW, AM, FM, radials. Jon, x5-6559 Dorm.

'71 Toyota Corona Mark II, 57 K, auto, radio, some rust, ask \$1,200. Marty, x203 Linc.

'71 Peugeot 304, exc cond, 31 K, any reas offer considered. Call 491-8275.

'71 VW Superbeetle, 49 K, exc cond, amfm radio, rear wndw defrost, std, \$1,350. Tai, 494-8588.

'72 Pont Le Mans, exc cond, AC, auto, many xtras, lo mileage, \$1,895 or best. Bruce, 782-0259.

'72 VW Porsche 914, Michelin X tires, appearance grp, trlr hitch, ski rack, \$3,800. Ria, x3-7563.

'72 Ply Val Scamp, vinyl roof, auto, 6 cyl, 70 K, gd cond, \$1,500. Dick, x7606 Linc.

'72 Hornet Sportabout wgn, lo miles, 25 K, auto, 6 cyl, exc cond, \$1,800. Tom, x3-6291.

'73 Chevy Camaro, std, vinyl roof, amfm stereo, bckst seats, 4 nw stl belt radials, metallic brn, exc cond, \$2,500. Hassan, x3-7489.

'73 Audi Fox, 4 dr, brn metallic, 4 spd std, AC, amfm radio, nw tires, exc cond, best. Betty, x7197 Linc.

'74 Mustang II, 2,300 cc, 4 spd, radials, exc cond, \$2,300. Tom, x8-3374 Draper.

'75 VW Scirocco, std, front whl drive,

Newcomb Sworn In

John E. Newcomb, Jr., assistant director at the Center for Advanced Engineering Study, was sworn in by Governor Michael S. Dukakis, as a member of the Governor's Advisory Committee on Corrections on Tuesday, March 23.

Mr. Newcomb, who has been active in corrections reform for several years, played an instrumental role in developing MIT's program for employment of ex-offenders.

blu, radials, amfm, sporty, gas miserly, 35-40 mpg hiwy, exc cond, 12 K, \$3,700. Lewis, x3-2928.

'75 1/2 Datsun 280Z, gold, lo mileage, exc cond, \$5,800 or best. Carolyn, x8-3316 Draper.

Housing

Arl, Jason Hts, spac victorian 6 BR, exc cond, efficient heat, prof nbrhd, hi 50's. x7581 Linc.

Back Bay, 2 BR apt, exc loc, nr MIT, qt sgl or cpl only, \$250. x3-1821.

Bedford, immac 3 1/2 yr 7 rm colonial, 3 BR, 1 1/2 B, 16' fully equip K, 24' screened carpeted porch, ww, frpl, garage, vinyl siding, acre lot, exc schools, sum occup, \$54,500. R. Ralston, x339 Linc.

Belmont, choice 4 rm apt, eat-in K, bsmt, some furn, \$240 + ht. Call 484-3080.

Camb, sub 2 BR apt 6/1 w/Sept opt, ww, mod K, AC, balc, partly furn if desired, 1 mi MIT nr Bdwy, \$304 incl ht, ht wtr. John, 354-5885.

Lex, 4 BR contemp hse, rent 1 yr beg sum, furn, all appl, sum pool mbrship, walk to elem sch, \$500. Call 862-3961.

Lex, mod 3 BR garrison colonial, 21' LR w/frpl, fam rm w/frpl, eat-in K, DR, 1 1/2 B, wds in back, nr Rt 2 & H Sq bus, \$59,900. Steven Bernstein, x7654 Linc.

Nwtn, furn 9 rm hse to rent 1-2 mos this sum, nr T, responsible fam w/o pets only, \$500/mo + util. x3-1470.

Som, 2 BR apt, LR, DR, K w/dw, AC, lndry in bldg, sub 6/1 w/fall opt. Call 628-2592.

Brewster, Cape Cod, charming cape, 4 BR, 2 full B, mod K, wash/dry, priv wded area, 5 min beach, \$1,000/mo or \$250/wk. Debbie, x3-5049.

Spr/sum rental, Fryeburg, Me, 3 BR chalet w/frpl nr Saco River, ideal loc canoe, hiking, bird watching, \$125/wk. Steve, x5584 Linc.

Animals

Loveable, energetic adult (25 lbs) m terrier, nds spac or cntry home & affection, frndly, gd w/chldrn & other pets, ownrs lvg cntry. Call 267-7397.

Wanted

Odd jobs, lawns, hedges, carpentry, painting, masonry, etc. Call 625-4711, aft 5:30pm.

Sailing ptrnr, fellow MIT fam to share our 41' fbrglas diesel yawl, superb cruising boat. Call 862-9462 for details.

Elec typwrtr, can be used, gd cond, reas price. Pam, x3-4905.

Freezer, 20-100 gal capacity. Call 861-9027.

F bike, cheap & working cond. Call 262-6153.

Seek sum sub 3 BR in Camb or Area, 6/1 thru Aug. Barbara, 876-6907, aft 9pm.

Trunks. Magdalena, x3-4830.

Russian typwrtr. Michael Levin, x3-2411.

Rider wanted for trip to Fla, lvg 4/3. Alex, x3-6150.

One tckt for Ford Hall Forum. x3-3161, lve msg box 5290.

People interested in starting a hostel in Camb, oppty for creative leadership. David Hoicka, x5-9649 Dorm, Bexley 409.

Upright piano, free, wl move. Enid, x3-4070.

Roommates

Rmmate to share lg Camb St 2 BR apt w/1 m, 10 min walk MIT, avail 5/1, \$85 + util. x5-6486 Dorm.

F rmmate to share mod 3 BR hse, wash/dry, lg yard, Burlington, \$157 + util. x8-3932 Draper.

Temp rmmate for Apr, share Camb 2 BR apt, warm frndly bldg, \$100 incl ht, nego. Sarah, x3-5775.

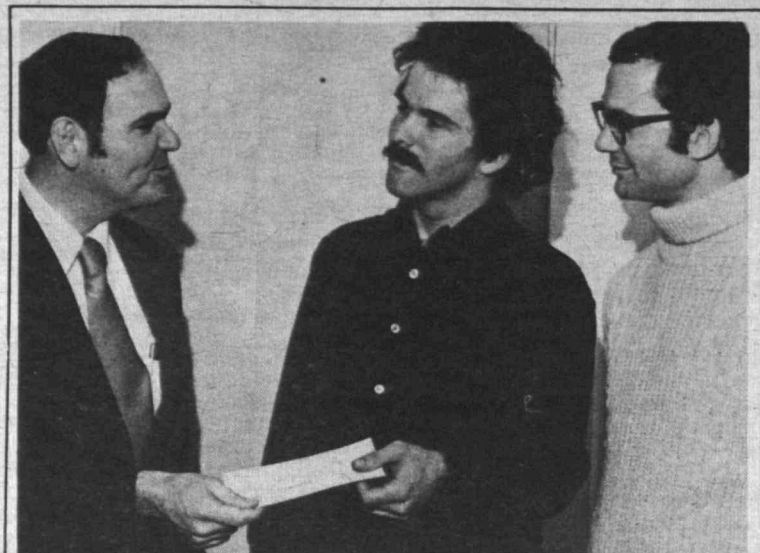
Miscellaneous

Typing of tech theses, own IBM Selec, reas. Ruth, x8-1811 Draper.

Typing w/editing done, anything, efficient MIT wife. Mike, x3-6275.

While you're on vac have exp stu hse-sitter, arrange early to be sure avail, wl kp hse cn, plants alive, must be nr T. Steven Spira, 494-9023.

Hrdwd floors prof sanded & refinished, \$40/sq ft. Christine, x3-2743.



Joseph S. Collins, secretary of the MIT Community Service Fund, last week presented a check for \$2,500 to Michael Riley, '69, math coordinator for the Group School, with David Kelston, administrative coordinator of the Group School looking on. The check represented a portion of this year's CSF grant to the private alternative high school located at 345 Franklin Street, Cambridge. The Group School is one of 11 agencies in which MIT volunteers are active that receive support from CSF.

Marshall B. Dalton Dies

(Continued from page 1)
and councils of the Institute and its Alumni Association spanned 60 years.

"Beloved by students, faculty, staff and employees, his interest in MIT's well being ranged from alumni organization and student life to employee welfare," Mr. Johnson said. "In his passing, MIT lost a loyal alumnus and Corporation member and the Greater Boston community a distinguished citizen and leader in private philanthropy." President of his own Class of 1915, Mr. Dalton became an ex-officio member of the Corporation in 1937 when he was elected the 44th president of the MIT Alumni Association. He continued to serve on the Corporation until the time of his death, and for the past 33 years he had been a Life Member of the Corporation.

During his long tenure on the Corporation, Mr. Dalton was a close advisor to five MIT presidents beginning with the late Dr. Karl T. Compton and Dr. James R. Killian, Jr., now Honorary Chairman of the MIT Corporation. Mr. Dalton was chairman of the first major capital drive conducted by the Institute in its modern history—the Mid Century Campaign—which raised \$26 million for MIT during 1949-52. He also was the first chairman of the Corporation Development Committee which was established in 1952. At his death he was a member of the Development Committee, having served continuously for 24 years. He had participated in every major capital drive conducted by the Institute, including the present MIT Leadership Campaign which he was serving as a member of the National Sponsoring Committee. He was an honorary member of the MIT Alumni Advisory Council and in 1975 received a special award from the Corporation Development Committee.

Also during his service on the Corporation, Mr. Dalton served for 11 years (1952-63) as a member of the Corporation Executive Committee and was on the Corporation Investment Committee and the Corporation Membership Committee during the 1950s and 1960s. He was a member of five different Corporation Visiting Committees from 1934 to 1949: Hygiene, Civil and Sanitary Engineering, English and History, Student Activity and the Libraries. He had been one of the early leaders in the business and scientific communities to whom President Compton turned in the early 1930s to strengthen MIT's system of visiting committees.

Another area in which Mr. Dalton made major contributions to MIT was in the development of the Institute's strong retirement plans for staff and employees. Upon his own retirement, Mr. Dalton became a Trustee of the MIT Pension Association and worked with Mr. Joseph Snyder, then Treasurer of the Institute, in the strengthening and improvement of these plans.

Mr. Dalton also was a longtime leader in fraternity affairs at MIT and in the affairs of his own fraternity, Phi Gamma Delta. He was a leader in MIT's Alumni Interfraternity Council, was one of the founders of MIT's Independent Residence De-

velopment Fund, and for several decades played an active role in securing resources for fraternity housing at MIT. He was a former national president of Phi Gamma Delta and a longtime adviser and supporter for the Iota Mu chapter at MIT.

Born in Woodfords, Me., January 7, 1893, he was with Liberty Mutual Insurance Co., Boston, from his graduation from MIT in 1915 until 1934. He served Liberty successively as a safety engineer, district engineer, assistant branch office manager, branch manager, New England district manager and vice president.

He was president of Boston Manufacturers Mutual Insurance Co. and Paper Mill Mutual Insurance Co. from 1934 to 1958 and president of a third company, Mutual Boiler and Machinery Insurance Co., from 1937 to 1958. From 1958 to 1965 when he retired, he was chairman of the board of all three companies.

During his years in the insurance industry, Mr. Dalton played a major role in the development of the Factory Mutual System through which several associated fire insurance companies join in sponsoring engineering activity in loss prevention, risk evaluation and risk sharing.

Mr. Dalton also was a trustee of Northeastern University, Governor Dummer Academy, New England Baptist Hospital, and the Monadnock Community Hospital. He received an honorary doctor of engineering degree from Worcester Polytechnic Institute in 1959, and the Marshall B. Dalton Chair in Religion and Ethics was established in his honor at Governor Dummer Academy in 1969. He also was a Fellow of the American Academy of Arts and Sciences.

Survivors include his widow, the former Lydia White, and two daughters, Mrs. Lloyd Plummer of Dover, N.H., and Mrs. Porter S. Wood of Kingston, R.I.

Members of the family requested that contributions in lieu of flowers be sent to MIT in Mr. Dalton's memory or to the Heart Fund.

Laura B. Fabrizio

Laura B. Fabrizio of Arlington, a secretary in Graphic Arts from 1952 until her retirement in 1966, died Saturday, March 27, at the age of 75. She leaves no immediate survivors.

Funeral services will be held Wednesday, March 31 at 10am, at the Pleasant St. Congregational Church in Arlington.

Mary J. Farrissee

Mary J. Farrissee, formerly of Cambridge, a cashier for Dining Services from 1938 until her retirement in 1965, died Wednesday, March 24, in Fort Worth, Florida.

Mrs. Farrissee is survived by a daughter, Christine LoPiccolo of Waltham and a sister, Yvonne MacLaughlin of Florida.

Henry D. Warren

Henry D. Warren, formerly of Lowell, a senior clerk at Lincoln Laboratory from 1960 until his retirement in 1970, died Sunday, March 21, in Rhode Island. He was 71.

Mr. Warren is survived by his sons, Richard of Wayne, Pa. and Henry of Albany, N.Y.

Varsity Crew to Compete In San Diego Classic

MIT's heavyweight varsity crew will compete Saturday, April 3, in the San Diego Crew Classic, an event that involves some of the top crews in the nation.

The crew, which left Logan Airport Sunday, is staying aboard yachts owned by MIT West Coast alumni, some of whom are members of the Regatta Committee that organizes the rowing event, an activity supported by the citizens of San Diego. The Regatta Committee pays most of the expenses of the crews it invites. MIT Alumni also are supporting the crew's trip and the student athletes are meeting some of their own expenses, said Peter A. Holland, head rowing coach.

The MIT Alumni Club of San Diego will take the oarsmen on a yachting cruise of the harbor area the afternoon of April 1. Later that day the alumni organization will hold a reception at the San Diego Yacht Club for the MIT crew.

Some of nation's top teams are represented at San Diego, including Harvard, Wisconsin, Navy, the University of Pennsylvania, the University of Washington at Seattle and Oregon State.

Baseball

MIT's baseball team (5-2) played an extensive and successful string of games in Florida last week.

Tech opened their seven game swing of the South with a 7-6 win over Flagler College in St. Augustine on March 21st. Senior Steven Edelson (Levittown, Pa.) was the hitting star for MIT, collecting four singles in five at bats. The winning pitcher was senior righthander Mike Royal (Ayer, Mass.), who pitched five shutout innings, striking out three.

The next day in Daytona, MIT pummeled Embury Riddle College 12-1, which included nineteen hits for the Engineers. Big stick for Tech was senior shortstop Vin Maconi (Nashua, N.H.) who had a double, three singles and five runs-batted-in. The next day saw MIT entered in the 2nd Annual Invitational Baseball Tournament, hosted by Florida Bible College, at Hollywood, Florida. Tech opened the tourney with another decisive run-producing 11-1 victory over the Florida Institute of Technology. Mike Royal scored his second win of the young season, giving up one unearned run in the seven innings he pitched. Sophomore third basemen Jeff Felton (Youngstown, Ohio) and freshman designated hitter Pete Steinhagen (Princeton, Minn.) each had three singles. MIT made it four straight the next day, beating host Florida Bible College 6-1. Pete Steinhagen became the pitching star, giving up only one unearned run while striking-out five.

All good things must come to an end, however, as the next day saw Wesleyan, a traditional New England MIT opponent, bring MIT down to earth with a 19-9 romp. MIT's hitting continued, as they collected seven singles and a triple. Tech actually jumped out to a 6-0 lead in the first, but Wesleyan quickly took over with eight of their own runs in the third.

The next afternoon, MIT gained the finals of the tournament by beating a New England rival, Trinity College, 4-2. Mike Royal boosted his record to 3-0 by going the nine inning route, giving up two earned runs on ten hits.

Tech faced Wesleyan once again in the finals. The Engineers sawed the lead with Wesleyan and were leading going into the ninth, 9-8, to succumb 13-9 by a five run opponent's deluge.

Mike Royal was named the tournament's most valuable player and senior captain Roy Henriksson (Livonia, Mich.), at second base, was named the top defensive player.

MIT batted .287 as a team, not bad for anytime of the season. The top hitters on the trip were Pete Steinhagen .542, Vin Maconi .440, Jeff Felton .346 and Steve Edelson .313.

Lacrosse

The Tech lacrosse team (2-2) dropped their first two games of the season 9-3 to New York Tech and 12-7 to Dowling College. But as the second-year coach Walt Alessi had anticipated, his young MIT lacrosse team should and will improve as the season progresses.

On the third and last day of their Long Island "southern" trip, Tech took out their aggressions on York College of Queens, N.Y. 14-3. MIT jumped to a 5-0 lead at the quarter and it appeared as though they could score at will. So lop-sided was the game that junior Captain Jeff Singer (Plainview, N.Y.) had only two saves on goal and was switched to attack for the entire second half. Singer added insult to injury by scoring his first goal of his collegiate career. Freshman Al O'Connor (Collinsville, Conn.) scored six goals in the first half and saw limited action in the remainder of the game.

In the last game of the trip, Tech played the best game of the week, beating a more experienced University of New Haven 9-7. O'Connor added three more goals while sophomore Gordon Zuerndorfer (Lexington, Mass.) added two more. Jeff Singer was outstanding in goal, being credited with 28 saves. The Tech stickmen open their New England league schedule at Boston College on April 3rd.

Crew Schedule

MIT's men's and women's crew teams announced their 1976 intercollegiate schedules this week. The highly successful men's heavyweight eight posted a 10-2 season. Last year's varsity placed second in both the EARC Sprints and the IRA Championships. The varsity lightweight finished their season last year with a 4-3 record and placed sixth in the Sprints. The women's varsity crew team ended their 1975 season with a disappointing 2-5 record. The 1976 schedules for the three teams are as follows:

Heavyweight Crew

- April 3—at San Diego, Cal. in the San Diego Crew Classic
- April 17—at Columbia
- April 24—BU & Northeastern at MIT
- May 1—Harvard & Princeton at MIT in the Compton Cup
- May 8—Dartmouth & Wisconsin at Wisconsin
- May 16—Eastern Sprint Championships at Princeton
- May 23—Dartmouth & Syracuse at Syracuse
- June 3-5—IRA at Syracuse

Lightweight Crew

- April 17—Yale at MIT
- April 24—Harvard & Dartmouth at Dartmouth
- May 1—Columbia & Cornell at Columbia
- May 9—Penn. & Navy at Penn.
- May 16—Eastern Sprints at Princeton

Womens' Crew

- April 3—at UNH
- April 10—Brown & Wesleyan at Conn. College
- April 17—Princeton & Yale at Yale
- April 24—UMass & Dartmouth at MIT
- May 1—BU at MIT
- May 8—Cornell, Syracuse, UNH & Dartmouth at Dartmouth
- May 15—Women's Sprints at Worcester

POSITIONS AVAILABLE

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

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

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

Academic Staff, Technical Asst. in Biology will carry out experiments in protein chemistry and immunology using following techniques: gel filtration, column chromatography, immunodiffusion, peptide fractionation, radioactive labeling. Primary responsibility will be in operation of automated amino acid analyzer. Bachelor degree in Biology or Biochemistry, experience with Durrum D500 and/or Beckman analyzer, previous laboratory experience required. Position begins 9/1/76. C76-4 (3/31).

Admin. Staff, Systems Programmer, in Programming Development Office to work on design, implementation and documentation of subsystems and operating system modification for Multics, IBM System/370 and minicomputers. Applicants must be familiar with operating system design concepts and be capable of system programming in PL/I and assembler languages. At least 2 years of system design and programming experience required, preferably on IBM System/370 or Multics systems. Some familiarity with minicomputers also desirable. Bachelors degree, or equivalent combination of education and experience required. A76-7 (3/31).

Admin. Staff, Applications Programmer, in Office of Administrative Information Systems to translate detail specification into computer code; test code and documents program for operation use and future maintenance. Associates degree, or equivalent, 1-2 years experience in COBOL and one other language, familiarity with financial applications required. Ability to test, debug and document programs according to prescribed standards also necessary. A76-8 (3/31).

Admin. Staff, Industrial Liaison Officer to provide interface and act as liaison among MIT faculty and staff and member companies of the Program (major industrial firms). Duties also include solicitation of new member companies. Masters degree and at least 3 years industrial experience, or PhD in Chemistry or Food Technology, the ability to communicate effectively with corporate executives and technical staff required. Ability to speak and write French and German desirable. A76-9 (3/31).

Exempt, House Manager to manage overall function of individual housing unit and to supervise unit employees. Will help establish and monitor budgets; plan long-range housekeeping and maintenance programs. Requires high school graduation, or its equivalent, plus 3 yrs. supervisory experience. Must be familiar with housekeeping and large building maintenance; basic accounting, clerical procedures. Must be able to plan, monitor work schedules; order supplies, services. E76-8,9 (3/24).

Sponsored Research Staff, Technical Asst., in Architecture Dept. lab for research and teaching related to computer-aided design. Duties include new facility design, assisting students and supervision of equipment maintenance. Candidates must have experience in digital circuit design, digital systems, computer graphic technologies, organization and administrative skills, knowledge of PL/I and LISP programming language. Position begins 8/1/76. D76-40 (3/24).

Exempt, Microbiology/Histology Technician (Veterinary) to diagnose pathogenic microorganisms in laboratory animals; prepare and stain activities of the laboratory. Formal education as well as practical training in histology and microbiology required. Candidates must be knowledgeable concerning the pathogenic microorganisms present in animals and, preferably, have a bachelors degree in a biological science. E76-10 (3/31).

Technical Asst. IV in the Energy Lab will compile and edit data for use in technical reports, budgets and financial reports; prepare inputs for computer program and read outputs. Will also assist with clerical duties; answer; type; file; monitor accounts. Facility with figures, familiarity with computer

programming, ability to compile graphs and tables required. Typing skill also necessary. B76-122 (3/31).

Tech. Asst. IV, part time in Architecture, Design Evaluation Project, a post-construction evaluation of federal housing for the elderly. Duties include field work, data analysis, report preparation. Techniques used are interviewing, observation, behavior mapping and photography. BA in Architecture, or related field, strong design background including drafting experience, familiarity with behavioral science methodologies required. Candidates should also be able to do qualitative analysis of data and have written and graphic communication skills. 20 hrs/wk. B76-107 (3/24).

Secretary IV to Science Librarian and professional staff: type correspondence, reports; sort and distribute mail; prepare payroll reports; maintain files and records; collect fines; coordinate maintenance and repair; handle meeting room reservations. Secretarial school training plus two years experience necessary. Candidate must have organizational ability and be able to work without close supervision. B76-109 (3/24).

Secretary IV to three Chemistry faculty members: type correspondence, technical manuscripts, course materials; arrange appointments and travel; monitor research accounts. Ability to set priorities, good typing skill, experience with dictation equipment necessary. B76-113 (3/24).

Secretary IV in Chemistry Dept. to faculty member/Editor of the *Journal of Organic Chemistry*: will process large volume of manuscripts; maintain journal statistics; type reports, course material and handle other routine secretarial duties. Organization skill, ability to handle detailed work, English grammar skill, good typing required. Minimum of 2 years experience preferred. B76-112 (3/24).

Receptionist-Secretary IV in the MIT Planning Office to greet visitors, answer phones; answer inquiries about Office projects; provide information in Institute physical facilities or refer such inquiries to appropriate department or person. Will also assist with typing and other office duties as required. Typing skill, secretarial experience required. Familiarity with MIT, editorial and writing skills preferred. B76-108 (3/24).

Secretary IV in the Office of the Dean, School of Humanities and Social Science will handle general secretarial duties for Dean, Associate Dean and Administrative Officer; type; maintain calendars; answer phones; file. Will also act as information resource for student on matters such as Humanities programs, registration procedures, etc. Must have excellent typing and organizational skills. Flexibility, ability to work in service-oriented capacity and under occasional pressure also required. B76-115 (3/24).

Secretary IV to 3 Chemistry Department faculty members to type correspondence and technical materials (class notes, manuscripts, reports); answer phones; files; arrange travel and appointments; monitor accounts; answer student inquiries. Requires good typing and organization skills, flexibility, initiative. 2-3 years secretarial experience preferred. B76-117 (3/24).

Editorial Secretary IV in Graphic Arts to prepare camera-ready justified and tabular materials on IBM proportional spacing electric typewriter; operate Compugraphic Compu-Write I, II and 7200 phototypesetting and photo-reading systems. Knowledge of typesetting terms, justification, quadding, leading, kerning, type styles, specification, required. High school graduate or equivalent, excellent typing and relevant working experience required. B76-19.

Secretary IV to the Administrative Officer, Chemical Engineering. Duties include transcribing shorthand and machine dictation, maintaining files, grant and contract records. Will assist in departmental visit arrangements. Previous office experience and preferably, secretarial school training required. Applicants should be able to organize and complete work with minimal supervision, to deal effectively with wide variety of people and be experienced in shorthand and machine dictation. B75-543.

Secretary III-IV in Treasurer's Office to perform general office duties: type correspondence, other materials; draft simple letters; file; answer phones; arrange appointments and travel; open and distribute mail. Will also handle office expense accounts; order supplies. Required excellent typing and organization skills, shorthand, flexibility. Knowledge of investment and financial terms desirable. Non-smoking office. B76-120 (3/31).

Secretarial III-IV in the MIT Associates Program to transcribe shorthand dictation; arrange travel; maintain files. Secretarial or business school training, shorthand, English grammar skill, familiarity with office procedures required. 1-2 years secretarial experience helpful. B76-110 (3/24).

Secretary III in the Industrial Liaison Office to assist in Conference preparations: type related materials; phone registrations; assist in registration process; handle travel-related duties: reservations, cash advances, itineraries; compile statistics; sort and distribute mail; may assist other secretaries or staff in peak loads. Strong typing skill, pleasant phone manner required. Familiarity with MT/ST and dictation equipment helpful, but not required. B76-114 (3/24).

Lib. Asst. III in Libraries Collections Development Dept. will be responsible for the acquisition of an assigned portion of current journals and serials: record and process materials on visible files; claim outstanding materials; process invoices, credits, charges; type new Kardex forms. Will also answer inquiries about receipt of materials and sort incoming periodicals on assigned days. Required typing ability, capacity

for detail. College or business school background plus knowledge of at least one foreign language desirable. B76-123 (3/31).

Clerk/Keypuncher III in Physical Plant to keypunch (will be trained) on Inforex data input machines or IBM 129 keypunchers from varied sources. Will also provide clerical backup: type purchase orders; process invoices; batch source documents; answer phones. Excellent typing, 1-2 years office experience required. B76-65 (3/31).

Waitress/Waiter, Set tables, take orders, serve food and beverages on banquet trays. Clear and reset tables. Dust chairs, wipe table clean. Experience is helpful but not necessary. 11am-3pm, Mon.-Fri. Position may include some week-end shifts.

Hourly, Cook's Helper, in the Food Service to prepare and cook vegetables; prepare and grill breakfast foods or other short order items; provide general assistance in kitchen; maintain clean, sanitary work area; perform other related duties as required. 1 year experience in quantity cooking, as well as the ability to read and understand recipes in English language required. MIT experience preferred. 40 hrs./wk. H76-32 (3/31).

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:

- A75-65, Acquisitions Editor, MIT Press (12/3)
- A75-71, Documentation Mgr., Off. of Admin. Inf. Syst. (1/7)
- A76-2, Prog. Analyst, Inf. Proc. Center (2/18).
- A76-4, Systems Programmer, Inf. Proc. Center (2/25)

BIWEEKLY:

- B76-69, Tech. Asst. V, Medical Dept. (2/25)
- B76-83, Sec. IV, Medical Dept. (3/10)
- B76-90, Sec. IV, MIT Devel. Foundation (3/17)
- B76-91, Sr. Clk. IV, Comptrollers Benefits Office (3/17)
- B76-93, Sec. IV, Mechanical Eng. (3/24)
- B76-97, Sec. III-IV, Elec. Eng./Computer Sci. Dept. (3/24)
- B76-98, Jr. Accounting Clk. III, Summer Session Office (3/24)
- B76-99, Editorial Sec. IV, Nutrition & Food Science (3/24)
- B76-100, Sec. IV, Resource Devel. (3/24)
- B76-102, Sec. III-IV, Res. Lab. Elec. (3/24)
- B76-103, Clk. Typist III, MIT Devel. Office (3/24)
- B76-104, Sec. IV, Nutrition & Food Science (3/24)

ACADEMIC STAFF:

- C76-3, Systems Analyst/Sr. Systems Analyst, Medical Dept. (3/24)

SPONS. RES. STAFF:

- D75-48, Economist, Energy Lab. (6/25)
- D75-120, Systems Programmer, Lab. for Nuc. Sci. (11/26)
- D75-161, Economist/Policy Analyst, Energy Lab. (9/10)
- D75-219, continuing education, Chemical Eng. (11/15)
- D75-229, Research Engineer, Energy Lab. (11/19)
- D75-232, Programmer, Center for Space Research (11/26)
- D75-243, postdoc. res., computer science, Artificial Intell. Lab. (1/7)
- D75-244, postdoc. res., computer science, Artificial Intell. Lab. (1/7)
- D76-249, postdoc. res., Physics, Lab. for Nuclear Sci. (1/14)
- D76-250, postdoc. res., Physics, Lab. for Nuclear Sci. (1/14)
- D76-7, Project Coordinator, Energy Lab. (1/28)
- D76-12, postdoc. res., National Magnet Lab. (1/28)
- D76-14, Tech. Asst. Arteriosclerosis Center (2/18)
- D76-17, Biochemist, Res. Lab. Elec. (2/25)
- D76-18, postdoc. res., Lab. for Nuclear Sci. (3/3)
- D76-19, postdoc. res., Lab. for Nuclear Sci. (3/3)
- D76-21, Data Analyst, Energy Lab. (3/3)
- D76-22, Laser Physicist, National Magnet Lab. (3/3)
- D76-23, Programmer, Lab. for Comp. Sci. (3/10)
- D76-24, Programmer, Artificial Intell. Lab. (3/10)
- D76-28, Energy Analyst, Energy Lab. (3/17)
- D76-30, Staff Scientist, Neurosciences Res. Program (3/24)
- D76-31, Staff Scientist, Neurosciences Res. Program (3/24)
- D76-32, Staff Scientist, Neurosciences Res. Program (3/24)
- D76-33, Computational Physicist, Res. Lab. Elec. (3/24).
- D76-34, Project Coordinator, Energy Lab. (3/24)

EXEMPT:

- E76-7, Nurse Practitioner or Physician Asst., Medical Dept. (3/24)

HOURLY:

- H75-55, Tech. B., Lab. for Nuclear Sci. (6/25)
- H75-143, 2nd. Cl. Eng. (10/15)
- H76-20, Cook, Endicott House, Dedham (2/25)

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

- B76-56 Sec. IV
- B76-92 Lib. Gen. Asst. III
- A75-74 Admin. Staff
- B76-89 Clk. Typist III
- C75-34 Admin. Staff
- B76-116 Sec. IV "CANCEL"

The following positions are on HOLD pending final decision:

- B76-94 Sr. Clk. III
- B75-590 Sr. Clk. III-IV
- D76-25 Spons. Res. Staff
- B76-8 Lib. Asst. III



CONGRATULATIONS AND A WELCOME TO MEMBERSHIP were extended to some 110 MIT employees who were inducted into the Quarter Century Club at its annual meeting Tuesday, March 23. Being greeted by Robert Radoecchia, chairman of the board of the Quarter Century Club are, left to right, Salvatore Lauricella of the Dining Service, Rebecca Fairbank of the Draper Laboratory, Elizabeth Piggott of the Office of the Honorary Chairman of the Corporation,

and Michael Blaho, Jr., of the Francis Bitter National Magnet Laboratory. Jeri Whitman of the Draper Laboratory, president of the Club is shown at the lectern. Altogether some 500 members of the community attended the banquet—an elegant seven-course dinner prepared and served by the Walker dining staff.

Nutritionists Should Consider Eating Habits, Study Shows

By BARBARA BURKE
Staff Writer

Telling people what foods are good for them is not enough to get them to eat properly, an MIT researcher told nutritionists and community aides at a meeting in Sturbridge, Mass., Wednesday (March 24).

"It doesn't do any good for nutritionists to advise people to eat certain foods if those foods happen to be unacceptable for reasons unrelated to nutrition," Dr. Judith Wurtman explained at the University of Massachusetts annual Conference on Nutrition Education.

Recommending pork to an orthodox Jew, or kale for lunch to a person who eats lunch at a fast-food restaurant, is sound nutrition—but useless advice, she said.

Instead, nutrition educators must make their advice fit the habits, incomes, customs and preferences of the people they are trying to help.

Dr. Wurtman, a research associate in the MIT Department of Nutrition and Food Science, and author of a forthcoming book on nutrition and the American way of eating, presented her analysis of "What and Why People Eat" to an audience of faculty from the University of Massachusetts College of Food and Natural Resources, and extension program aides who work with low-income homemakers.

For many years, she said, nutrition educators worked on the assumption that if people were properly advised, they would eat three well-balanced meals a day.

They failed to take into account the fact that various groups, because of economic status, religious or ethnic background, or location, find certain foods "unacceptable, unattainable or inedible."

She also pointed out that Americans now eat more than a third of their meals outside the home—increasingly in fast-food restaurants. Although the protein content of such meals is often adequate, she said, one rarely finds turnips and kale listed among the hamburgers and french fries routinely served at such places.

But people who eat in fast-food places could compensate for such deficiencies by eating more fruits and green vegetables at other meals.

Dr. Wurtman stressed the impor-

Baltimore to Speak To N.Y. Alumni

Dr. David Baltimore, 1975 recipient of the Nobel Prize in Physiology or Medicine and American Cancer Society Professor of Microbiology at MIT, will be the main speaker at a luncheon meeting sponsored by the MIT Alumni Center of New York, Wednesday, April 7, at the University Club (1 West 54th St., N.Y.).

The Center, representing the second largest concentration of MIT alumni in the world, acts as a "branch office" for all Institute academic and administrative activities in the greater New York area. In addition, it is serving as a principal coordinating center for MIT's \$225 million Leadership Campaign over the next five years.

Dr. Baltimore, 38, who is a native New Yorker, will speak about "Viruses and Cancer."

tance of helping people who are especially likely to suffer from inadequate diets, such as pregnant women and children, who have special needs for iron, folic acid and calcium.

These nutrients, she said, are often difficult to obtain in adequate amounts even with a "normal" diet, and require careful, not casual, meal planning.

Another group with special nutritional needs are the elderly, Dr. Wurtman said: they are often too poor to buy foods with the nutrients they need, or are unable to prepare them because of poor health.

Concert Features Arabic Music

A lecture and demonstration by a leading European interpreter of early Arabic music will be given at 5:15pm Wednesday, March 31, in the Music Library.

Fawzi Sayeb, who appeared recently as guest performer with the Boston Camerata, will speak about improvisation on the oud, the Arabic instrument which is the ancestor of the European lute, and illustrate his talk with selections played on the oud. Joel Cohen, director of the Boston Camerata, will serve as translator.

Fawzi Sayeb was featured in 12th century troubador songs in the Camerata's program, "Mediterranean Crossroads: Music of Provence, 1200-1700," which illustrated the influence on southern France of the Arabic civilization of Moorish Spain.

Black Lectures Are Rescheduled

The two lectures by Professor Max Black, Sage Professor of Philosophy at Cornell University which were previously cancelled, have been rescheduled.

The Rationality of Voting will be held Monday, April 5, at 4pm in Rm 4-145.

Tensions between Humanism and Technology will take place Tuesday, April 6, at 4pm in Rm 9-150.

The lectures are sponsored by the Department of Philosophy, the Technology Studies Program and the Technology and Culture Seminar.

Noble to Speak

Historian David Noble, Mellon Fellow in Humanities and Engineering at MIT, will speak on "A Technology of Social Production: Modern Management and the Expansion of Engineering" at the Technology Studies Seminar Wednesday, March 31, at 4pm in Room 20D-205.

Dr. Noble, author of the forthcoming book *America by Design: Science, Technology and the Rise of Corporate Capitalism* (Knopf, 1976), will discuss the evolution of management as technology, and focus on the incorporation of human and social variables in engineering theory and practice.

Talbot House Openings

Talbot House, MIT's retreat in South Pomfret, Vt., has openings available in May. All MIT groups are eligible to apply to use Talbot House. For further information, call Dean Jon Hartshorne, x3-7974.

Major Awards Nominations Due

Nomination deadlines are coming up for major awards to be presented at the annual Awards Convocation, May 6, in the Little Theatre.

Deadline for nominations for the Goodwin Medal is Monday, April 5.

The Goodwin Medal, consisting of a medal, scroll and cash gift, honors a graduate student for conspicuously effective teaching. Nominations, including supporting documentation, should be submitted to the Office of the Dean of the Graduate School, Rm 1-136.

Deadline for nominations for Compton, Stewart and Murphy Awards is Wednesday, April 7.

Karl Taylor Compton Awards—the highest awards given to students—recognize excellence and devotion to the MIT community in any area on the basis of lasting or sustained contributions.

William L. Stewart, Jr. Awards honor significant achievement by students for outstanding contributions to particular activities or events.

The James N. Murphy Award is given to an Institute employee for inspired and dedicated service, especially with regard to students.

Nominations for Compton, Stewart and Murphy Awards should be directed to the Awards Selection Committees, Rm 7-101.

Weizenbaum Book

Computer Power and Human Reason by Joseph Weizenbaum, professor of computer science and engineering in the MIT Department of Electrical Engineering and Computer Science, has been published by W.H. Freeman and Co., San Francisco (\$9.95).

Professor Weizenbaum argues in his book that there are decisions in human affairs that computers cannot make because elements of human intelligence cannot be transposed to machines.

Letter

(Continued from page 1)

MIT community that the Institute is an open university whose public meetings can be attended by all who come on campus and who adhere to Institute requirements of good behavior. MIT is also a university committed to assuring the free exchange of information and ideas. The SACC Forum was an example of that exchange. Consistent with the principles of an open university it is Institute policy to permit all members of the community to speak freely at open meetings. We would view it as being wholly improper for any member of this community to have his freely given public remarks place him in any personal, political or legal jeopardy by any kind of governmental investigative agency.

"While we reaffirm the openness of our campus, we would be indignant if any person came onto this campus for purposes of spying or surveillance. Any person present in the United States as an agent for a foreign government must register with the United States Department of State and sanctions are imposed for failure to do so. Information concerning 'spying' activities will be referred to the Department of State.

"Dr. Menand is continuing his inquiries into this incident."

Theory Suggests Cygnus X-1 May be Obese Neutron Star

(Continued from page 1)

assumption that at densities above nuclear density, nuclei are still governed by the laws that govern them at lesser densities.

But no one knows how matter behaves at the central densities of a neutron star. So Professor Brecher and Caporaso decided to see how massive a neutron star could be constructed if one ignored the previous assumptions, and set only two conditions: that the speed of sound throughout the core of the star is equal to the speed of light, and that the usual description of nuclear matter applies below nuclear densities.

Under those conditions, they found that they could make mathematical models of neutron stars up to five times as massive as the sun. They also made a model of a neutron star based on a more restrictive model of nuclear matter—the MIT "bag model" of Professor Kenneth Johnson, in which sound travels more slowly than light. With this model, they found that neutron stars could be three times as massive as the sun.

No one knows which model is correct—one of these two or one of the other models that have been proposed. But in the next few years, astrophysicists expect to learn the masses of many more neutron stars.

Then physicists will be able to test their theories against these masses, and to determine how matter does behave—not just how it could behave—at extremely high densities.

In the meantime, Professor Brecher's calculations contribute to the continuing debate about black holes, which were first predicted in 1796 by the French mathematician and natural philosopher Pierre de Laplace.

If black holes exist, they are ob-

Secretaries

(Continued from page 1)

volves spending time on boats at sea.

Marge Meyer, secretary to Professors Morris Cohen and Carl Floe in the Department of Materials Science and Engineering, has worked at MIT for 29 years. She travels to such places as Washington, DC, Philadelphia, and La Jolla, Cal., working on Professor Cohen's professional activities.

Alice Moriarty, secretary to Dean William Pounds of the Sloan School of Management, has worked at Draper Laboratory and on campus in a variety of responsible positions for 26 years.

Rosemary Carpenter, secretary to Professor Jean Louis in the Energy Laboratory, has held secretarial positions at the United Nations, in Geneva, Switzerland, and in Vienna, Austria.

All are welcome to attend the meeting.

Hobby Shop Overhaul

It's time for spring cleaning and the MIT Hobby Shop is no exception.

The Shop is reorganizing storage facilities, according to Shop supervisor George Pishenin. Before new storage shelves can be built, all lumber and projects must be claimed by Shop members.

Lumber and projects not claimed by April 5 will be discarded.

jects where gravitation has won out over the other physical forces that normally keep elementary particles at a comfortable distance from each other.

Any matter venturing too close to a black hole would be swallowed up, never to be seen again. Just what happens to it in the black hole cannot be determined, either experimentally or theoretically.

Each black hole is surrounded by an "event horizon," whose size depends on the mass of the black hole. No radiation can escape the event horizon—so there is no way to study what is going on inside.

And at present it is impossible to predict the behavior of matter in a black hole, Professor Brecher said, "since there is not yet a quantum theory of gravity."

To search for these secretive objects, physicists look for steady streams of x-rays coming from extremely massive objects. The theory is that matter falling into a black hole would emit a last gasp of x-rays before it enters the event horizon.

But matter falling onto a neutron star also emits x-rays, so the crucial factor in identifying a black hole is its mass. Just how massive does a neutron star have to be before the last bulwarks against gravity are overcome?

In 1939, when J. Robert Oppenheimer showed that there is a limit to the mass of a neutron star, this question was academic. The first non-solar x-ray source in the sky was discovered only in 1962.

"Now that we know a bit about the properties of several neutron stars, we want to know more precisely the upper limit to their allowed masses," Professor Brecher said.

But Professor Brecher, who admits that he is "not a black hole aficionado," says that finding an object more massive than five solar masses would still not be proof of the existence of black holes.

The theory of General Relativity allows black holes—"but the theory of General Relativity has been tested only in a limited domain," he said.

"If there is any place where General Relativity might go wrong, it would be where the gravitational field is either very strong or very weak, compared to what we are used to in the solar system or even in our galaxy."

There are at present two interesting alternative theories, he said—one advanced by Nathan Rosen, the other by Huseyin Yilmaz—that satisfy all known observational tests in the solar system, but which don't predict black holes.

Brecher and Caporaso are now working with those theories, to see what they do predict for a neutron star that carries "obesity" just a bit too far.

Sheridan Co-directs NATO Symposium

Professor Thomas B. Sheridan of the MIT Department of Mechanical Engineering was co-director of an international symposium, "Monitoring Behavior and Supervisory Control," held earlier this month in Berchtesgarden, West Germany.

The symposium, sponsored by the Scientific Affairs Division of NATO, is organized to convene scientists and engineers who are doing theoretical and practical work in dealing with complex man-machine relationships in controlling vehicles and large-scale processes.