Inside:

Massachusetts Institute of Technology

TECH TALK

November 14, 1973
Volume 18
Number 19

More Heat Reductions Certain In Wake of MIT Fuel Oil Cut

Daytime temperatures at MIT "simply are going to have to be lowered" if the Institute is to remain open in the face of a 30 percent cut in anticipated winter fuel oil supplies, Director William R. Dickson of the Physical Plant Department said this week.

In the first seven days after the oil cut was announced—retroactive to Nov. 1—Physical Plant engineers were able to cut overall oil consumption by about 15 percent by reducing nighttime and weekend heat from ventilation systems in most central buildings, he said.

"These are the easiest steps, of course," Dickson said. "But we know they are not enough. We must make even more heat reductions—and we must have the help of everyone who lives or works here—if we are to get through the winter with only 70 percent of the oil we need."

Several additional steps having to do with nighttime and weekend heat reductions and with reductions in average temperatures of domestic hot water supplies are being—or soon will be—put into effect, Dickson said.

"After we have done all these things, we will begin to know how much we have to reduce average daytime temperatures in order to get through the year with available oil," he said.

"We'll begin—probably within several days—by bringing average daytime temperatures down to approach government standards."

Under normal conditions, Dickson said, average daytime temperatures at MIT are around 74 degrees.

Older buildings at MIT are heated primarily by perimeter steam radiators, supplemented by ventilating systems that draw cold air from the outside, heat it through steam coils and blow it into the building interiors. Newer buildings are heated either by hot air from central ventilating systems supplemented by perimeter heating beneath windows or by the ventilating systems alone. Initial oil savings so far have been realized by reducing or eliminating operation of some selected ventilating systems.

Alternate fuels offer no solution for the MIT fuel crisis, Dickson said.

Institute equipment, Dickson said, was converted shortly after World War II and no longer is able to burn coal.

Natural gas could be used, but is as unavailable as oil, Dickson said. As a matter of fact, the Institute burns only natural gas in the summer and is a summertime customer of the Commonwealth Gas Co. That company, however, has had its own supplies cut and has told the Institute it cannot

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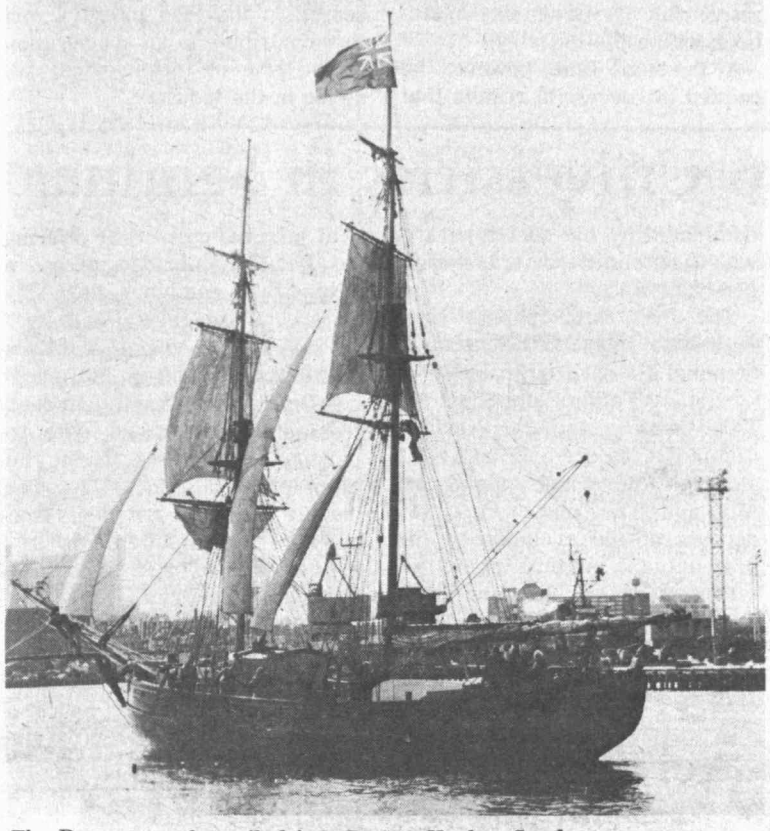
See related stories on Page 3: An MIT meteorologist sees a mild winter ahead for eastern US—and suggestions on how to help the Institute conserve heat.



The Beaver as she sailed into Boston Harbor Sunday.

Photo by W.A. Baker

MIT Aided in Beaver Rigging

A replica of the brigantine *Beaver*, one of the three ships on which the Boston Tea Party took place, arrived in Boston Harbor this weekend—several months late but still in time for the kickoff of Bicentennial activities December 16, the 200th anniversary of the Tea Party.

The new *Beaver* was a Baltic sailing coaster, rerigged in Denmark to represent a brigantine. Further authentication of the ship will be carried out while she is berthed in Boston. Plans for the rigging and other work were drawn by William A. Baker, naval architect and curator of Hart Nautical Museum.

The *Beaver's* voyage to Boston was beset with difficulties. After leaving Denmark, where the basic conversion was completed, she encountered engine trouble and stopped in Amsterdam for repairs.

From Amsterdam she sailed to Weymouth, England, to take on a cargo of tea. While there she suffered a fire and Mr. Baker flew to England to draw plans for repair of the fire damage.

The *Beaver* arrived in Nantucket last week, sailed on to Martha's Vineyard for a picture taking session, and arrived Sunday in the Boston Fort Point Channel at the Congress Street Bridge.

The *Beaver* and an accompanying permanent historical exhibit, operated by Boston Tea Party Ship, Inc., will open for public inspection December 1. Admission will be $1 for adults and 50 cents for children.

The *Beaver* is also the subject of a two-panel exhibit in Hart Nautical Museum which shows the new rigging plan and photographs of the new *Beaver's* conversion and voyage.

Environmental Engineer To Direct Energy Squeeze

With a utility bill of $3.5 million a year and growing and major fuel and energy problems threatening, MIT is in the market for an environmental engineer to organize and direct an energy conservation program.

"Over the past few years, MIT has reduced its energy needs, generally so that a five percent saving is built into its annual requirement," Thomas E. Shepherd, Jr., superintendent of utilities, said.

"However," he said, "we are convinced we could save 10 to 20 percent more through economies in specific areas. The person we are seeking will determine where those economies can be made and carry out procedures to affect them."

The new position is not specifically related to the current oil crisis at MIT, Shepherd said. Had such an individual been in place with a conservation program in effect when a 30 percent cut in winter oil supplies was announced a week ago, however, "he or she would have been of great assistance in planning our responses."

As an example, Shepherd cited fume hoods found in many laboratories at MIT. They protect students and researchers from noxious or toxic fumes and use large amounts of circulating air, causing a drain on the heating system. If use of the hoods could be consolidated heating those laboratories would be more efficient and economical, he said.

Another area for study, Shepherd said, is air conditioning systems which are self contained in some MIT buildings. Buildings erected since 1965 are cooled by a central chilled water plant.

Shepherd said a person with a degree in electrical engineering is being sought. "But," he said, "we really want a person with knowledge of building mechanical systems who has experience in engineering design and building operation."

The position has been advertised in *Tech Talk* since September and more recently was listed in the *Boston Globe*. Later this month it will appear in *The Spokeswoman* and the *New York Times*.

Faculty from 6 Universities Participate in New Humanities Seminar

MIT has taken the lead in organizing faculty members from six universities into a collaborative effort—called the Cambridge Humanities Seminar—to enrich and diversify curriculum offerings in the humanities in the Boston-Cambridge area.

A central goal is to broaden the study of humanities at MIT beyond the elementary-level subjects now offered by making available a program for advanced studies to students from MIT and the other co-operating universities.

The program, which is supported by a $30,000 grant from the National Endowment for the Humanities and a $7,500 supplementary grant from MIT, also is seen as a step toward inter-university teaching programs involving the cross-registration of students.

Dr. Harold J. Hanham, dean of the MIT School of Humanities and Social Science, said "While the program's immediate goals are limited to the humanities, the approach touches on central issues facing all colleges and universities in a period of rapidly-escalating costs—how by sharing their intellectual resources, several universities can each provide its students with the widest choice of educational opportunities without compromising academic quality."

The new program was organized by Professors Eugene Goodheart and Alvin C. Kibel of the MIT Department of Humanities, who serve as directors. Joel Orlen, assistant to the MIT provost, who often plays an organizational role in co-operative inter-university programs at the Institute, is in charge of administrative arrangements.

In the first phase of the program this school year, 14 professors from MIT, Harvard, Boston University, Brandeis, Wellesley and

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Professors Goodheart and Kibel, and Mr. Orlen. —Photo by Margo Foote

Open Meeting to Inaugurate Food Industry Technology Program

An effort to apply new technology to the food industry, as one way of bringing about lower food costs, is being launched at MIT.

The project, which will include a series of workshops, is designed to develop a working relationship between engineering and scientific personnel and operation executives of the food industry.

The program has been given the name TAFI, for Technology Applied to the Food Industry, and will be inaugurated with an open meeting Thursday, Nov. 29, at MIT, to determine the extent of interest in the scientific community and to outline some of the critical areas that require new technology in the food industry.

The meeting is to be held from 4 to 6pm in Room 9-150, the Center for Advanced Engineering Studies. It is open to students, alumni and faculty from MIT and other universities in the Boston area, as well as equipment manufacturers and food industry executives.

Also being planned is a symposium this summer that would attract scientists and operating personnel in the food industry from throughout the United States.

The TAFI program will be administered by faculty members from three departments of the university—Dr. Gordon F. Bloom, senior lecturer in the Alfred P. Sloan School of Management and former president of the Elm Farm supermarket chain in Massachusetts; Dr. Murray Eden, professor of electrical engineering in the Department of Electrical Engineering; and Dr. Samuel A. Goldblith, Underwood-Prescott Professor of Food Science and the associate head of the Department of Nutrition and Food Sciences.

Initial funding for TAFI has been provided by the National Commission on Productivity.

The new program is an outgrowth of a successful effort by food industry executives and MIT faculty members who joined during the past year in a cooperative research program to decide on the best symbol for use in an automatic checkout system.

The system will soon become operational in the food industry, and is expected eventually to come into general use in department stores and other retail outlets.

"One thing we learned from that undertaking," Dr. Bloom said, "was that most engineering and scientific personnel at MIT are unaware of the problems that exist in the food industry and of the opportunities which exist for the application of new technology to lower food costs. But once the problem has been clearly delineated, scientists can make major contributions in achieving significant advances in technology in the industry."

Dr. Bloom said that a "productivity crisis" in the food industry has been a major cause of the inflation in food prices. The industry must find a better way to improve its distribution system, he said, "and this can only come about through research and a systematic approach on the part of the entire industry."

"In view of the unprecedented inflation which has occurred during the past year, the need for a new approach to improving productivity is apparent," he said. "The TAFI program represents an effort which can make an important contributon to lowering food prices if it is given the proper support by concerned personnel."

Professor Eden, who played a key role in the selection of the symbol for the food industry's automatic checkout system, cautioned against expecting any "quick cures" from establishment of the TAFI program.

He said it would probably take a number of years until real understanding was developed between those responsible for the advancing of technology and those responsible for day-to-day operations within the industry.

At the same time, however, he pointed to successful results that have been achieved in a program developed at MIT between the School of Engineering and the printing industry. He said he thought that similar "cross-fertilization of ideas" with food industry personnel should hold forth the possibility of similar success.

Professor Goldblith, who for many years has chaired the Underwood-Prescott symposium on food science and nutrition at the Institute, said a summer symposium, which is included in TAFI planning, could become an annual "clearing house for new ideas and forum for discussion with respect to technological applications to the food industry."

Like the Underwood-Prescott lectures, he said, the TAFI symposium "could assist in the dissemination of the latest knowledge about current experiments and research in the food industry and thus contribute to an acceleration of the rate of technological advance in the industry."

King Named Project Officer

Appointment of James T. King as Project Officer in the office of Resource Development at MIT has been announced by Gen. James B. Lampert, vice president for resource development.

Mr. King will assume administrative responsibility for projects of high funding priority, particularly in staff coordination and assistance to senior Institute officers. Initially he will concentrate on completing the funding for the chemical engineering building, assisting Howard W. Johnson, Chairman of the Corporation, and Professor Raymond Baddour, head of the chemical engineering department.

Mr. King came to MIT in 1953 and was appointed to the academic staff as technical instructor in the Materials Division of the Department of Civil Engineering in 1968. He is currently project director for the Medication Delivery System Project at the MIT Urban Systems Laboratory in collaboration with Boston University and the Massachusetts College of Pharmacy.

Until recently, Mr. King represented MIT on the Boston Mayor's Committee on the Urban University for interaction between high schools and local universities.

He is a member of the Corporation of the Massachusetts College of Pharmacy and visiting lecturer in the department of liberal arts there, and also is special consultant to the president, Dr. Raymond Gosselin.

Women's Forum Sees Two Skits

Two skits, "Professor Procrastinator" and "The April Salary Review," were premiered before a full audience at the Women's Forum last Monday.

The skits, which illuminate the treatment of women at MIT, were written by members of the Forum for presentation as a consciousness raising effort. Performers included members of the Forum and others who have been active in the formulation and implementation of MIT's Affirmative Action Plan.

Additional performances are planned for IAP as a basis for a skit writing and performing workshop sponsored by the Forum. People—both male and female—and ideas for more skits are being sought.

Pianist to Perform

Pianist Yasuo Watanabe will perform with the MIT Symphony Orchestra in its first concert of the season Saturday, Nov. 17, at 8:30pm in Kresge Auditorium.

The orchestra, under the direction of David Epstein, will feature the Overture to the *The Marriage of Figaro* by Mozart, the Prokofiev *Piano Concerto No. 3* and the Sibelius *Symphony No. 2.*

The concert will be sponsored by the MIT Music Section. Tickets will be $1 at the door.

Award for Emblem

Joseph F. Kuchta of Medford, a member of the MIT Safety Office staff, is the designer of a new emblem adopted recently by the national Campus Safety Association.

Dr. Peter P. Gil, (right) associate dean of the Sloan School of Management and co-chairman of the board of trustees of the Community Service Fund, is one of the volunteer chance sellers for The Trip, the Quarter Century Club sponsored tour to Rio de Janeiro, January 22-30. Buying some chances is John M. Wynne, vice president for administration and personnel. Chances will be available through Friday, Nov. 16, with the drawing scheduled at 1pm Monday, Nov. 19, in the Bush Room, 10-105.

Faculty from 6 Universities in Seminar

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Yale are holding bi-weekly seminars.

The professors, representing seven disciplines, are examining a common subject—the idea of the past as it plays a role in the study of various cultural activities.

The seminar members present original papers on this theme for discussion by the group and collaborate in developing new courses, using the discussions as the basis for the advanced instructional program.

In the second phase of the program next year, for which the organizers are now seeking additional funds, some of the seminar members plan to teach newly-developed courses to classes of cross-registered students from the participating schools.

The courses can be taught at the home school of the instructor, but MIT will provide a central teaching location along with a reading room and library to stimulate interaction among students and faculty.

The announcement of new curricular offerings will be made in time for fall registration next year.

At the same time, a second faculty group will be organized to generate still another new cirriculum in the humanities.

Professor Goodheart said that the theme for this year's seminar "seemed particularly appropriate at a time when consciousness is so dominated by the contemporary, with a consequent loss of historical perspective."

The first three papers have dealt with "Past and Present in Stendhal's *Charterhouse of Parma*," "Fathers and Sons: the 19th Century and the Oedipal Complex" (as exemplified by the story of James and John Stuart Mill) and "The Future's Past" (an account of the evolution of the museum as a cultural institution.

Professors Goodheart and Kibel, in their proposals for funding, said that all the faculty members participating "are committed in principle to a multi-institutional and interdisciplinary program."

They said the development of the program would be flexible, allowing for changes in the number of universities and disciplines that would be involved.

The professors said that the seminar was conceived "as a contribution not only to MIT but also to the Boston-Cambridge area."

"The sense of intellectual isolation and demoralization is not confined to MIT," they said, adding that the program would provide "for the first time an ongoing forum where representatives of various humanistic disciplines can educate one another while addressing subjects of mutual interest."

"A salutary effect of our proposal," they said, "would be to enrich the faculty at MIT by inviting distinguished outside faculty at minimal cost, while offering the Boston-Cambridge area a forum that combines scholarly work with pedagogical activity."

Professors Goodheart and Kibel said that students from MIT would be stimulated by having students from other institutions with sophisticated interests in the humanities come to MIT. Conversely, they said, "students from other institutions often express a desire for a kind of freedom of intellectual inquiry that traditional discipline-oriented departments tend to constrain."

They said the program could perhaps lead to other forms of cooperation, and to new programs in humanities at MIT.

Seminar members from MIT, in addition to Professors Goodheart and Kibel, are Professors David M. Epstein and Bruce Mazlish of the Department of Humanities and Professor Irving Singer of the Department of Philosophy.

Participants from other schools are:

Professor Joseph Ablow of the Division of Art at Boston University; **Professor Joan Bamberger** of the Anthropology Department at Brandeis, **Professor Philip Fisher** of the English Department at Brandeis, **Professor George Kelly** of the Politics and Philosophy Departments at Brandeis, **Professor Stanley Cavell** of the Philosophy Department at Harvard, **Professor Monroe Engel** and **Professor Morton Bloomfield**, both of the English Department at Harvard, **Professor Charles Feidelson** of the English Department at Yale and **Professor Arthur Gold** of the English Department at Wellesley.

New Advisory Committee Represents MIT Women

An advisory committee representative of all women at MIT is being formed to assist Mary Rowe, special assistant to the president and chancellor for women and work.

Members of the committee will be drawn from various constituencies and geographical areas of the Institute. Groups such as the Association for Women Students, the Technology Matrons and the Women's Forum and others will have representatives, as will MIT areas such as the Sloan School and Lincoln Laboratory.

The committee will advise Dr. Rowe on areas of interest to the constituent groups and serve as a communications link with her office.

The Women's Forum hopes to use the election of its representatives as a means for expanding its membership, according to Carol Grossman, a member of the Forum steering committee.

"Some women don't attend the Forum because they think it is radical," she said, "while others don't come because they think the Forum is too conservative. We hope to encourage these women to attend and make nominations so that the Forum candidates will represent a wide range of women's opinions."

Ms. Grossman said that nominations from the Forum will be open through Nov. 23 and that election by secret ballot will take place at the Nov. 26 Forum meeting.

TECH TALK
Volume 18, Number 19
November 14, 1973

Tech Talk is published 50 times a year by the News Office, Massachusetts Institute of Technology. Director: **Robert M. Byers**; Managing Director, News Office Publications: **William T. Struble**; Assistant Directors: **Joanne Miller, Margo Foote (Photojournalist)**; **Charles H. Ball, Dennis L. Meredith, Robert C. Dilorio**; Business Manager: **Paul E. Johnson**; Reporters: **Sally M. Hamilton**; **Damon P. Wright**; Calendar of Events / Want Ads: **Susan E. Walker.**

Address news and editorial comment to MIT News Office, Room 5-111, Massachusetts Institute of Technology, Cambridge, Ma. 02139. Telephone Ext. 3-2701.

Mail subscriptions are $5 per year. Checks should be made payable to MIT and mailed to Business Manager, Room 5-122, MIT, Cambridge. Telephone Ext. 3-3676.

More MIT Heat Reductions Seen Certain

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supply MIT with any gas this winter.

The federal Environmental Protection Agency, meantime, has before it petitions from the state of Massachusetts asking that 54 major oil users—MIT included—be allowed to burn oil with 2.2 percent sulfur instead of oil with the present .5 percent limit. EPA hearings are scheduled for next week.

"But we have been unable to receive any assurance that we will actually get more oil—or at least as much oil as we need for normal winter operations—even if the sulfur limits are raised," Dickson said. "I can't take a chance on something that might happen. I have to assume that we are not going to have enough oil."

(EPA has just raised from .3 percent to .5 percent the amount of sulfur permitted in lighter home heating oils, but this does not affect institutions such as MIT that burn heavier residual oils.)

Dickson said his department already is receiving complaints from people about lowered temperatures, in many cases from people from unaffected areas who apparently just think it is colder.

"People are going to have to understand that this is a real emergency for MIT and the nation," Dickson said. "We cannot work our way through this with a business-as-usual attitude."

For example, Dickson said, if MIT tried to operate normal day-night-weekend mechanical cycles, but with reduced oil feeds to stretch supplies through the winter, average temperatures throughout the university would drop to around 57 degrees.

"That's totally unacceptable," Dickson said.

On the other hand, if the university burned its available oil at a normal rate, "we would exhaust our supply sometime in December, which is equally unacceptable."

"The answer is rigorous conservation," he said.

Almost immediately after the cut was announced, Dickson said, nighttime and weekend heat reductions were put into effect in the main Bldg. 1-10 complex and in Bldgs. 9, 14, 18, 36, 38, 54, and in the Student Center and in Kresge Auditorium—all told about one-fifth of MIT's total floor space.

There was an immediate 20 percent reduction in the amount of oil burned between 7pm and 7am, Dickson said, which averages out to approximately 15 percent over a full 24-hour cycle when weekends are included.

"These were the quick and easy steps we could take because of our mechanical set ups," Dickson said, "but 15 percent is not 30 percent and we are going to have to keep right on going."

Nighttime and weekend heat reductions are to be made shortly in most other academic and research buildings, he said.

(Similar reductions also have been made in Bldgs. E18 and E19, Dickson said, but steam for these buildings is purchased from the Cambridge Steam Corp. and any savings that occur in oil consumption there accrue to that company and not to MIT.)

Also being placed into effect this week is a reduction in the temperatures of domestic hot water used throughout the Institute, including dormitories. These temperatures normally are maintained at 140 degrees and consume anywhere from 15 to 25 percent of the MIT oil supply. Starting this week, the water temperature will be cut back to 120 degrees.

Meantime, Dickson said there are numerous ways people who live and work at MIT can help reduce the demand for heat and the consequent burning of oil.

One important step, he said, is for everyone to lower and close their venetian blinds at night and on weekends. This simple step alone, he said, can reduce by 30 percent the heat required for individual spaces during the time the blinds are closed.

"Also, people should be sure to close windows when they go home, or, better yet, keep them closed all the time," Dickson said. "Another way to save heat is to keep corridor doors shut. We do not heat the corridors. If the doors are open, the corridors draw heat from the offices."

Dickson also asked that all radiators and forced hot air registers be kept clear of books, papers, coats, clothes, plants, etc. Most radiators and registers are beneath windows and are intended to cut down heat losses through the glass. Clogging them increases the losses.

Finally, Dickson said, the university has asked for a voluntary ban on the use of electric space heaters.

"We've seen a lot of them being brought in around the Institute since the crisis started," Dickson said. "It's true that we do not burn our own oil to generate electricity—we buy it from the electric utilities. But the utilities do use oil and we already are beginning to get pressure from them to cut back our electrical consumption."

A team of Physical Plant engineers, Dickson said, has been organized virtually fulltime on the problem of saving oil. Dickson himself is working at it virtually full time. Other members of the team include Thomas E. Shepherd, Jr., superintendent of utilities; Haig G. Gechijian, deputy superintendent of buildings; Richard F. McKay, manager of the central utilities plant on Vassar St.; James Gardner, mechanical operations supervisor; Andrew M. MacDougall, foreman of the Heat and Ventilating Shop; George E. West Jr., a mechanical engineer in Physical Plant's design section; and Howard F. Miller, assistant to the director of Physical Plant.

Miller, Dickson said, has set up a telephone where people with suggestions or ideas on how to save fuel can call. The extension number is 3-6266, which—using the letters on the telephone dial—spells ENCON for "energy conservation."

"We can use all the help we can get," Dickson said.

Here's How You Can Help Conserve Heat

Here's how you can conserve heat and help MIT get through the winter despite a 30 percent cut in oil supplies:

1. Lower and close your venetian blinds at night and on weekends. The blinds reduce heat losses through the windows. If you have drapes, pull them closed.

2. Close your windows when you go home. Better yet, leave the windows closed all the time. Don't let the heat escape.

3. Keep your corridor doors shut. The corridors are not heated. When you leave your doors open, the corridors draw heat from your office, or classroom, or laboratory, or dormitory room.

4. If you have a thermostat, turn it down to at least 65 degrees at night and on weekends and by at least four degrees during the day.

5. Keep radiators and forced hot air registers clear. Don't stack them up with books, papers, reports, coats, clothes, plants, etc. They are supposed to keep a curtain of hot air against the windows to combat losses. Clogging them reduces efficiency.

6. Don't use those electric heaters if you have one. They consume prodigious amounts of electricity and it takes oil to make electricity. True enough, the Institute buys its electrical power. But you are still using someone's oil, if not MIT's, and you are just making the overall situation worse.

7. If you have any ideas on how to conserve energy, call Ext. 3-6266—that spells ENCON on your dial and that stands for energy conservation.

MIT Meteorologist Foresees Mild Winter for Eastern US

Hurd C. Willett, MIT professor of meteorology, emeritus, believes that the eastern half of the nation will have a mild winter—a forecast that has encouraged officials trying to cope with the energy crisis.

According to the *Wall Street Journal*, which reported Professor Willett's prediction on Monday, a bitterly cold winter could turn a crisis situation into a national calamity marked by strict fuel rationing, power brownouts and blackouts, restrictions on automobile use and enforced lower settings on thermostats on buildings throughout the country.

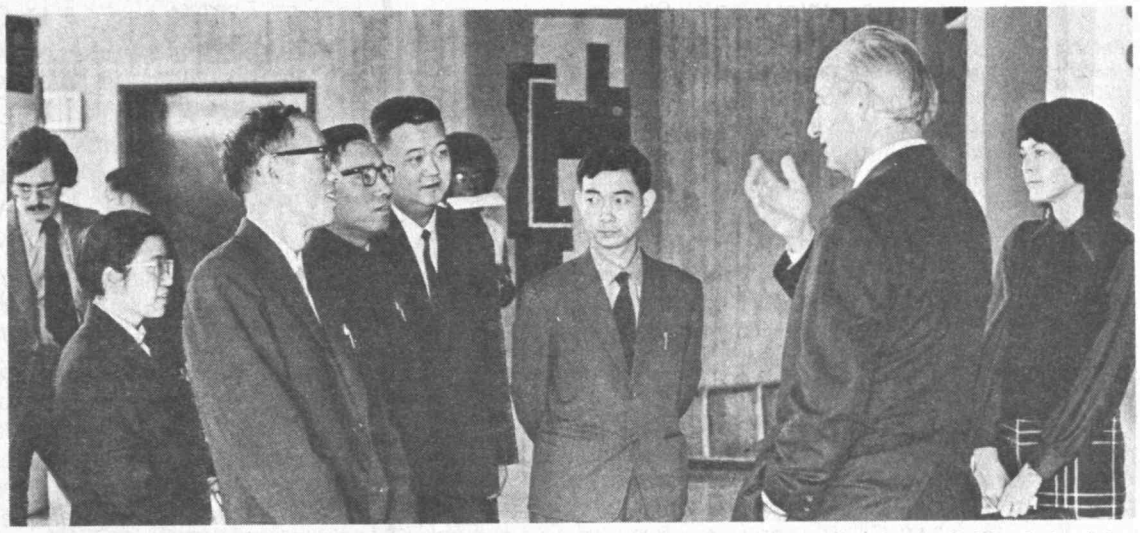
The newspaper said that some of the government's long-range forecasters—while saying that such prognostications are imprecise—were predicting slightly warmer-than-average temperatures this winter in the east and the Ohio Valley.

Reinforcing the hope of a mild winter, it said, was the forecast of Professor Willett, whom the newspaper called "one of the nation's most respected weathermen."

"The indications quite definitely call for a mild winter in terms of temperature, and snowfall probably won't be severe either," it quoted Professor Willett as saying.

The article said that Professor Willett bases his prediction on years of studying the variations in the sun's activity—the so-called sun-spot cycles.

He said, it added, that "in the entire 24-year cycle, these three years coming up are the clearest" in calling for mild winters in the eastern half of the country.



Dr. Robert W. Mann, professor of mechanical engineering, was among the MIT faculty welcoming a delegation of medical professionals from the People's Republic of China on Monday. The nine Chinese scientists, experts in the fields of physiology of pain and biomedical engineering toured laboratories at MIT and Massachusetts General Hospital on their four day stay in Boston. —Photo by Margo Foote

'Weather' Blowing Up In Lobby 7

"Weather," a large multi-featured, mixed-media exhibition is currently transforming the Building 7 lobby.

The show was organized and designed by environmental artist Otto Piene, visiting professor in the School of Architecture and Planning and Suzanne Weinberg, coordinator for the Lobby 7 Committee.

Professor Piene, known for his helium-filled polyethylene *Rainbow* at the 1972 Summer Olympics, was assisted in this show by Mitchell Benoff, a Boston artist. MIT students, professors and administrators created the various exhibition displays and works.

The exhibition explores the natural forces of weather and its common and uncommon events. "Weather" consists of sculptures and air installations, "pocket phenomena" and a collection of weather events organized as a walk-through media show. The show also incorporates meteorologic studies, two of Professor Piene's works, weather sounds, and the verse of great poets.

Local TV weatherman Norman J. MacDonald of WBZ and Dr. Fred Ward of WNAC will give short talks at noon today, the opening day.

First Mathis Memorial Lecturer Named

"The Civil Engineering Mind—Nature and Nurture," will be the topic of the first Mathis Memorial Lecture at MIT, to be delivered by Dr. Ralph B. Peck, professor of foundation engineering at the University of Illinois at Urbana-Champaign. The lecture is scheduled for November 15 at 4pm in Room 54-100.

Dr. Peck, former President of the International Society for Soil Mechanics and Foundation Engineering, has been a Terzaghi Lecturer, Rankine Lecturer, and has won wide international recognition for his work in foundation engineering. He is a member of the National Academy of Engineering.

The lecture series was established last year to honor the late Sam J. Mathis of the Standard Oil Co. of New Jersey. Mr. Mathis was a widely known civil engineer and construction authority.

Under terms of the lectureship,

Dr. Peck

started with a gift by Mr. Mathis' widow, Mrs. Kathryn Mathis of Pinehurst, N.C., income from the Mathis fund will be used to provide for a periodic lecturer in MIT's Department of Civil Engineering.

In delivering the first Mathis Lecture, Dr. Peck will discuss "the way a civil engineer makes his best contribution to society, what characteristics he has and should have to be most effective, how these characteristics are developed by his education and experience, and what changes might be made in engineering education to point budding engineers in the right direction."

Wives' Bake Sale Offers Lunch, Too

The Technology Wives annual bake sale will be held Thursday, Nov. 15, from 8am until sell-out, in the Lobby of Building 10.

With a well-established reputation for culinary skills, the Wives will be offering homebaked cookies, brownies and cakes, plus sandwiches, potato salad, coffee and hot and cold cider on a lunchtime menu.

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. Undergraduates are also urged to check with the UROP bulletin board in the main corridor of the Institute.

Earth and Planetary Sciences

MIT's George R. Wallace Astrophysical Observatory is undertaking a major observational program to study Comet Kohoutek 1973. Observations will be made from now through early March with a wide-angle 8" Newtonian reflector, a 16" Cassegrain reflector, and an automated 24" Cassagrain reflector. Available instrumentation includes single- and double-beam photometers, a vidicon imaging photometer, a vidicon spectrometer, and a 4 x 5" photographic plateholder. Subsequent data analysis will be aimed at (1) understanding the physics and chemistry of the comet as a member of the solar system; and (2) using the observed dynamic processes as a probe of the solar wind and interplanetary medium. Undergraduates interested in observational, theoretical or analytical topics based on Comet Kohoutek, and who have relevant academic or practical experience, should contact Alan Goldberg or Professor Thomas McCord, Rm. 24-422, X3-3748.

Tufts University School of Medicine Boston

Several professors from the Department of Pathology have suggested four potential project areas for undergraduates: (1) Immunochemistry of blood group antigens and antibodies, includes development of methods for measuring minute amounts of antigen on cell surfaces and in solution; (2) Chemical structure of antigens and relation to function in processing immunity or tolerance, involving synthesis of artificial conjugates to test their ability to react with lymphocyte cell receptors in vivo and in vitro; (3) Antibodies and the immune response, study of the effect of antibody on regulation of the immune response to soluble and cell bone tumor antigens; and (4) Lymphocyte molecules, involving the study of lymphocyte surface molecules by immunologic means and determination of their role in immune phenomena.

Bolt Beranek and Newman, Inc. Cambridge

The Physical Sciences Division (Division 1) of BBN has proposed two projects for undergraduates: (1) Continuous spectrum propeller noise. Pusher propellers operate in the wake of the vehicles which they drive. Turbulence in the wake causes fluctuating angles of attack on the propeller blades, fluctuating lift, and therefore radiated sound. Strouhal type vortex shedding near the blade tips also generates noise. Certain blade geometries reduce this noise without compromising performance and these geometries are being optimized through experimental development in an acoustic wind tunnel. Student should have mechanical ability, a working knowledge of low speed aero or hydrodynamics, and an experimental attitude. (2) Noise reduction for engine cooling fans on heavy trucks. Radiator fan on a heavy truck is a surprisingly strong contributor to the vehicle's overall noise signature. With new EPA noise requirements, cooling requirements are being increased by higher installed horsepower engines. Fan noise is related to efficiency, which in current designs is poor. The project would involve improvement of fan efficiency and quality of the flow influencing noise generation. Students should have mechanical ability and a working knowledge of low speed aero or hydrodynamics.

Nutrition and Food Science

A normative study aimed at probing the eating and drinking behavior of two- and three-year-old children. Initial work involves determining and obtaining the sample for study. Then, interviews with mothers of two- and three-year-old children will be carried out based on already developed interview schedules. Tentatively, 100 to 150 interviews will be undertaken. After data collection is completed, the data will be analyzed and a report will be produced on the project. Interested students should contact Dr. Pollitt, Rm. 16-339, X3-3112 or Lena Sun, 868-8271.

NASA Institute for Space Studies New York City

The Goddard Institute for Space Studies is interested in formulating projects for undergraduates with interests in numerical forecasting and the dynamics of planetary atmosphere. One project suggested involves poleward transport of heat by the large scale cyclones and anticyclones. In order to be able to predict climatic changes, efficient methods for calculating such transports need to be developed. Contact Prof. Peter Stone, 54-1420, X3-2443.

Dynatech R/D Company Cambridge

Two project areas are proposed: (1) Biocompatible polymers—a new (ethical) drug delivery system based on polymers which are slow to release the therapeutic agent. Delivery systems for sustained release through tissue compatible hydrolyable polymer matrix in which the medicant is dispersed. For details check with Prof. C.L. Cooney, 16-229, X3-3108. (2) Fuel gas from solid waste. Dynatech is developing a system involving municipal solid waste, separating organic and inorganic fractions and then converting the organic fraction to fuel gas. Contact UROP for details.

WBZ Matching Plan Endorsed

MIT Parking Committee Urges Carpools

The MIT Parking Committee, as one part of the Institute's response to the nationwide crisis in energy and fuel, this week urged all members of the Institute community who drive back and forth to work to join a carpool, if possible, to save gasoline.

The Committee recommended that MIT people who want to find others with whom to form carpools use the WBZ/ALA "Commuter Computer Clubcar" matching service by completing and mailing in—to Box 103, Boston, Ma. 02134—the questionnaire printed below.

Because parking spaces at MIT have become increasingly scarce, the Committee has traditionally given extra consideration where possible for assigned parking to people who share rides or are members of carpools. This policy, the committee said, will be particularly important in promoting carpools as an energy-saving device during the national crisis. Established MIT carpools may contact Campus Patrol with respect to parking provisions.

Westinghouse Broadcasting Co., which owns WBZ radio and WBZ-TV (Channel 4), together with the ALA Auto and Travel Club, launched the computer-based matching service several months ago to help reduce auto congestion and air pollution and so far more than 7,000 have used the service.

In structuring the plan, the sponsors had help from several MIT people—including Professors Marvin Manheim, Charles Miller, Paul Roberts, Daniel Roos, David Wilson and Nigel Wilson, all of whom are involved in research relating to urban transportation.

WBZ RADIO's COMMUTER COMPUTER CLUBCAR

QUESTIONNAIRE

☐ MS.
☐ MR. _____

ADDRESS: _____

CITY: _____ ZIP: _____ (DO NOT OMIT ZIP CODE #.)

PHONE: _____

1. CHECK THE ONE POINT IN THE FOLLOWING LIST CLOSEST TO YOUR COMMUTING DESTINATION:

1. ☐ Government Center/City Hall
2. ☐ P.O. Square/Financial Dist.
3. ☐ State House/Beacon Hill
4. ☐ Wash. St./Shopping District
5. ☐ Pru. Center/Copley Square
6. ☐ Park Square
7. ☐ North Station
8. ☐ South Station
9. ☐ B.U./Kenmore Square
10. ☐ Northeastern U./Fenway
11. ☐ City Square/Charlestown
12. ☐ South End/City Hospital
13. ☐ Faneuil Hall/North End
14. ☐ Charles Circ./Mass. General
15. ☐ Columbia Pt./Boston Globe
16. ☐ Army Base/Fargo Building
17. ☐ Logan Airport
18. ☐ M.I.T. (Cambridge)
19. ☐ Harvard (Cambridge)
20. ☐ Gillette Plant/South Boston
21. ☐ Boston Herald American
22. ☐ Lechmere Square (Cambridge)
23. ☐ Dedham/128 Industrial Parks
24. ☐ Needham/128 Industrial Parks
25. ☐ South Shore Plaza
26. ☐ Waltham Industrial Park/128
27. ☐ Polaroid/128
28. ☐ Burlington Mall
29. ☐ Intersection 128/93, Woburn
30. ☐ Other: (On or within Route 128, Major Street or Landmark)

MBTA DRIVE/RIDE LOCATIONS

31. ☐ Riverside Station
32. ☐ Quincy Center Station
33. ☐ Wonderland Station
34. ☐ Everett Station
35. ☐ No. Quincy Station
36. ☐ Dedham/128 Railroad Station

2. CHECK THE TIME AT WHICH YOU MUST BE AT YOUR MORNING DESTINATION:

1. ☐ 6:30AM
2. ☐ 7:00AM
3. ☐ 7:30AM
4. ☐ 8:00AM
5. ☐ 8:30AM
6. ☐ 9:00AM
7. ☐ 9:30AM
8. ☐ Other: _____

3. AT WHAT TIME DO YOU LEAVE IN THE AFTERNOON:

1. ☐ 3:00PM
2. ☐ 3:30PM
3. ☐ 4:00PM
4. ☐ 4:30PM
5. ☐ 5:00PM
6. ☐ 5:30PM
7. ☐ 6:00PM
8. ☐ Other: _____

4. CHECK HERE IF YOU NEED THE NAMES OF PEOPLE WHO LEAVE FOR HOME ONE HOUR AFTER YOU NORMALLY DO. _____

5. CHECK YOUR CLUBCAR PREFERENCE:

- ☐ Drive only
- ☐ Ride only
- ☐ Alternate driving
- ☐ All male
- ☐ All female
- ☐ No preference

6. CHECK ANY OF THESE SPORTING EVENTS WHICH YOU REGULARLY ATTEND IF YOU WOULD LIKE TO RIDE THE CLUBCAR TO THEM:

1. ☐ Patriots Games at Schaeffer
2. ☐ Bruins Games at Boston Garden
3. ☐ Celtics Games at Boston Garden
4. ☐ B.C. Football at Alumni Stadium
5. ☐ Whalers at Boston Garden
6. ☐ Red Sox Games at Fenway Park
7. ☐ Braves at Boston Garden

IMPORTANT—It should be understood by all persons using the "Commuter Computer" service that its sole function is to match, on the basis of information provided (but without investigation of driving records and other relevant information), prospective drivers with prospective riders. THE UNDERSIGNED HEREBY AGREES THAT WBZ AND ALA WILL NOT BE LIABLE FOR ANY ACTION TAKEN OR OMITTED IN GOOD FAITH BY WBZ OR ALA AND THEIR AGENTS AND EMPLOYEES IN CONNECTION WITH THE "COMMUTER COMPUTER" SERVICE. THE UNDERSIGNED AGREES TO ASSUME ALL RESPONSIBILITY FOR CONTACTING, INVESTIGATING AND DRIVING OR COMMUTING WITH THE PERSONS WHOSE NAMES ARE FURNISHED BY WBZ OR ALA, AND THE UNDERSIGNED AUTHORIZES WBZ AND ALA TO RELEASE THE NAME AND TELEPHONE NUMBER OF THE UNDERSIGNED TO ANY POTENTIAL DRIVER OR RIDER SELECTED BY ALA.

_____
Signature

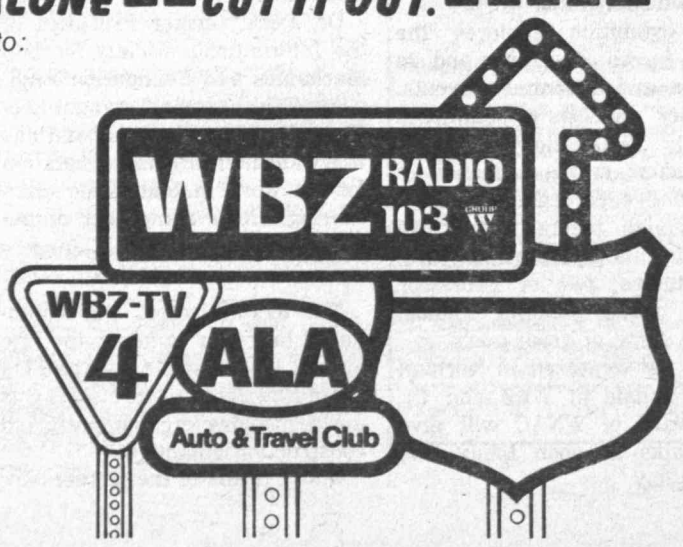
IF YOU DRIVE TO WORK ALONE—CUT IT OUT.

Cut out the questionnaire. Answer all questions. Then mail to:
Commuter Computer Clubcar, Box 103, Boston, MA 02134

Questionnaires must be accompanied by a dime or 10¢ in stamps for return postage and handling, or they cannot be processed.

Along with your Commuter Computer printout, you will also receive a Clubcar "Clubcard," side and rear window decals, a what-to-do-in-case-of-accident reference card, and a special "Visor Advisor" with alternate route maps, emergency phone numbers and downtown parking information, designed to fit on your sun visor, out of sight until you need it.

The Commuter Computer Clubcar is a service of WBZ Radio and WBZ Television, created in cooperation with the ALA Auto and Travel Club.



East Boston Day Care Center Sets Youngsters' Sights High

The following story appeared in the Nov. 5 edition of The Boston Evening Globe and is reprinted here with permission.

By PHYLLIS COONS
Globe Staff

More than 50 youngsters are learning how to play together on a steep hill where some of the busiest streets in East Boston meet.

Thanks to a house which was built in less than two weeks, a lot of kids are getting along like one big, happy, scrappy family.

MIT architecture students Anne Rossbach, Mike Harris and Chuck Laven heard that Casey Dunning was looking for ways to store cots and yet gain space at a new Little Folks Day Care Center he was starting at 65 Trenton St. The students had been working with Tom Grato on outdoor schoolyards for kids, building playgrounds on the foundations of infill housing projects which went bankrupt.

Casey asked Tom to lend him the students. They took a look at the barnlike rooms of the old Sons of Italy headquarters and figured that there was no place to go but up.

Twenty unfoldable cots, used during rest periods, took up a lot of floor space, even when they were stacked in triple tiers. Subtract a busy pattern of foot traffic around the beds and you lose another big chunk of some 735 square feet of floor space in the main room.

Casey's problem was that with about a third of his total of 60 youngsters using the room, each is supposed to have 35 square feet, not including traffic space. He had to utilize most of his 735 square feet to comply with requirements for licensing.

The architecture students watched children jumping on cots and getting distracted before and after rest time when groups moved into different corners of the room to work with three or four teachers.

Then Mike, Anne and Chuck came back after school and built a platform or second floor so that cots could be stored beneath it. Teachers, parents and students worked on plans by night and watched how the children used what they built the next day.

"It was a round robin thing. We built with screws instead of nails so we could change things as we went along," says Mike.

Again the solution was up, all the way. What horizontal day care space couldn't do, vertical space could—and did. The students built ladders and landings off ladders. They built railings and made bunks out of them by adding cabinets after they saw the children lying on the floor of their wooden lofts.

Pretty soon the loft became an "apartment house" and the lower main platform grew into a "living room." The kids were telling the architects what they wanted.

"It was like a party, coming back every night at five to work until midnight and then watching what the kids did with what we built the next day," Mike said.

"It has been a long time since we were kids," Chuck said, "so it's a very good thing for us to learn how they play."

Director Casey Dunning says: "The whole quality of play was changed by turning the room into a house."

The room has cream-colored walls. Natural wood, which the kids can write on or paint with water colors, makes the house adaptable to any kind of decor. The MIT students scrounged material from demolition sites and bought some.

Professional architects wanted $15,000 to do the job. Another group wanted $300 a day for consultant's fees before building, says Casey. The students built it for under $200. MIT Student Summer Projects in Community Affairs Program provided funds to pay student architects.

Mike Harris and Chuck Laven, right, get some ideas from Paula Martone, top, and Jesse Epstein.

Parents started the nursery school when they learned that Casey's job as a nursery school director for the Erich Lindemann Mental Health Center in Boston fell through.

They helped the local, non-profit Community Development Corp. raise venture capital to buy the building so they could rent it. The Permanent Charity Fund gave them money to renovate it.

VISTA volunteers and parents help to teach and clean the Center. The school lunch program will feed the kids.

Parents pay $10 to $15 a week as they can afford it, instead of $40 to $50 a week which pre-school training costs.

The reason Little Folks works is that the kids are working partners.

Opening Nov. 16

Hayden Plans Schwitters, Corita Exhibits

Two art exhibitions—one featuring collages and graphics by the late German artist Kurt Schwitters, the other silkscreen prints by the contemporary artist Corita Kent—will go on display in Hayden Gallery and the adjacent Corridor Gallery on Friday, Nov. 16.

Both exhibits are being sponsored by the MIT Committee on the Visual Arts and will have a public opening, 8-10pm on Nov. 16.

The Schwitters exhibit in Hayden was organized by the Museum of Modern Art in New York City.

Schwitters (1887-1948) was one of the foremost artists in the medium of collage. Among works in the exhibit are prints, magazines and graphics which have rarely been shown. Also included in the show are photographs of his sprawling constructions, the three *Merzbaue*, all of which have been destroyed.

The Corita Kent exhibit will be in the Corridor Gallery outside Hayden and was organized by the Hayden Gallery staff.

Ms. Kent, formerly Sister Mary Corita Kent, chairman of the Department of Art at Immaculate Heart College in Los Angeles, is now an independent artist living in Boston. She is well known here for the 150 foot "rainbow" executed on the Boston Gas Co.'s Dorchester gas tank along Boston's Southeast Expressway.

Like the "rainbow" for the fuel tank, her overall work utilizes and transforms material from the popular culture.

The exhibit offers a retrospective of her recent works, including posters, special editions of prints, illustrations and magazine and book covers.

The exhibits will close on Saturday, Dec. 8.

Bourdelle's Tragic Mask of Beethoven, (1901) permanently placed after being exhibited last July in a Hayden Gallery show of recent MIT gifts and acquisitions, is now on view in the Music Library. The bronze, standing 30 inches high, was acquired earlier this year along with Rodin's Large Head of Iris. Both of the bronzes—the Rodin is on the second floor of the Humanities Library—have been placed not so much for gallery-type viewing but to encourage a more direct and prolonged interaction between the works of art and people who use the libraries.

Pounds Selected For C-M Award

Dean William F. Pounds, of the Alfred P. Sloan School of Management has been selected to receive a merit award from the alumni association of Carnegie-Mellon University.

Dean Pounds graduated from Carnegie-Mellon in 1950 with a bachelor's degree in chemical engineering and earned his master's and PhD degrees in the CMU Graduate School of Industrial Administration (GSIA).

Gets Penn Award

Robert G. Gallagher, MIT professor of electrical engineering, was presented with a gold medal as a distinguished alumnus of the Moore School of Electrical Engineering of the University of Pennsylvania. Professor Gallagher was given the award at the annual meeting of the university's alumni society, November 2.

Turkey Sharing

Students who would like to be part of a family for the holiday and families who would like to share their holiday with a student who can't go home, please contact Mrs. J.B. Feldman, 527-1022.

Blood Drive Nets 1,425 Units

The MIT Blood Drive ended Friday, Nov. 9, after collecting 1425 units of blood. Approximately 1620 members of the Institute community volunteered to make donations but some were disqualified. Evening hours initiated this year were more popular than expected. Extra beds were opened in an attempt to accommodate donors as quickly as possible. Plans are being made for more evening hours and more beds this spring. There will be a small two-day drive, Jan. 7-8, at the beginning of IAP.

Memorial Concert

The MIT Chamber Music Society with mezzo-soprano Patricia Miller will present a concert in memory of John F. Kennedy, Tuesday, Nov. 20, at noon in the MIT Chapel.

Under the direction of William Draper, the concert will feature the Vivaldi *Stabat Mater, Adagio and Rondo* by Mozart and Stravinsky's *Elegy for J. F. Kennedy.*

The concert is sponsored by the MIT Music Section and will be free and open to the public.

Hillel Symposium

A symposium entitled, "Peace and War: An Encounter with Israel," and a performance of Hebrew music by the Zamir Chorale of Boston will highlight a program sponsored by MIT Hillel to be held at 7:30pm Sunday, Nov. 18 in Kresge Auditorium. Admission to the event is free.

The 90-member Zamir Chorale is a professional college-age chorus conducted by Joshua Jacobson.

Contest Seeks Young Inventors

The first Student Innovation Contest, sponsored by the MIT Innovation Center, and open to undergraduates of any department, has been announced by Eta Kappa Nu, the MIT electrical engineering honorary society which is organizing the competition.

Purpose of the contest is to encourage creativity and confidence among students as inventors and entrepreneurs. Contestants will submit detailed plans of an original engineering project and an estimate of its marketing potential. The proposals will be judged on their originality, technical feasibility, and marketing merits.

Judging will be done on two levels—Level 1 for freshmen and sophomores and Level 2 for juniors and seniors. There will be certificates of award and cash prizes for winners on both levels—$300, $100 and two $50 awards.

Interested students may register for the contest in Room 38-476 until Wednesday, Nov. 21. Details of the contest will be given on registering.

The deadline for entries is Feb. 8—making it possible for participants to work on their projects through IAP. For more information call Ext. 3-4645.

THE INSTITUTE CALENDAR

November 14 through November 23

Events of Special Interest

Copernicus in China: Or, Good Intentions Gone Astray* – Prof. Nathan Sivin, technology studies program. Concourse Forum. Wed, Nov 14, 4pm, Rm 10-105.

Moby Dick* – The Karl Taylor Compton Lecture Series presents Jack Aranson, solo performer, in a dramatization of *Moby Dick*. Wed, Nov 14, 8:30pm, Kresge Auditorium. Free. Tickets, Bldg 10 Lobby.

Tech Wives Bake Sale* – Thurs, Nov 15, 8am until sell-out, Bldg 10 Lobby.

Ugliest Runs Rampant on MIT Campus – Vote for your favorite Ugly. One penny is one vote, proceeds to Care African Fund. Mon, Nov 12-Fri, Nov 16, 9am-5pm, Bldg 10 Lobby.

Israel: Symposium and Concert* – Peace and War: An Encounter With Israel – Prof. Alan Dershowitz ("The Advocates"), Steve Cohen, David Landes, Harvard University; Prof. Art Green, University of Pennsylvania; and performance by Zamir Chorale of Boston. Sponsored by Hillel. Sun, Nov 18, 7:30pm, Kresge Auditorium. Free.

An Evening With Elie Wiesel* – Sun, Nov 18, 8pm, Kresge Auditorium. Tickets: adults $5, sutdents $2. Call Hillel Office, x3-2928.

Doherty Professorships in Ocean Utilization – Discussion of eleigibility and support opportunity for non-tenured MIT faculty – Mon, Nov 19, 3:30-5pm, Rm 1-214.

Share Thanksgiving – Students who would like to be part of a family for the holiday and families who would like to share their holiday with a student who can't go home, please contact Mrs. J.B. Feldman, 527-1022.

Seminars and Lectures

Wednesday, November 14

Conceptualizing Power, Autonomy and Dependency* – Jorge Domingues, and **Concluding Discussion on Formalizing Systematic, Structural Theories of Political Processes* – Hayward Alker.** CIS, MIT; Center for International Affairs, Committee for Latin American Studies, Harvard. 9:30am-12:30pm, Millikan Rm E53-482.

Light Scattering* – W.B. Veldkamp, graduate student. Nuclear Engineering Doctoral Seminar. 2pm, Rm 24-307.

Second Symposium on Undergraduate Research in the Department of Food Science –** Seven undergraduated present their research findings. Nutrition & Food Science Undergraduate Research Symposium. 2:15pm, Rm 9-150. Coffee, 3pm.

War, Crime and Watergate 1963-1973 – Peter Dale Scott,** english, University of California, Berkeley. Center for International Studies Seminar Series. 3-5pm, Rm E53-482.

Short Range System Analysis of Nuclear Electric Power System* – R. Eng, graduate student. Nuclear Engineering Doctoral Seminar. 4pm, Rm NW12-222.

On Characterization of Pseudo-Inverses in Normed Spaces and Certain Optimization Problems* – Richard Vinter, electrical engineering, Electronic Systems Lab. Operations Research Center Seminar. 4pm, Rm 24-121. Refreshments after.

Paleocirculation and Paleontology: The North Atlantic Ocean 18,000 Years Ago* – Prof. John Imbrie, geological sciences, Brown University. Earth & Planetary Sciences & Meteorology Joint Colloquium. 4pm, Rm 54-100. Tea, 3:30pm, Rm 54-923.

Thursday, November 15

The Brain: An Explanation* – Pat Gunkel, Project MAC. Project MAC Lecture. 10am-2pm, Rm 9-150.

Cauchy's Problem in the General Kinetic Theory (discussion)* – Dr. Jury D. Nagornykh, research fellow, aero/astro. Aero/Astro Seminar. 3pm, Rm 33-206.

Comparison of Experiment and Theory of Belt Pinch Plasma (Equilibrium MHD Stability and Energy Loss) – Dr. Glenn Bateman,** Max Planck Institute of Plasma Physics, Munich, Germany. Nuclear Engineering Seminar. 4pm, Rm 38-166.

Some Aspects of the Vibrations of Fluid-Loaded Spherical Shells* – Dr. Robert T. Menton, Naval Underwater Systems Center. Interdepartmental Acoustics Seminar. 4pm, Rm 5-134. Coffee, 3:30pm, Rm 1-114.

A Turbulent Burning Model for Spark Ignition Engines* – Prof. James C. Keck, mechanical engineering. Thermodynamics Seminar. 4pm, Rm 3-343. Coffee.

The Civil Engineering Mind – Nature and Nurture* – Dr. Ralph B. Peck, foundation engineering, civil engineering, University of Illinois at Urbana-Champaign. Mathis Memorial Lecture, Civil Engineering. 4pm, Rm 54-100.

Planning and Design of Air Passenger Handling Facilities* – Hanan A. Kivett, director, transport facilities planning Kivett & Myers. Flight Transportation Seminar. 4pm, Rm 35-225. Coffee, 3:30pm, Stu Lge 33-411A.

Neutrino Reactions at NAL* – Prof. Barry Barish, California Institute of Technology. Physics Colloquium. 4:15pm, Rm 26-100. Refreshments, 3:45pm, Rm 26-110.

The Politics of Technology Transfer to the Third World* – Ramon Barguin, politicial science. Seminar for Foreign Students and Participation in Development. 7pm, International Students Lge, Walker.

Friday, November 16

Molecular Beam Chemistry* – Dudley Herschbach, chemistry, Harvard University. Lab for Laser Physics Seminar. 11am, Rm 26-414. Coffee, 10:30am.

The Channel Tunnel* – Frank Davidson, American co-founder Channel Study Group, senior research associate, MIT. Center for Transportation Studies Luncheon/Seminar Series. 12n, Stu Ctr Mezzanine Lge. Buffet $2, speaker 12:45pm (lecture free).

Continuation of Underwater Photography Slides and Movies With Strobe Lights* – Prof. Harold E. Edgerton and Mr. Charles E. Miller. Electrical Engineering Lecture. 12n-1pm, Rm 10-250.

Form Reflects Sense: An Analysis of Some Poems by Wallace Stevens* – S. Jay Keyser, linguistics, University of Massachusetts. Foreign Literature & Linguistics, Humanities Lecture. 3:30pm, Rm 36-155.

Some Problems Regarding Regional Development in the Sahel-Sudano Region* – Gerard Munari, chief economist, S.E.D.E.S. Civil Engineering Seminar Series concerning Sahel-Sudano Zone. 3-4pm, Rm 1-236. Coffee.

Structure of Reynolds Stress and the Occurrence of Bursts in the Turbulent Boundary Layer* – Prof. W.W. Willmarth, aerospace engineering, University of Michigan. Mechanical Engineering Seminar. 3pm, Rm 3-133. Coffee, 4pm, Rm 1-114.

UARL Laser Initiated Target Experiment – LITE ** – Dr. A.F. Haught, United Aircraft Research Lab. RLE Plasma Dynamics Seminar. 4pm, Rm 36-261.

Superconductors: Past, Present and Future* – Prof. T.H. Geballe, applied physics, Stanford University. Material Science Colloquium. 4pm, Rm 9-150. Refreshments, 3:30pm.

Technology, Society and Values in MIT Education* – Profs. Eugene B. Skolnikoff and Harvey Sapolsky will speak on the Science and Public Policy Program. Technology Studies Colloquium. 4:10pm, Rm 14E-304. Coffee, 4pm.

Monday, November 19

Proposed Modifications to the ECCS Interim Policy Statement* – Dr. Donald H. Roy, manager, methods development, Babcock & Wilcox. Nuclear Engineering – ANS Seminar. 3:30pm, Rm NW12-222. Coffee & donuts.

The Engineer and Society* – Dr. Raymond L. Bisplinghoff, deputy director, National Science Foundation. Aero/Astro Seminar. 4pm, Rm 37-252.

Some Ideas About Martensitic Nucleation and Growth* – W.S. Owen, MIT. Williams Lecture, Metallurgy & Material Science. 4pm, Rm 6-120. Coffee, 3:45pm.

Diverse Applications of Graph Theory* – Alan Tucker, mathematics, State University of New York, Stony Brook. Applied Mathematics Colloquium. 4pm, Rm 2-338. Coffee, 3:30pm, Rm 2-349.

On the Estimation of Large Floods with the Use of Prior Information* – E. Wood, research assistant, civil engineering. Water Resources & Hydrodynamics Seminar, Civil Engineering. 4-5pm, Rm 48-316. Coffee, 3:45pm, Rm 48-410.

Tuesday, November 20

Saturation of Dissipative Trapped Particle Modes* – D. Ehst, nuclear engineering. Nuclear Engineering Doctoral Seminar. 12n, Rm 38-166.

From an Idea to a Business* – Prof. Amar G. Bose, electrical engineering. Innovation Center Seminar. 3-5pm, Rm 35-225.

Wave Breakdown and Turbulence* – Prof. Marten Landahl, aero/astro. Interdepartmental Fluid Mechanics Seminar. 4pm, Rm 2-338. Coffee, 3:30pm, Rm 2-349.

Numerical Models of the Atmosphere of Venus* – Dr. Eugenia K. Rivas, research associate, meteorology. Meteorology Seminar. 4pm, Rm 54-100. Tea & coffee, 3:30pm, Rm 54-923.

Factors Determining the Morphology of Martensite* – W.S. Owen, MIT. Williams Lecture, Metallurgy & Material Science. 4pm, Rm 3-270. Coffee, 3:45pm,

Direct Statistical Analysis of Nonlinear Systems Using CADET (Corvariance Describing Function Technique)* – Dr. Arthur Gelb, president, Analytic Sciences Corporation. Electrical Engineering, Decision & Control Science Group Seminar. 4pm, Rm 37-212.

Overlapping Pathways for Replication, Recombination and Repair and Their Effect on the Growth of Bacteriophage in Lambda* – Dr. Anna Marie Skalka, Roche Institute of Mollecular Biology. Biology Colloquium. 4:30pm, Rm 6-120. Coffee, 4pm, Rm 56-520.

Southern (Rural) Development – Owen Brooks,** Freedom Village, Inc. Greenville, Mississippi. Community Fellows Program Seminar. 5-6:30pm, Rm E40-160.

Community Meetings

Family Day Care Program – Activities and materials for preschoolers, discussion of program goals. Fri, Nov 16, 9:30-11:30am. Information, Child Care Office, x3-1592.

Information Processing Center Course – Non-credit course in "Intermediate TSO," Mon, Nov 12-Fri, Nov 16, 2-3pm, Rm 39-530. Fee $5. Preregister, Lynne Penney, Rm 39-427, x3-6320.

SCEP – Meeting on the freshman year, Speaker, Peter Buttner, executive officer of the Freshman Advisory Council. Wed, Nov 14, 7:30, Stu Ctr Rm 353.

Pre Law Meetings – Marshal-Whythe School of Law, William & Mary, Dean Sullivan, Thurs, Nov 15, 12n, Rm 4-149. **Cornell University Law School,** Dean Neimeth, Fri, Nov 16, 3-4pm, Rm 4-163.

Women's Forum – Lotte Bailyn, associate professor, organizational behavior and management, Sloan School, will speak of her research on the relationship between career and family. Mon, Nov 19, 12n, Bush Rm 10-105.

Student Art Association –** Open drawing workshop. Tues, 7:30pm, Stu Ctr Rm 429.

Urban Action Volunteer & Resource Center – Volunteer tutors, teachers urgently needed in Cambridge and Boston schools, as well as volunteers for other community agencies. Mon-Fri, 9am-5pm, Stu Ctr Rm 437, or call x3-2894.

Course Evaluation –** Sponsored by TCA & SCEP. Come help out. Info, lve msg at TCA, Stu Ctr Rm 450, x3-4885.

MIT Club Notes and Meetings

Bridge Club – ACBL Duplicate Bridge. Thurs. 6pm, Stu Ctr Rm 407. IMP-scored team games (similar to rubber scoring). Smaller IMP games Fri, 8pm, Sat, 2pm, Stu Ctr Rm 407. Jeff, x3-5285 or 864-5571. Club Tournament Fri, Nov 16, 8pm.

Chess Club –** Sat, Sun, 1:30-5pm, Stu Ctr Rm 473.

Chinese Choral Society –** Singing. Sun, 3-6pm, Stu Ctr Rm 473.

Classical Guitar Society – Classes, group or private. Mon & Thurs, 5-8pm; Sat, 8am-12n; Rm 4-146, 148,149. New group class for beginners every month. Vo Ta Han, 494-8353.

Club Latino – General Assembly* –** Election of officers. New students welcome. Thurs, Nov 15, 5pm, 4th flr Stu Ctr.

MIT/DL Duplicate Bridge Club –** Tues, 6pm, Stu Ctr Rm 473. Jeff, x3-5285 or 864-5571.

Fencing Club –** Wed & Thurs, 6:30pm-9:30pm, du Pont.

Figure Skating Club –** Trying to organize a club for figure skating and ice dancing. If interested, call Gwen Champion, 327 McCormick, x8827. Must have athletic card.

Goju Karate Club* – Mon, Thurs, 7pm, Stu Ctr Rm 407. Beginners enter class first week of each month. Info, Terry or Dick, 440-9631.

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

Judo Club –** Sport and self defense. Mr. M.H. Yanagi, 5th degree Black Belt, chief instructor. Mon, Wed, Fri, 5pm; Sat, 1pm; Exercise Rm, du Pont Gym. Beginners welcome. Info, Mike Portnoff, x3-7310.

Kung Fu Club –** Northern Praying Manits. Tues. Thurs, 7-9pm, T. Club Lge. Info, H.C. Wong, 876-5071.

MIT Karate Club –** Evening classes, 8-10pm, Mon, Wed, du Pont Wrestling Rm. John Miller, x3-1588.

MIT Magazine: Free Parking – Weekly meeting. Sun, 8pm, Walker Mem Rm 316.

MIT Wheelmen* – Wholesale parts orders placed, racing & touring events planned, informal discussion of everything about bicycling. Wed, 7:30pm, Rm 1-203.

Modeling Club – Physiologic and Endocrinologic Models –** Meeting Thurs, Nov 15, 4:30pm, Rm 16-141. Info, MItchell Swartz, Rm 13-3041, x3-6737.

Outing Club* – Mon & Thurs, 5-6pm, Stu Ctr Rm 461.

Rugby Club –** Practices, Tues & Thurs, 5:30pm, Briggs Field. Games, Sat, 1:30pm, Briggs Field.

Science Fiction Society* – Fri, 5pm, Rm 1-236.

Scuba Club –** Compressor hours: Mon, Fri, 4-6pm, Alumni Pool.

Scuba Club –** Pool session, Wed, Nov 14, 8-10pm, Alumni Pool.

Strategic Games Society* – Offers opponents and discounts on merchandise to members plus gaming periodical library. Sat, 1pm-1am, Walker Rm 318. Call Kevin Slimak.

Student Information Processing Board Meeting* – Mon, 7:30pm, Rm 39-200.

Tech Engineering News –** General staff meeting, Sun, 5pm, Stu Ctr Rm 453.

Technique* –** Yearbook staff meetings. Sat, 11am & Wed, 7:30pm, Stu Ctr Rm 451.

Tech Squares* –** Western style square dancing. Tues, 8-11pm, Sala de Puerto Rico. Admission $1, first time free.

Tiddlywinks Association* – Wed, 8-11pm, Stu Ctr Rm 491.

Unicycle Club* – Meetings, Sun, 1pm, front Stu Ctr. Beginners welcome, we have unicycles. Play "unicycle hockey."

Volleyball Club –** Serious volleyball, and eventual participation in Boston area tournaments. Sun (except vacations), 2-4pm, du Pont Gym.

White Water Club –** Pool session. Tues, Nov 13, 8-10pm, Alumni Pool.

Women's Gymnastics Club* – Mon-Fri, 5-7pm, du Pont Gym. Info, Ursula x3-5954.

Wellesley Events

Bates Poetry Reading – Robert Lowell. Thurs, Nov 15, 8pm, Houghton Memorial Chapel.

A Mid-Summer Nights Dream* – Wellesley College Shakespeare Society. Thurs, Nov 15-Sat, Nov 17, 8pm, and Nov 17, 2pm, Shakespeare Society House. Free.

Lilly Martin Spencer: The Joys of Sentiment* – Exhibition of many of the works of the Victorian painter. Through Nov 25, Main Gallery.

Social Events

24-Hour Coffee House* – The MIT 24-Hour Coffee House has re-opened. Inexpensive food, candy, non-alcoholic drinks are sold. Relax, play games, read. Daily, Stu Ctr, 2nd fl Center Lge.

Pot Luck Coffeehouse** – Live entertainment, cider, donuts, coffee. 8:30pm-12m, W20 Mezzanine Lge, 3rd fl. Performers & others interested in helping out, call Doug, x8766 Dorm.

Friday Afternoon Club** – Music, conversation and all the cold draft you can drink. Fri, 6pm, the Thirsty Ear, Ashdown Basement. Admission: $1 men, 50 cents women. Must be over 18.

Muddy Charles Pub** – Join your friends for music, beer, wine, snacks, conversation at the Muddy Charles Pub, 110 Walker. Hours: Mon-Fri, 11:30am-2pm and 4-8pm; call GSC, x3-2195.

Deutscher Tisch – Wir treffen uns freitags von 1-2 in Lobdell, um auf Deutsch und ueber Deutschland zu reden. Wir sind an der schwarz-rot-goldenen Tischflagge zu erkennen.

Movies

The Caretaker* – Department of Humanities. Wed, Nov 14, 7pm, Rm 10-250. Free.

Shame* – Department of Humanities. Thurs, Nov 15, 7pm, Rm 10-250. Free.

King Dinosaur* – UMOC movie. Candidates will perform to relieve the tension of this horrifying movie. Thurs, Nov 15, 7pm, 9:30pm, Rm 54-100. Free, mandatory 49 cent donation to Care African Fund.

Chemical-Biological Contamination: Pesticides in Focus and Paradise Lost (short) and **Of Broccoli, & Pelicans & Celery & Seals**** – Barker Engineering Library Environmental Film Series. Thurs, Nov 15, 5pm, and Fri, Nov 16, 12n, 4th fl conference rm (enter 10-400). Free. Coffee.

The Last Picture Show – LSC. Fri, Nov 16, 7pm, 9:30pm, Kresge Auditorium. Admission 50 cents, ID's required.

The Forty-First (Grigori Chukhra) – Film Society. Fri, Nov 16, 7:30pm, 9:30pm, Rm 6-120. Donation $1.

Take The Money and Run – Midnite Movie Series. Fri, Nov 16, 12m, Sala. Free, ID required. Bring your own blanket.

The Confession – LSC. Sat, Nov 17, 7pm, 10pm, Rm 26-100. Admission 50 cents, ID required.

The Stagecoach* – LSC. Sun, Nov 18, 8pm, Rm 10-250. Admission 50 cents.

Two Daughters (Satjajit Ray) – Film Society. Fri, Nov 23, 7:30pm, 9:30pm, Rm 6-120. Donation $1.

Slaughterhouse Five – LSC. Fri, Nov 23, 7pm, 9:30pm, Rm 10-250. Admission 50cents, ID required. .

The Absent Minded Professor and The Scratch – Midnite Movie Series. Fri, Nov 23, 12m, Sala. Free, ID required. Bring your own blanket.

Frenzy – LSC. Sat, Nov 24, 7pm, 9:30pm, Rm 10-250. Admission 50 cents. ID required.

Music

Noonhour Concert Series* – Thurs, Nov 15: John Gibbons will present Bach's Partitas 3 and 4 on the harpsichord. 12n, Chapel. Free.

MIT Symphony Orchestra* – Featuring Japanese pianist Yasuo Watanabe. Program includes pieces by Mozart, Prokofiev and Sibelius. Sat, Nov 17, 8:30pm, Kresge Auditorium. Tickets $1 at door.

Chamber Music Society* – Memorial Society* – Memorial concert to John F. Kennedy, featuring works by Vivaldi, Mozart and Stravinsky. Tues, Nov 20, 12n, Chapel. Free.

Recorder Ensemble** – Music provided, but bring instruments and any music you particularly wish to play. Tues, 7pm, ESG Hdqurs, 6th fl bldg 24. All aficionados are welcome, freshmen encouraged to attend. Details, David Dreyfus, x3-7787.

Dance

Folk Dance Club* –International, Sun, 7:30-11pm, Sala. **Balkan,** Tues, 7:30-11pm, Stu Ctr Rm 491. **Israeli,** Thurs, 7:15-10–15, T-Club Lge, du Pont. **Afternoon dance break,** Fri, 12:30-1:30pm, Kresge Oval.

Exhibitions

7 X 7* – An exhibition at the Creative Photography Lab of forty-nine photographs by seven midwest photographers. Thurs, Nov 1-Wed, Nov 28, W31-310. Hours: Mon-Fri, 9am-10pm, Sat, Sun, 12n-6pm.

Exhibition of paintings by Susan E. Schur – Over 70 oil paintings. Through Fri, Nov 30, Faculty Club.

Kurt Schwitters* – Collages, prints and graphics by the German artist will be on exhibition at Hayden Gallery Nov 23-Dec 8. Gallery hours Mon-Sat, 10am-4pm. Free.

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

Music Library Exhibit – In honor of St. Cecilia, patron saint of music. Scores, books, pictures.

Athletics

Women's Swim Team – Practice Mon-Fri, 6-7pm, Alumni Pool.

Women's Basketball** – Practice Mon, Tues, Wed, Fri, 4-6pm, Rockwell Cage. Beginning Fri, Nov 2.

Religious Services and Activities

The Chapel is open for private meditation from 7am to 11pm every day.

Philosophical Talks on "Bhajagovindam"* – Swami Chinmayananda will give a series of talks on the Hindu philosophy. Sponsored by SANGAM. Fri, Nov 16-Thurs, Nov 22, 7:15-8:45pm, Stu Ctr Rm 473. Info, Subramanian, x3-6231.

Campus Crusade for Christ/College Life Family Time* – Singing, sharing, prayer & teaching from God's Word. Fri, 7-9:30pm, Rm 1-132.

Celebration of Holy Communion* – The Revs John Crocker, Episcopal Chaplain; Peter Johnson, Boston/Cambridge Ministries; and Constance Parvey, Lutheran Chaplain. Wed, 5:05pm, Chapel. Supper following, 312 Memorial Dr.

Christian Bible Discussion Group* – Thurs, 1pm, Rm 20B-031. Prof. Schimmel, x3-6739, or Ralph Burgess, x3-2415.

Seminars on the Catholic Faith* – Catholic Belief I. Introduction or refresher seminar on the teachings of the Catholic Church. Tues, 7pm, Bldg W2, 2nd fl seminar rm. Father MacNevin, x3-2981. **Knowing and Believing.** Readings and discussion on the interaction of religion and culture. Thurs, 7pm, Bldg W2, 2nd fl seminar rm. Steven Murphy, x3-2981.

Christian Science Organization* – Meetings, including testimonies of healing. Tues, 7:15pm, Rm 8-314.

Hillel:Services** – Mon-Fri, 8am, Rm 7-102; Fri, Traditional 4:15pm, Kosher Kitchen, Non-Traditional 7:45pm, Chapel; Sat, 9am, Chapel. **Classes*** – Many interesting classes offered, for full schedule call Hillel office, x3-2982. **Shabbos Meal*** – enjoy a traditional Friday evening Shabbos meal at Kosher Kitchen, must order by Tues each week. For info and to order, Herbie Levine, x8403 Dorm.

Islamic Society* – Juma prayers. Fri, 12:15pm, Kresge, Rehearsal Rm B. Discussion on the Interpretations. Sat, 5pm, ISC Lge, 2nd fl Walker.

Latter Day Saints Student Association* – Discussion of beliefs. Tues, 8am, Stu Ctr West Lge.

Protestant Communion Service* – Wed, 5:05pm, Chapel.

Protestant Worship Services* – Sun, 11am, Chapel.

Roman Catholic Masses* – Sun, 9:15am, 12:15pm, 5:15pm; Tues, 5:05pm; Fri, 12:15p. Chapel.

United Christian Fellowship* – Christians for Dinner and Sharing Meeting. Thurs, dinner, 5pm Walker, followed by singing, sharing, praying 6pm, Rm 6-321.

Westgate Bible Study Meeting* – Includes study of the Gospel of Mark. Wed, 8pm, apt 1202 Westgate I.

Announcements

Student Innovation Contest – Sponsored by Innovation Center to encourage creativity and confidence as inventors. Must present detailed plans for original project and estimate of marketing potential. Certificate of award and cash prizes. Register starting Mon, Nov 5, Bldg 10 Lobby or Rm 38-476. Info, Rm 38-476, x3-4645 (lve Msg) or Bob, 926-3335.

Children Wanted – We have warm and loving parents to care for your children in licensed day care homes. Information, Child Care Office, x3-1592.

Christmas is coming! – Give someone you love a gift: Give yourself Maggie's self-designed fitness classes – every*body* welcome. M, W, F 12n-1pm, T, Th 1-2pm, M-F 5-6pm, fencing rm. Athletic card required.

Attention: Graduates – of the New York City specialized high schools. Students, faculty, or staff in the Boston area, please write M. Frankston, Rm 54-625.

Wives of Graduate Students** – Persons bilingual in Spanish-English or Portuguese-English needed to act as volunteers for Chelsea fire victims using local hospital. If interested, contact Mrs. Rodrigues, x3-4911.

Placement Interviews

The following companies will be interviewing Wed, Nov 14–Tues, Nov 20. Those interested may sign up in the Career Planning and Placement Office, Mon-Fri, 9am-4pm, E19-455, x3-4733.

Wednesday, November 14 – Battelle Columbus Labs; Bell System (AT&T Co); Celanese Corp; Mechanics Research Inc; United Aircraft Corp/Sikorsky Aircraft Div.

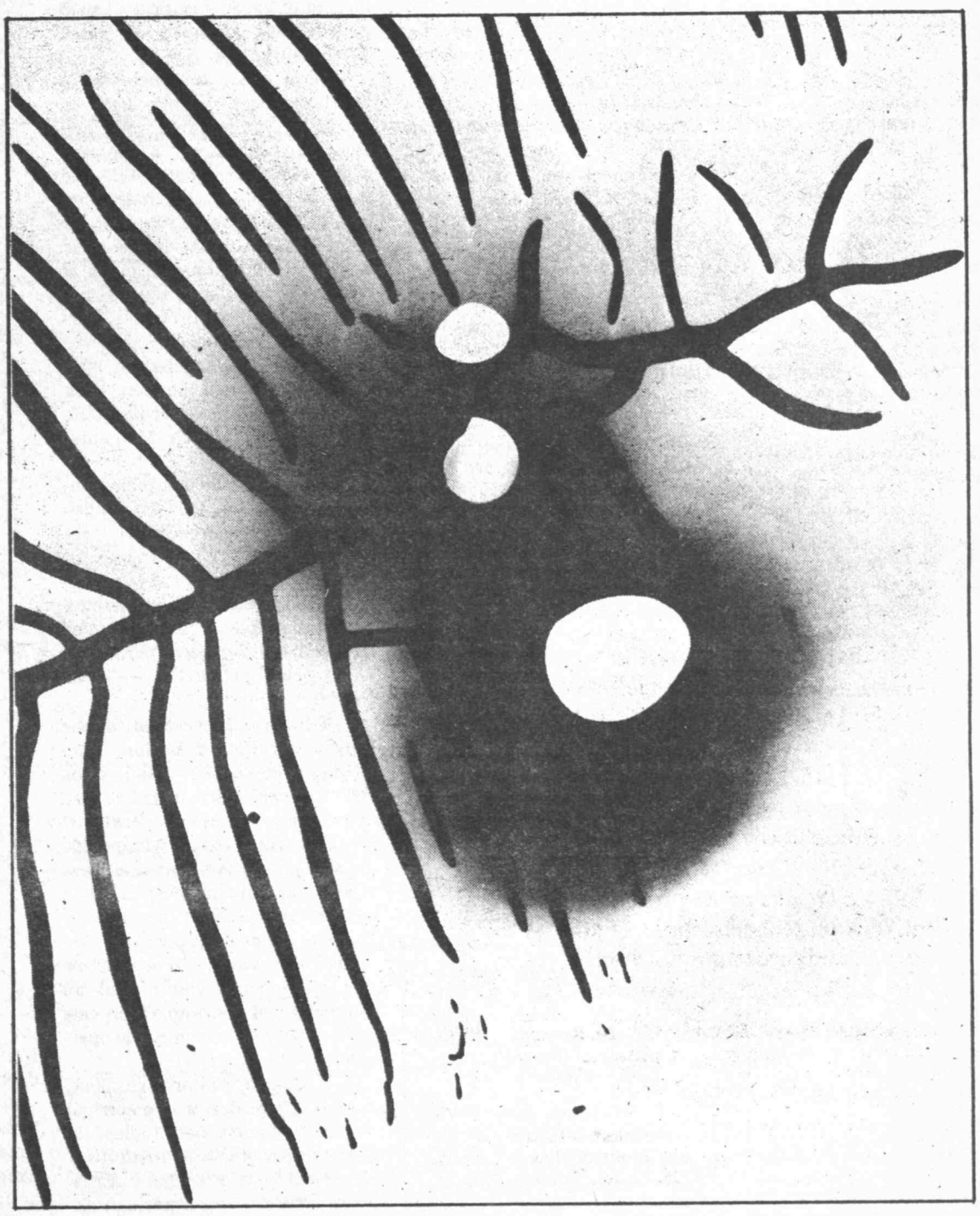
Thursday, November 15 – Naval Ship Systems Command & Naval Ship Engineering Center; Naval Ordnance Lab; US Naval Weapons Lab; IBM; TJ Watson Research Center; 3M Co; United Aircraft Corp./Pratt & Whitney Aircraft Div; Westinghouse Electric Corp.

Friday, November 16 – IBM; TJ Watson Research Center; 3M Co; United Aircraft Corp./Pratt & Whitney Aircraft Div; Westinghouse Electric Corp; Hydroacoustics Inc; Mission Research Corp; Naval Civil Engineering Lab.

Monday, November 19 – Action/Vista/Peace Corps; National Aeronautics & Space Administration – Langley Res, Center; Sperry Rand.

Tuesday, November 20 – Action/Vista/Peace Corps; National Aeronautics & Space Administration – Langley Res Center; Sperry Rand.

Send notices for November 21 through November 30 to the Calendar Editor, Room 5-111, Ext. 3-3279, before noon Friday, November 16.



RIGHT—Photodrawing (1962) by Gyorgy Kepes, director of the Center for Advanced Visual Studies at MIT, is on view at the Fogg Art Museum through December 2 as part of an exhibit entitled, "Newly Recreated: Photographic Printing Processes Revived."

United Way Goal Set At $150,000

Last year the Massachusetts Bay United Way campaign netted $14 million, to which the MIT community contributed $110,700. This year MIT has set a goal of $150,000.

To understand the broad community needs supported by United Way, the following list of service categories shows percentage totals received by each from the MBUW Fund last year. The list also includes United Way campaign and administration costs for 1972-73.

Family and Child Care—(counseling, guidance, foster homes, adoption, legal aid, traveler's aid, etc.)—$3,687,000 (26 percent)

Health—(visiting nurses, Medical Foundation, health education, mental health, retarded children, hospital care, etc.)—$2,417,369 (17 percent)

Youth and Recreation—(settlement houses, community centers, boys clubs, Scouting, Y's, etc.)—$4,070,512 (29 percent)

Servicemen and Their Families—(U.S.O., Red Cross, Salvation Army)—$1,143,406 (8 percent)

Community Planning—(and information and referral, specialized state and national services, etc.)—$727,788 (5 percent)

Campaign Costs—$835,562 (6 percent)

United Way Administration—$410,393 (3 percent)

The United Black Appeal raises funds to help support organizations primarily serving blacks of Greater Boston. Their goal for the year is $500,000.

Based on the needs of the black community, the United Black Appeal will select recipient organizations which also provide health, education, cultural and social service in the community.

Pledge cards for both the United Way and the United Black Appeal have been distributed to members of the MIT community. The campaigns will continue through Thanksgiving.

Procedures Established for Doherty Professorships

MIT has established policies and procedures for the administration of the Henry L. Doherty Professorships in Ocean Utilization. A formal statement of the policies has been distributed to department heads.

The professorships are intended to aid the professional development of junior faculty members interested in any aspects of development and meaningful use of the oceans.

A discussion meeting for interested faculty is scheduled for Monday, November 19, 3:30pm in Room 1-214.

The two-year professorships are open to all assistant professors and non-tenured associate professors from all academic departments and disciplines interested in ocean-related programs.

Professorships were made possible by a grant to MIT from the Henry L. and Grace Doherty Charitable Foundation, Inc. Selection for the professorships will be made by a selection committee consisting of the Provost, the Dean of Engineering, the Director of the MIT Sea Grant Program, and two additional senior faculty members, after nominations have been reviewed by the Sea Grant Policy Committee. Nominations may be made by the heads of the academic departments.

Selection will be based primarily on the relevance of the nominee's proposed research to current issues in ocean utilization, potential applicability of the results to problem resolution, and the professional benefit to the recipient.

Each professorship will provide up to full salary and employee benefits for the academic year, and will normally run for a two-year period effective July 1 following the appointment. The funds granted may be used in lieu of full salary for certain support items and research assistance.

The first appointments will be made effective July 1, 1974, based on nominations received by December 31, 1973.

Inbal Dance Theater to Perform

The world famous Inbal Dance Theater of Israel will perform Thursday, Nov. 29 at Kresge Auditorium at 8pm at the 1973 Abramowitz Memorial Lecture.

Inbal was founded in 1949 shortly after Israel became an independent state—as a means of preserving the music, song and dance of the ancient Yemenite culture. Its programs are based on Yemenite and shepherd dances, folk songs, religious chants and stories from the Old Testament.

The troupe is now on its fourth American tour and its appearance at Kresge follows a two-week engagement at the New York City Center.

Inbal is being presented by the Department of Humanities in cooperation with Alpha Phi Omega fraternity as a benefit for the Chelsea Fire Relief Fund. Tickets are $1 each and may be purchased Nov. 19-21 at TCA, Room W20-450, and Nov. 26-29 in the Lobby of Building 10. Tickets are limited to two per person and MIT identification is required.

Lanchester Prize

Police Patrol Analysis Wins Award

MIT Professor Richard C. Larson has been awarded the 1972 Lanchester Prize for his book, *Urban Police Patrol Analysis*, published by the MIT Press in August, 1972. The award was presented Tuesday at the annual Operations Research Society of America meeting in San Diego, Calif.

The Lanchester Prize, which includes a stipend of $2000, is awarded annually for the book or paper which best meets several criteria. These include "the magnitude of its contribution to the advancement of the state of the art of operations research, the originality of its ideas or methods, new vistas of application opened up by it, the degree of unification or simplification of existing operations research theories or methods it achieves, and expository clarity and excellence."

The book analyzes police patrol operations and aims at establishing workable criteria to help urban police departments develop effective patrol policies and programs.

By combining Professor Larson's knowledge of metropolitan police forces with his analysis of operations research, the book produces a wide range of models that indicate the effectiveness of various police patrol and response strategies. They also make possible the comparison of different strategies, in what is the first such quantitative analysis of these patrol operations.

Several concepts developed in the book were recently used in Boston's "Maximum Patrol and Response Strategy," a massive reallocation of patrolmen in the Boston Police Department announced by Police Commissioner Robert J. diGrazia. Boston and New York City provided much of the cooperation and source material that led to Professor Larson's book. Its methodologies are now being implemented in New York City through the New York City Rand Institute and in Washington, D.C., through Mathematica, Inc.

Professor Larson is principal investigator of a $700,000 multidisciplinary research grant, "Innovative Resource Planning in Urban Public Safety Systems," supported by the Social Systems and Human Resources Division of the National Science Foundation (Research Applied to National Needs).

The study will investigate public safety operations in Boston, Cambridge and Quincy, building on MIT's recent work in police and emergency medical operations. The research program will include an analysis of how to evaluate the operational effectiveness of urban emergency systems, the development of models as planning, research and management tools for use with such systems, and an evaluation of the impact of new technology and new forms of operation on these services.

Dr. Larson, a Winthrop resident, is associate professor of electrical engineering and urban studies. He is a member of ORSA, Institute of Electrical and Electronic Engineers (IEEE), and American Association for the Advancement of Science (AAAS). He has served as a member of the Science and Technology Task Force of the President's Commission on Law Enforcement and Administration of Criminal Justice (1966-67) and the police advisory panel of the National Commission on Productivity (1973). In Massachusetts, he serves on the science and technology advisory panel of the Governor's Committee on Law Enforcement and Administration of Justice.

Professor Larson

Two MIT researchers are slated to participate in a symposium on the results of the National Science Foundation's program of Research Applied to National Needs (RANN being held at the Sheraton-Park Hotel in Washington, Nov. 18-20.

The symposium is bringing together 1,000 leaders in business, government, education and research for discussions on three important national problem areas—energy, environment and productivity.

Scheduled to make presentations in the productivity session on Nov. 20 are: Dr. Richard C. Larson, associate professor of urban studies and electrical engineering, on "Resource Allocation in Public Safety Services," and Dr. Henry H. Kolm of the Francis Bitter National Magnet Laboratory, on "Magnetic Separation in the Mining and Processing Industries."

Among the previous winners of the Lanchester Prize have been Philip M. Morse, MIT professor of physics, emeritus, in 1968, for his book *Library Effectiveness, A Systems Approach*; Harvey M. Wagner, 1969, for his book *Principles of Operations Research*, and Leslie C. Edie, 1954, for his paper "Traffic Delays at Toll Booths."

Room Will Honor von Hippel

The reading room at the Center for Materials Science and Engineering will be named for Institute Professor Emeritus Arthur R. von Hippel at ceremonies Nov. 19, Professor von Hippel's 75th birthday.

One of the Institute's most eminent scientists, Professor von Hippel is widely known for his research on the electrical properties of solids, liquids and gases. He was among the first to stress that research on modern electronic devices required an interdisciplinary approach, a view he forcefully advanced in his series of texts on "Molecular Engineering."

Announcement of the reading room dedication was made by Professor Nicholas J. Grant, director of the Center for Materials Science and Engineering, and by Professor Louis D. Smullin, head of the Department of Electrical Engineering.

Professor von Hippel, born in Rostock, Germany, in 1898, came to the Institute as assistant professor of electrical engineering in 1936. He became professor of electrophysics in 1947, and, in 1962, Institute Professor, a distinguished rank which permits the holder to teach and do research without regard to departmental boundaries.

In 1940 he founded the Laboratory for Insulation Research, a pioneering interdisciplinary facility, that was the foundation of the Center for Materials Science and Engineering.

A reception at 3:30pm in the main lobby of the Center—Building 13—will precede the dedication ceremony at the second floor reading room, 13-2137.

A plaque to be placed in the reading room reads:

"Arthur Robert von Hippel Reading Room. Dedicated to A.R. von Hippel, Institute Professor, pioneer in interdisciplinary research in materials science and engineering."

In 1964, when he retired, Professor von Hippel's former students and colleagues gathered at the Institute for two days to pay him honor.

The events included a conference on "The Structure and Properties of Dielectrical Materials" and a testimonial dinner.

The Tech Talk editorial telephones, Exts. 3-3277 and 3-3278, have been discontinued. Editorial calls are now received on News Office Ext. 3-2701.

Classified ads, Ext. 3-3270, and Institute Calendar listings, Ext. 3-3279, will continue to be received on those lines.

Annuity Plan Briefing Dates Rescheduled

The Prudential Insurance Company of America has announced a change in the times its representatives will be on campus to brief faculty and staff members on MIT's new tax-deferred annuity program.

Effective Tuesday, Nov. 20, they will be available for consultation and interviews each Tuesday from 9:30am to 4pm in Room 20C-205.

Richard LaRhette of Prudential also said that the company's representatives can provide assistance most effectively if faculty and staff members will complete a "request for information" card in advance of interviews. These cards can be obtained from the benefits office and returned to Allan J. Urquhart, the Institute's benefits office, at E19-230 (Ext. 3-4271).

Prudential was one of two companies selected to fund the program, which goes into effect Jan. 1.

Information and enrollment procedures for the second company, the Teacher's Insurance Annuity Association—College Retirement Equity Fund, will be announced later this month in *Tech Talk*.

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 5-105. *Please submit all ads before noon, Friday, November 16.*

For Sale, Etc.

Compl dark rm, Bogen 66A enlarger, lenses & condensers for 35mm & 120 film, easel, dryer, other acces, some chem, ask $175. x3-4152.

Refrig, gd work cond, $20. Call, 965-0372.

Snows, 2, VW, 2/rims, 5 lug, used 1 seas, ask $25. Call, 484-0082, evgs.

Boys hockey skates: sz 1, 2½, 4½, reas, x8-3546 Draper.

Sheepskin jacket, med, $25 or best. x8823 Dorm.

Minolta SR-1, $100. Bill Karp, x3-6737.

Skis, w/bndgs, 190 cm, $30; Koflach boots, sz 10, $20. Alan Katz, x3-3161, lve msg.

Pr stud snows, fit VW, used 3K, $25/pr. Peter, x3-6759.

Hcky skates, hi qual, Bauer Spec Pro 99, exc cond, sz 7, $25 or best. Ira, 494-9172.

Snows, F78x14, mtd, nw '72, $25/pr. Don, x8-4462 Draper.

Leath coat, f, grey, ¾, sheepskin trim, hand embroid Turkey, sz 5, nw, $80; leath coat, m, brn, full lgth, lk nw, sz 42,L, $100. Donna, x3-4271.

Bed/couch, $30; child furn; 3 tiered shlf, $3; 2 sm cab chests, $2.50/ea; charcoal grills; wardrobe cab; bike, $8; wd skis w/bndgs, $8; guitar, $8; thermal blnkts; lg dresses; ivory linen wed dr, sz 14, $10; misc hsehld items. x3-3304.

Yamaha guitar, 2 mos, w/case, $60. Lou, x8-3584 Draper.

Storm wndws, 30x39 & 34x51, alum, $15.80 ea. Bill, x5437 Linc.

Fig skates, girls, sz 4; sm sled, 4'; both lk nw. x3-7785.

Electronics, 6 vols, '63–'68, compl, most unused, best. x3-6092.

Durst M-300 enlarger, $45; enlarg lenses: 50mm f4.5, $25; 75mm f3.5, $15; bike lock & chn, $3; GE toaster, $6; gooseneck lamp, $7; gal wine jugs; glasses, etc, best, nego; want file cab, couch, less $40. Herb, x3-7787.

Cheap: picnic tbl; Garrard AT-60 trntbl, w/dust cvr, works fine; tv, nds rabbit ears; sgl bed; sofa, converts to bed; chrs; oval tbl; victorian fl lamp. Call, 738-2118.

Sony 350 tape deck, 3 heads, gd cond, $90; Advent 101 Dolby, ec, $85; Heathkit AA-100 amp, 25/25 w RMS, $50; Sony 22-D mic, nw $100, $20. Peter, 267-5270.

Tires, (5), 650x16, 6 ply, 8K, $100; stud snows, (2), 775x14, 10K, $25. x3-1806.

Hagstrom elec bass, Oliver 35 w bass amp, w/15" spkr, v gd cond, both $275. Rick, x3-2501.

Acrylic fox fur bdsprd, rich, 5' w, $40. Diane, x0610 Dorm, evgs.

Panasonic stereo set, comp, SG999D, 24 rms watts, exc cond, $149 or best. Call, 494-9237.

Metaframe aquarium, 30 gal, sell or trade. x3-7220.

Scotts std stamp catalog, vol 1-3, '73, lk nw, cost $27, now $15. Sue, x3-5762.

Trundle bd, $20; ice cream freezer, nds part, $5. x3-6010.

Plwd pram, 8', w/2 hp mtr (nds tune-up), $150. Dick, x3-4505.

Child 1 pc snow suit, red, sz 4, nvr worn, ask $20. Connie, x3-5851.

Natn'l tape rcrdr & mtch spkrs, exc cond, $100; flash attach, $10; flash attach shoe for Nikkormat, $10. Steve, x3-7950.

Michelin X 135x15 tires, 2 snows, 1 reg, best. Bob, x3-7220.

Gibson dish wash, hrvst gold, less yr old, perf cond, port or stat, $150. Robert, x196-373 EDC.

Used stove w/dbl oven, exc cond, $125 or best. Izzy, x8-2878 Draper.

Stroller/chr baby furn, gd cond, reas. Lydia, x3-4878.

Police monitor, 2 bands, $50 nego. Nick, x3-2843.

Stereo tape plyr/amp, exc cond, orig packing, 20 w magnetic inputs, loudness contour, $40; (4) 8 trk tapes. x9469 Dorm.

Drapes & crtns: 2 pr org/gr, 52W, 84L, $8/pr, $15/both; red, 48W, 60L, $5; wh/brn/org, 100w, 50L, $5; bl/grn, 120W, 64L, $6; w pr pink, 64W, 32L, $2/pr, $3/both. x5778 Linc.

Pr VW rims, 5 hole, $4; (2) 560x15 tires, 1 mtd 5 hole, 1 mtd 4 hole, $5 ea. Fred, x3-2484.

Dinette set, 7 pc, $50. Lloyd, x3-2215.

Pr lg Advent spkers, Harmon Kardon 930, Miracord 620U, perf cond, $550. Call, 738-5657, aft 6.

Bike, fr, 8 spd, nrly nw, w/acces, $100. Sam, x3-6928, lve msg.

Wlnt bed w/box spr, matt; 9x12 wool rug; drapery rod, 184", 2 pces ww grn carpet, 16x14, 13x7. Call, 325-2813.

WW snows, 735x14 mtd balanced, used 1 seas, 2K. Odien x8-2700 Draper.

Wd skis, f, w/sz 7 Koflach tie boots, $50 or best. Dianne, x3-6116.

Office typwrtr, Royal, rec recond, all mod features (incl magic margin), $55. x3-5503.

Tektronix 310 oscilliscope, dc-4Mhz, exc cond, $150. x8-3367 Draper.

SB-301, 80-10 m rcrvr, w/xtal filter, $200 or best. Jean Ward, x3-3161, lve msg.

Hyde athletic hockey skates, m, sz 9, lk nw, $15. x3-7404.

Fall & wntr storm coats, f, sz 16. Aina, x3-2194.

Garrard mdl 50, 4 spd auto trntbl w/ADC crtrdg, wd base, dust cvr, cheap. x-0553 Dorm.

Books, mainly polit sci, 3/$1. x3-7084.

Formica dinette tbl w/4 uphol chrs, bk & st, 30x40, w/ext 48, $45 or best. Mrs. Shechter, 298-0484.

Yamaha classical guitar, rosewd, lk nw, w/case, $70 or best. Evelyn, x3-2928.

Mark 10 "B", newest CD ignition sys, saves gas/better perf, reg $60, nw units $35/ea, limited quantity. Dick Dolbec, x282 Linc.

Elec calculator, APF Mark 1, 4 functions, float or fixed decimal, constant switch, $40. x9442 Dorm.

Wntr coat, f, wool, Russian-sytle midi, cran red, blk fur trim, was $120, $45; Norge 15 lb washer, 6 yrs, runs, copper, $40; 5 pc silver tea serv, 3 pots, sug & crm, $150. Eva, x3-5742.

Bike, m, Philip 3 spd, bskts, heavy chain, lock, $30 or best; rugs: 9x12 olv grn, $20; 5x7, olv grn, $8; 4x6 bl, $5. Chu, x3-1916.

Vehicles

'40 Ford Opera coupe, flat head V8, all stock, nw br, gd tires, x parts, solid body, drive away cond, best. Brad, x3-5808.

'61 VW bug, gd mech cond, call for details, $150. Call, 862-9462.

'63 Chevy II Nova sta wgn, 6 cyl, auto, gd tires, trans, mtr, 20 mpg, 4 snows, nw batt, strtr, sticker, $125. Bud Suddath, x3-4710.

'64 Valiant conv, big 6 eng, auto, depend transp, orig ownr, best. Fred, x3-2540.

'64 Sunbeam Alpine, nw tires, batt, prtly reblt, nds wk, $200 nego. Kokann, x3-3213.

'64 VW bug, 95K, gd cond, r, 2 snows, $250. Don, x3-3229.

'64 Dodge Dart, bl, gd run cond, ask $250. Call, 288-6052, aft 5.

'65 Corvair, poor cond, gd tires, broken strtr, runs ok once going, fix or for parts, $100; nd van. Daryl, 899-9389.

'67 Fury III, 318, auto p st, exc cond, $650. x305 Linc.

'67 Mustang, hrdtp, 80K, std, gd cond, nw clutch, strtr, snows, $400. Susan, x8-4466 Draper.

'67 Merc Monterey, convert, p st & br, v gd run cond, 78K, ask $300. Tsai, x3-1916.

'68 Thunderbird, p st & br, ac, nds work, best. Cathie, x8-4091 Draper.

'69 VW bug, auto, gd cond, $880. Call, 547-8643.

'70 Peugeot 504, nw paint, eng, tires, $2,300 or best. David, x3-1636.

'70 Maverick, perf, lgest 6 cyl, 14" whls, $1,100. x3-6886.

'70 Olds Cutlass Sup, 2 dr conv, r, stud snows, orig owner, $1,995. x3-4257.

'70 Maverick, gd mech cond, nds some body wk, $795; skis: nw, wd, 190 cm, $10; used wd, 180 cm, $5; used Head 360, 195 cm, $10; Lang boots, sz 11, $15. Paul, x8-4596 Draper.

'70 Triumph GT6, yel w/blk int, amfm, nw clutch, br, hand exh, exc cond, $1,500. Judy, x3-6101.

'71 Pinto, 37K, 2000cc, 4 spd, disc br, amfm stereo, many x, exc cond, $1,400. x7233 Linc.

'72 Fiat 128 sta wgn, mint cond, lo miles, $2,000 or best. R. Strong, x8-1416 Draper.

'72 Merc Cougar, 9K, ac, vinyl tp, blt in amfm stereo tape, Michelin tires, $3,200 or best. Harold, x8-3691 Draper.

'73 Ford Torino, 2 dr hd tp, V8, auto p st, disk br, r, snows, only 11K, $2,550. Bill, x366 Linc.

'67 Yamaha 350, 3.6K, exc cond, 2 hlmts & chain, $525. Ron, 232-3258, lve msg.

Housing

Bos, 153 Beac St, BR w/lg closet, LR, K w/oven, refrig, B, partly furn, ww, painted, gd maint, avail now, $185 incl util. G.P. Demeter, 267-1307.

Bos, Brkln St nr BU Br, 10 min MIT, sub 12/1-5/1, 3½ rm, cln, pets ok, $115 + util. Joanne, x3-5656.

Camb, 6 rm, gar, fam only, $225. x3-5140.

Camb, 2 BR, sub 1/1-8/31, mod, $226.50. Madeline, x8-3528 Draper.

Camb, Tang Hall: housing office has apts, avail now, MIT grad stu pref, affil considered, share w/1, 2, or 3, no married. E18-307, x3-5148.

Everett, 2BR, on T, $125. Jerry Power, x3-2638.

N Andover, 2 BR twnhse, ac, ww, pool, bsmnt, mod K, dw, nr stores, sch, church, incl h, water, gas. Vicky, x7764 Linc.

Waltham, nr 128 & trnpke, 3 BR hse, LR, DR, lg K, 1½ B, avail 1/1 May. x3-5880.

Wtrtwn, 8 Berkeley St, 5 rm apt, 1st fl 3 fam nw B & K, ww, d&d, avail 12/1. Tim, 926-2835.

Mt Snow, Vt, sell or rent, 3 BR condo, + loft, 2 B, frpl LR, DR, K w/d&d, wash & dry, rent $2,000, 12/1-4/1. Jeff, x5823 Linc.

Wash DC, Cap Hill, sm hse, 2 BR, 1½ B, ac, furn, swap for equiv hse or apt Camb area, for yr or beg Dec '73. Wilson, x3-5121.

Canadian ski hse, nr Jay Peak, all util, slps 15, v reas. Christine, x3-7742.

Animals

Bl pt siamese kittens, 8 wks, CFA reg, $15. Dotty, x3-7729.

Great dane pups, AKC, blk & harlequin, (Freyja pups). x3-6610.

Cat, m, nds warm, loving home, free. x3-3306.

Blk rabbit, 2 yrs, free. x8-1341 Draper.

Frndly dalmation-type dog, yr old, nds home, other dogs & cats avail. Nancy, x3-3405.

Dachshunds, 2, mother & son, v healthy, 6 yr old registered, 2 yr old has papers, $50 both. Call, 663-8182.

Lost and Found

Lost: brn leath flight jacket, Nov 5, Stu Ctr, Blood Drive area. Lance, x3-1940.

Lost, strayed or stolen: lg tan car (Merc Montego) w/4 whls, Mem Dr, 11/7, $200 reward for info. x3-6331.

Wanted

Hcky skates, m, sz 10, $15 or wl trade m fig skates. Sanford, x0382, lve msg.

Tramsmission for '67 VW bug. Clyde, 665-3027, evgs.

Used power lawnmower, run cond. Fisher, x3-5571.

Brazilian, Portuguese lessons. x3-7062.

Ride, E Arl (pref Brdwy) - DL7, rd trip, 8-5. Donna, x8-1576 Draper.

Translators for all languages. x3-5259.

Rmmate, f, grad stu, 3 BR apt, Camb bet H & Cent Sq, avail now, $88 incl h. Ruth, x3-2574.

Banjo (5 str) tone ring & other parts. Elliott, x7231 Linc.

Rmmate, m or f, share So End twnhse, own fm, lg K, LR, wash & dry, dw, frpl, 3 min T, $83. Peter, x3-1913.

F, share Beac Hill apt w/2 f, 2BR, furn, nr stores & T, avail 12/1 or 12/15, $87. Call, 227-3621, evgs.

Person for infant & child care, part or full time, live in or out, W Newton. Call, 965-0536.

Rmmate, f, share 4 rm apt, Cent Sq, w/grad stu & child, $90. Gael French, x3-3547.

Used elec typwrtr, SCM or Rem pref, w/auto rtn. Diane, x8664 Dorm.

Clning woman, 1 day/wk, must drive. Call, 862-1935, evgs.

Babysitter, 1 or 2 aft/wk, chldrn 3, 3, 1, 6 mos, flex hrs, in parents home. Joel, x3-7905.

Stu who want to spend Thansgiving w/a fam, fam who want to add to their fam for the holiday. Mrs. J.B. Feldman, 527-1022.

Furn apt for visiting f prof on or nr campus, 1/6-2/3. Evelyn Wheeler, x3-1493.

Refrig, 5 cu ft, gd cond. Helen, x3-7690.

Rmmate, f, spl lev apt nr T, shops, working & pt time stu, no drugs, no pets, avail 12/1, $130. x3-2011.

Mens wh bucks, sz 9½. Don, x8-1231 Draper, evgs.

Tires, 6.00x12, gd cond; service manual '69 Toyota Corolla. Frank, x3-6814.

Ride Rt 1, Ipswich to MIT, wl share exp. Carl, x3-6926.

Responsible person(s) to drive car S Illinois-Bos, asap. Sandy, x3-2574.

Used copy or old edition Architectural Graphic Standards. Chuck, 247-8275. evgs.

Rmmate, Tang Hall 5A1, own BR in 3 man apt, K, LR, B, avail 12/22, MIT grad stu, $113. Steve, x3-6031.

Sm heater for 5 gal fish tank. Sandy, x3-4791.

Ride for 2, Wash-Balt area, Thanksgiving. x8786 Dorm.

Positions Available

This list includes all non-academic jobs currently available on the MIT campus. A duplicate list is posted each preceding Tech Talk publication date on the Women's Kiosk in the Bldg. 7 lobby, and on the bulletin board outside the Office of Minority Affairs, 4-144. This list is also posted in the Personnel Office E19-239, on the day of Tech Talk publication. These postings are provided to encourage individuals from within the Institute to apply for positions for which they feel they qualify.

Virginia Bishop	*3-1591*
Mike Parr	*3-4266*
Philip Knight	*3-4267*
(secretary – Joy Dukowitz)	
Sally Hansen	*3-4275*
Jack Newomb	*3-4269*
Evelyn Perez	*3-2928*
(Secretary – Mary Ann Foti)	
Dick Higham	*3-4278*
Pat Williams	*3-1594*
Claudia Liebsny	*3-1595*
(secretary – Dixie Chin)	

New applicants should call the Personnel Office on extension 3-4251.

The following positions have been filled since the last issue of *Tech Talk* and are no longer available:

73-1041-R	Sr Libr Asst IV
73-956-R	Secretary III
73-1099-R	Sr Acct Clerk IV or Acct Asst V
73-595-R	Secretary IV
73-1145-R	Jr Animal Caretaker
73-1150-R	Secretary III-IV
73-1071-R	Waitress
73-986-R	Secretary IV
73-1029-R	Gen Helper
73-1074-R	DSR Staff – P-T
73-968-A	Tech Asst Acad Staff
73-1010-R	Secretary IV
73-1123-R	Tech Art IV
73-837-R	Secretary III-IV
73-1100-R	Secretary III-IV P-T
73-1153-R	Secretary IV
73-1026-R	Secretary IV
73-1172-A	Jr Libr Asst III P-T
73-1118-R	Waitress
73-1175-A	Sr Libr Asst IV Temp
73-1174-A	Sr Libr Asst IV Temp
73-1104-A	Secretary III

The following position is on HOLD pending final decision:

73-643-A	Staff Recruiter Admin Staff

Administrative Staff member will work in the area of resource development dealing with individual contributors. Develop strategies and programs, prepare reports, provide advice and counsel of a legal nature for resource development activity. Some travel required to represent MIT. Must have legal training and preferably some experience as a counselor in practice or a job situation utilizing legal training. Writing and organizational ability; motivation, enthusiasm required. 73-480 (5/30).

DSR Staff member will plan, manage, and execute high-quality research projects having a strongly experimental orientation. Familiarity and experience with low-speed flight and wind tunnel testing methods and advanced piloting aviation type aircraft; Ph. D. in Aerodynamics and five years applicable research and development experience required. 73-488-A (6/20).

Biochemist – DSR Staff member will participate in lipoprotein studies, and will supervise the activities of several technicians in a clinical research setting. Ph.D. or M.D. in Biochemistry required, as well as experience with lipoprotein and supervising. 73-515-R.

Manager of Subsystem Development – Administrative Staff in the Programming Development Office will provide technical direction of the design, development, and maintenance of software subsystems under the OS/360, OS/VS2, and Multics Operating Systems. Minimum of 7 years professional experience, and 2 years experience in technical management. 73-912-R (9/12).

Systems Analyst – DSR Staff at the Cambridge Project will adapt Time Series processor programs for use with the Consistent System on Multics. Knowledge of calculus, econometrics, statistics, and linear algebra; extensive PL/1 programming experience on Time Sharing Systems; familiarity with TSP-CSP required. Position is temporary until 6/74. 73-845-R (8/29).

Environmental Engineer – Administrative Staff in Physical Plant will organize and direct an Institute-wide energy conservation program. Survey campus buildings to determine areas of possible energy economy; plan procedures; maintain the Institute's compliance with environmental requirements. BS in Electrical Engineering with a basic knowledge of building Mechanical systems for heating, ventilating, and air conditioning. Experience in engineering design or operation of buildings. Experience in energy conservation helpful. 73-875-R (9/5).

DSR Staff at the Cambridge Project will maintain and develop a major Multics System's operating primitives including dynamic storage allocation routines and a PL/1 preprocessor needed to support programs. Will work with others in development of behavioral science applications software Multics and PL/1 experience; minimum 1 year system programming experience in the area of high order parsers, dynamic storage allocation, and multiprocess interactions required. 73-1057-R (10/3).

Director of Personnel Development – Administrative Staff will coordinate the Career Development and Training Programs for all non-academic personnel. Responsible for organization development; assess training needs; plan and develop new training programs; coordinate existing training and development programs; develop career planning and counseling capability. Experience in organization development and career development and planning desirable. 73-1116-A (10/17).

Administrative Staff – Associate Director of the Alumni Fund will be responsible for Staff support to alumni boards and committees engaged in the annual solicitation programs for the Fund. Duties require extensive interaction with senior alumni and corporation executives throughout the country, and extensive interaction with senior members of the MIT faculty and administration. Incumbent must be an alumnus/alumna of MIT. The position will entail a moderate amount of travel. 73-1018-R.

DSR Staff in Metallurgy will perform scanning transmission electron microscopy and high spatial resolution electron probe microanalysis of biological specimens; prepare thin films to use as microanalysis standards; technical subjects. BS with experience in the performance of high spatial resolution and physical constants of thin films, or MS degree required. 73-1127-R (10/24).

Technical Librarian – Administrative Staff will design and implement procedures for organizing and maintaining an Industrial Administrative Information Systems. Process and document EDP reference manuals, technical journals, internally prepared documentation. Aid in implementation, and thereafter maintain, formal methods of interfacing with vendor support personnel. Be directly involved in process of documenting material developed by technical support group, including editing and re-writing of such material. Will also edit and re-write material for a Programmer's User's Guide. Knowledge

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of methods for development and maintenance of a Special Library required; minimal knowledge of data processing concepts and terminology desired. 73-953-A (9/19).

DSR Staff at the Aeroelastic and Structures Research Laboratory will be Project Engineer at a large subsonic wind tunnel. Plan, prepare, run and report production and research wind tunnel experiements. Related in the study of the aerodynamics of buildings and aircraft. BS degree in Aeronautical Engineering or equivalent experience required. 73-1004-A (9/26).

Administrative Staff in the Office of Personnel Relations will assist the Wage and Salary Administrator with the development implementation and long term maintenance of a formal, integrated classification and salary administration program. BS degree or equivalent and 2-4 years of direct experience with the administration of a formal exempt classification and compensation system required. Familiarity with basic statistical methodology is desired. 73-1108-A (10/17).

Adminstrative Staff – Personnel Administrator in the Center for Space Research will serve as staff liaison between the Center and its group and the Institute Personnel Office. Maintain all personnel files, interview job candidates; prepare salary review and file various reports. Represent the CSR management concerning employee policies, hiring policies and standards, promotions, reviews and terminations. Will act as a consultant for equal opportunity employment practices and in connection with employee grievances. Individual should be a college graduate with 2-3 years in personnel administration or a non-graduate with 5-7 years of relevant experience. Familiarity with all phases of personnel administration as well as experience in union activities and classifications required. Excellent communication skills are essential. 73-1167-R (11/7).

Administrative Staff – Program Administrator in the Office of Sponsored Programs will represent the department with respect to sponsored programs in a number of academic departments and laboratories, including proposal review and submission, grant contract negotiation and post-award administration. Experience in an academic department or research laboratory working with faculty principal investigators on sponsored programs preferred. Experience in MIT financial or business administration valuable. 73-1156-A (10/31).

Systems Programmer – Administrative Staff will provide technical expertise; develop and implement methods of improving computer performance. Minimum of two years S/360 or S/370 BAL (ALP) Assembler Language Programming experience. Knowledge of tele-processing, and COBOL or PL/1. 73-265-R (4/73).

DSR Staff (part time-temporary) in Earth and Planetary Science will need Fortran IV and JCL experience to work closely with staff and students. Convert, edit, manage and scientifically analyze large quantities of geophysical and oceanographic data. Primary emphasis is on time series analysis methods. 25 hour work week, temporary 2-3 months with a possibility of becoming permanent. 73-1179-R (11/7).

DSR Staff – Systems Programmer at Project MAC will perform system analysis and system programming on a research version of the Multics operating system. SM or EE degree required; 2-3 years programming experience in the supervisor of some advanced operating system required. Ability to contribute to research and work with students important. 73-1137-A (10/24).

DSR Staff at the Laboratory for Nuclear Science will program for the APC group. Work on existing bubble chamber data analysis programs and develop new programs. Familiarity with FORTRAN; BS or equivalent in physics or math required. 73-1166-R (11/7).

DSR Staff – Systems Analyst at Cambridge Project will adapt Time Series Processor programs for use within the Consistent System on Multics. Knowledge of calculus, econometrics, statistics, and linear algebra; extensive PL/1 programming experience on Time Sharing Systems; familiarity with TSP-CSP required. This position is temporary 7/1/74. 73-749-R (8/8).

Scientific Programmer DSR Staff in Earth and Planetary Sciences will design and implement modifications to an existing scientific software system in connection with the Mariner 9, MVM, and other space-related experiments. Also write auxiliary data. Experience working with a large scientific program; advanced knowledge of FORTRAN; math and/or engineering background on a bachelor's level required. Knowledge of System/360, assemble, JCL, and O/S would be helpful. 73-1094-R (10/17).

Planner/Architect – Administrative Staff in Planning Office will concentrate on long-range planning for existing environmental conditions, define problems, develop plans and design concepts; degree in Architecture required; degree in Planning preferred. Minimum of 5 yrs. experience and the ability to work independently important. 73-880-R (9/15).

Administrative Staff Planner will direct long-range physical planning for the various efforts of the planning team; develop budgets and schedule of government agencies and community groups. Must have a Masters degree in Planning and a minimum of 5 yrs experience. 73-535-R (6/13).

Engineering Assistant – Exempt in the Fuel Research Laboratory of Chemical Engineering will analyze and calculate emission rates of nitric oxide, carbon monoxide, carbon dioxide, and soot from gas range burners. Will also design and make modifications to the equipment. Associate degree in Physical Science or engineering minimum requirement. 73-1084-A (10/17).

Student Accounts Representative – Exempt in the Student Accounts Office will assist students in uderstanding the accounting charges and credits to their accounts; determine the accuracy and make corrections if necessary; review and assist students in the financial registration process. Candidate should have the desire to assist students, the patience to listen to their problems, the ability to communicate effectively. 73-1206-R (11/14).

DSR Staff-Temporary in Earth and Planetary Sciences will analyze and interpret seismic data, especially P and S waves from the earth's core, and surface waves generated by explosions and earthquakes. Will also use the computer. MS in geophysics preferred; experience in computer programming and data analysis important. Job is temporary until 8/31/74. 73-1148-A (11/7).

DSR Staff – Temporary in Earth and Planetary Sciences will research in geophysics related to ultrasonic seismic modeling to study scattering problems. Will require some electronic work and use of computer. MS is in geophysics or related area; background in seismology; ability to do computer programming required. Experience and knowledge of electronics desired. Job will run through 4/30/74. 73-1147-A (11/7).

Administrative Staff – Assistant to the Director of Financial Aid will assist students and their families in describing and resolving financial problems related to study at MIT. Evaluate financial need of individual students; participate in the aid delivery system; coordinate Institute resources; allocate funds to students; prepare governmental reports; assist with the admission process; contribute in research and survey studies on aid policies and procedures. Candidate should have a sincere interest in students and all aspects of college administration and management. Good communication skills required. 73-1180-R (11/14).

Technical Instructor – Temporary Academic Staff in Physics will develop and construct, under faculty guidance, prototype experiments for an undergraduate instructional laboratory. Job involves woodworking and elementary machining of metals and some elements of electronics. BS in Pyhsics is necessary. Job ends 6/30/74. 73-1199-R (11/14).

DSR Staff in the Center for Space Research will analyze and interpret plasma data from satellite-bone plasma experiments. Recent Ph.D in space plasma physics or related area required. Candidate should have had direct experience with the analysis and interpretation of experimental results related to the interplanetary plasma. 73-1183-A, 73-1184-A (11/14).

Senior Secretary V in the Radioactivity Center will perform general secretarial duties necessary for smooth office functions. Contact patients and invite them to come to MIT for Studies; maintain all records; handle correspondence, travel arrangements and hospitality duties. Knowledge of medical terminology helpful; excellent skills and maturity important. 73-893-R (9/12).

Secretary IV in Mechanical Engineering will handle general secretarial duties for a group of faculty, researchers, and students. Maintain accounts; type technical reports, proposals; transcribe from shorthand and machine dictation. Excellent typing required. Shorthand and dictaphone skills, ability to organize within a very busy office is important. 73-1058-R (10/10).

Senior Secretary V in the Arteriosclerosis Center will coordinate the office activities of the Director of a multi-faceted medical research program. Schedule appointments, conferences, lectures, maintain student records and appointments and a variety of office files; periodically prepare reports; type manuscript reviews and other materials. Individual will have extensive telephone contact with other medical areas and patients. Good organizational skills ability to establish priorities and supervise junior secretaries required. Knowledge of medical terminology and machine transcription helpful. 9:30-5:30. 73-1088-R (10/10).

Secretary IV in Academic department will type correspondence, proposals, DSR reports, manuscripts, these (much of it technical) keep DSR account records; maintain small library; compose routine letters; assist professor with details of registration. Ability to work independently and to write letters important; accurate typing essential; knowledge of shorthand, technical typing and bookkeeping preferred. 73-578-R (6/27).

Senior Secretary V to the Ocean Engineering Department Head will perform a variety of complex duties. Answer correspondence independently or from verbal instructions; maintain busy schedule of appointments; assist with salary reviews; act as department liaison with other Institute offices; organize and maintain departmental files; coordinate work of other secretaries during peak periods. Excellent shorthand or speedwriting, and typing skills; several years responsible secretarial experience required; ability to organize and to establish priorities; initiative and poise essential. 73-1155-R (11/7).

Secretary IV in the Office of the Vice President and Treasurer will handle general secretarial duties, assist with administrative functions. Candidate should have the ability to grasp the basics of the insurance industry and to deal with legal terminology. Excellent secretarial skills required; shorthand preferred. Maturity to make decisions, establish priorities, and ability to work under office pressures important. 73-1159-R (11/7).

Secretary IV to a Professor in Economics will handle all general secretarial duties; type correspondence, course material, technical manuscripts; perform editorial secretarial duties for *Econometrica*. Good typing and organizational skills required. 73-1170-R (11/7).

Editorial Secretary IV at Graphic Arts will type on a variety of typesetting units; proofread and make corrections, do paste-ups; operate to meet deadlines for publications; responsible for processing using the Ektomatic developing and stabilizing unit. Will also perform other clerical duties and assist customers on the phone and in person. Excellent typing required; previous commercial experience preferred. Knowledge of proofreading symbols, codes and units of measure important. 73-1141-R (10/30).

Secretary IV to two Professors on Committee on Biomedical Engineering and Man Vehicle Laboratory in the Center for Space Research will handle general secretarial duties. Excellent typing and dictaphone skills required; ability to work independently doing editing and research important; familiarity with medical terminology desirable. 73-1138-A (10/31).

Secretary IV in Urban Systems Laboratory will be receptionist and general secretary for the Headquarters Office. Will type general correspondence, file, reconcile accounts, handle purchasing, payrolls, and travel arrangements, and maintain a small library. MIT experience preferred; good typing; ability to establish priorities important. 73-1146-R (10/31).

Secretary IV in Mechanical Engineering will perform general secretarial duties for the department head. Type correspondence from machine or shorthand dictation. Excellent skills (shorthand preferred); ability to establish priorities and to occasionally work under pressure with a variety of people is important. 73-1151-R (10/31).

Secretary IV to the Director of the Industrial Liaison Office will handle all office procedures including accounting and some statistics necessary in operation of a large office. Excellent typing and shorthand skills are essential; previous experience required, preferably at MIT, business school background preferred. 73-1031-R (10/3).

Secretary IV for Institute Secretary for Corporations will organize and run the office. Very accurate typing needed for some letter-perfect copy. Other typing duties require speed. Preliminary research on corporate prospects; gather backup information for visits; draft not-too-technical correspondence. Work closely with other Institute offices in obtaining pertinent data; receive visitors. Flexible, adaptable, good telephone presence. 73-1091-R (10/10).

Secretary IV in Mechanical Engineering will handle bookkeeping for computerized accounts; maintain budget records; prepare materials for courses; type technical reports. Secretarial school background or previous experience preferred; knowledge of bookkeeping, keypunching, or other computer techniques helpful. Good typing and the ability to work for several people required. There is a lot of student contact in this job. 73-1194-R (11/14).

Secretary IV in the Civil Engineering will handle general secretarial duties for a professor and two colleagues. Organize and maintain files; perform some administrative duties; type correspondence, class material, technical reports; handle several accounts. Good typing skills required; ability to work with students, faculty and staff important. 73-1195-R (11/14).

Secretary IV-V (part-time) in the Center for Advanced Visual Studies will handle general secretarial duties. Excellent typing skills needed for final-draft manuscript typing and general correspondence. Individual should have editorial skills and an interest in the arts. 20 – 25 hour work week. 73-1162-R (11/14).

Secretary IV to the Assistant Director of the Center for International Studies. Handle some administrative responsibilities; assist with general headquarters work and report production; greet visitors. Excellent typing skills required. Flexibility important in dealing with people and working under pressure. 73-1196-R (11/14).

Secretary IV to the Executive Officer of Chemical Engineering will handle general secretarial duties; maintain petty cash account; receive visitors. Previous secretarial experience preferred; ability to anticipate, maturity to handle problems and work independently required. Good shorthand and typing skills necessary. 73-1191-R (11/14).

Secretary IV in Mechanical Engineering will handle general secretarial duties necessary for the smooth function of this busy office. Type technical reports, proposals, papers, class notes; answer routine correspondence; maintain files. Previous secretarial experience, excellent typing skills required; experience in technical typing, shorthand preferred; ability to establish priorities important. 73-1193-R (11/14).

Secretary IV in the Office of the Dean of the Graduate School will handle general secretarial duties for the Executive Officer and Assistant Dean. Answer routine correspondence; draft progress and fiscal reports; prepare memoranda and institutional surveys for MIT distribution, assist with processing of fellowship programs, applications and proposals. Good typing, shorthand, and dictaphone skills required. Familiarity with MIT helpful. 73-1200-R (11/14).

Secretary III-IV in Economics will handle regular secretarial duties for two professors; type class material and research reports (some technical). Both professors teach undergraduate and graduate courses and are active with students thesis research. Shorthand or speedwriting and good typing required. Ability to work independently is important. 73-1150-R (10/31).

Secretary III for a group of faculty members and research staff in the Research Laboratory of Electronics. Type technical manuscripts, including setting format and verifying footnotes and references; handle all other general office duties. Excellent typing experience preferred. 73-861-R (9/5).

Secretary III in Mechanical Engineering will assist with general secretarial duties in Headquarters Office. Good typing skills, abilit y to work accurately in a busy office important. 73-1152-R (10/31).

Secretary III in the Student Accounts Office will assist with the preparation of the degree list and review of students financial status; will also handle all general secretarial duties. Accurate typing skills required; ability to deal effectively with students in a busy atmosphere important. 73-1154-R (10/31).

Secretary III – Temporary in the Dewey Library will handle secretarial, some administrative and library assistant duties. Type and file catalog records; assist at the Library's public service desks; perform secretarial duties for the Head Librarian. Good typing skills essential; previous secretarial and/or library experience highly desirable; ability to work accurately and efficiently without close supervision required. Occasional evening or weekend work may be required. Job ends 1/14/74. 73-1205-A (11/14).

Secretary III in the Operations Research Center will type research reports, manuscripts, and correspondence for an active research group. Handle other general secretarial duties. Strong typing skills important, ability to work with details important. 73-1187-A (11/14).

Secretary III in the Operations Research Center will assist the Administrative Assistant in general secretarial work. Type correspondence, manuscripts, reports; mimeograph, ditto materials; assist with the processing of invoices and checking monthly statements. Accurate typing skills important; ability to work with students, faculty, and staff important. 73-1188-A (11/14).

Reactor Operator Trainee IV in Nuclear Engineering will serve as shift operator on the MIT Reactor after passing AEC Operators Exam. Two yrs. of technical college education or its equivalent background will be necessary for preparing for operators' licensing. Knowledge of electronic circuits would be helpful. Ability to work under pressure of emergencies important. 40 hour work weeek. 73-988-R (9/26).

Jr. Programmer V in the Arteriosclerosis Center will assist in design, development, and evaluation of a Medical Data Management System. Candidate must have a sincere interest in working in a medical environment and have the ability to collaborate with medical personnel. Previous data management experience, knowledge of PL/I and familiarity with 360/370 OS desirable. 73-1182-A (11/14).

Senior Clerk III at the MIT Press will handle duties of media production assistant. Assist with the processing of journals, books and other materials for production. Accurate typing needed for performing clerical functions. Candidate would have an interest in the details of the publishing world and the ability to learn these functions. 73-1208-A (11/14).

Senior Clerk III in the Microreproduction Laboratory (Libraries) will process requests for microfilm and photocopies; type invoices, work orders; prepare statements for the Accounting Office. Ability to assist customers over the phone and in person is essential; accurate typing skills required; bookkeeping knowledge helpful. 73-1160-R (11/7).

Senior Clerk III will take and process orders at Graphic Arts. Price and schedule Xerox work, handle requisition details. Knowledge of photography preferred, but not essential. 73-946-A (10/10).

Library General Assistant III (part-time) – Temporary in the Processing Section of the Rotch Library will assist with a variety of clerical duties; search and file in the card catalog; maintain records. Accurate typing essential; ability to handle a variety of details important. Previous library experience desirable. 17½ hour work week, job ends 6/30/74. 73-1192-A (11/14).

Microfilm Trainee – Messenger II in the Microreproduction Laboratory will work as a camera operator; assist in all phases of microfilm production; deliver and pick up material to be microfilmed. Individual must be reliable; have good attendance and references. Ability to follow detailed instructions required; some manual dexterity desired. Temporary through 7/74. 73-1158-R (11/7).

Painter in Physical Plant must have minimum of 5 years experience in all phases of painting, including interior and exterior work. Preparation and mixing paint materials and matching colors, thorough knowledge of the various materials, tool, equipment and rigging used in the trade. Must have a Painter Rigger's License and be able to work effectively on staging and ladders. 40 hour work week. M-F. 73-1106-R (10/24).

Machinist B (Temporary 9 mo-1yr) in Nulcear Engineering will work from blue prints, specifications, verbal instruction, or sketches. Set up and operate machine tools. Work in reactor machine shop on experimental and reactor components fabrication with supervision. Will handle and be exposed to radioactive materials. Strict adherence to approved radiation protection procedures will be required. Minimum 2 years applicable experience or graduation from a 2-year day technical school machinist course required. 73-1059-R (10/24).

2nd Class Engineer must have a Mass second class Engineer's license or higher. Individual must be willing to work on any shift. 73-182-R (4/73).

Electrician for Physical Plant will install and maintain all types of electrical equipment and systems. Ability to work from blueprints, verbal instructions or sketches as necessary. Some electronic experience desirable. Must be able to work all shifts and on irregular schedule. Minimum of five years experience and Mass State license required. 73-1107-R (10/17).

Coming soon in M.I.T.'s magazine of technology in the service of society:

The "Energy Crisis" by David C. White, Energy Laboratory, M.I.T.: Our trouble is a problem because it has so many dimensions.

Energy Use and Thrift in Packaging and Marketing by Stephen Berry and Hiro Makino, University of Chicago: Just recycling cans could save 34 billion kwh., glass containers 38 billion kwh. every year; what are we waiting for?

Key Issues in Offshore Oil by John W. Devanney III, Ocean Engineering, M.I.T.: The cost in real national income for undeveloped domestic offshore oil is more than $3 per barrel. The risks of development . . .

Oil Shale and the Energy Crisis by Gerald U. Dinneen and Glenn L. Cook, U. S. Bureau of Mines: Technology is closing in on 600 billion barrels of oil out there in Colorado, Utah, and Wyoming.

The Challenge and Promise of Coal by Edmund A. Nephew, Oak Ridge National Laboratory: Deep mining is the ultimate route to most U.S. coal, but that's not where the action is today.

An Engineer--Social Science Team at Work by Amitai Etzioni, Sociology, Columbia University: They really did manage to work together effectively, and here is how.

Science and the Presidency: A summary in dialogue form of the Science Advisers' M.I.T. reunion. "There is nothing sadder than an adviser whose advice isn't wanted," said Donald F. Hornig.

. . . and Next a Materials Shortage? by Vincent E. McKelvey, Director of the U. S. Geological Survey: Can we solve the minerals problem before it becomes the "minerals crisis"?

How We Saved the Skylab by William C. Schneider, Skylab Director, N.A.S.A.: the workshop was underpowered and overheated, and this an hour-by-hour account of what they did to save the mission.

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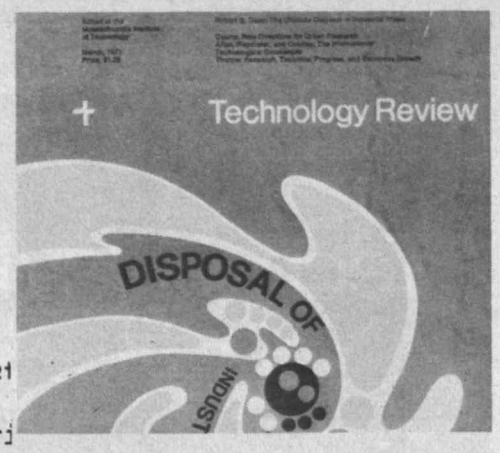

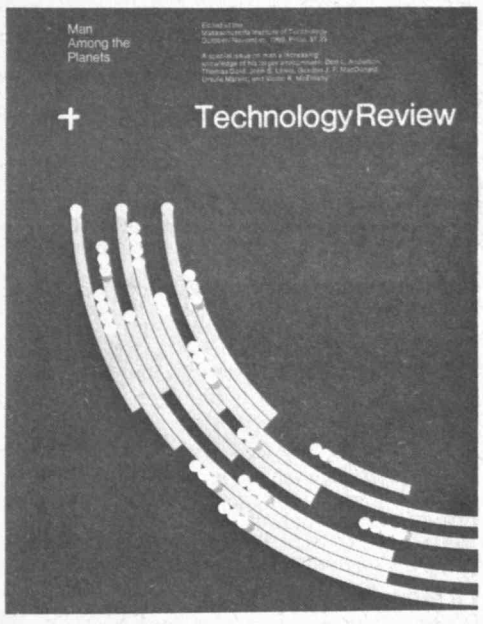

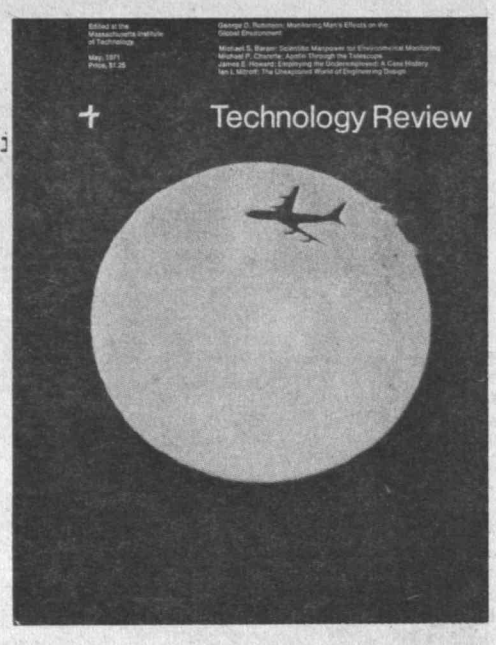

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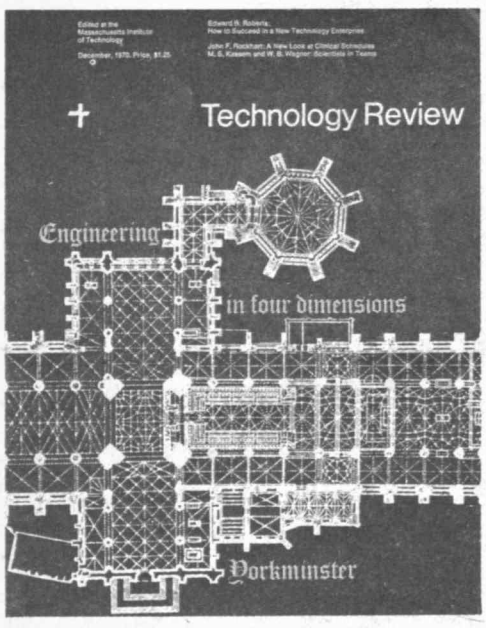

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