Massachusetts Institute of Technology

TECH TALK
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April 12, 1972
Volume 16
Number 40

Draper Lab to Keep Watchful Eye on Apollo 16

When Apollo 16 streaks for the moon and back next week and the week after, scores of Boston area engineers will stay close to telephones in their homes and offices in case their on-the-spot expertise is needed to help solve unforeseen problems in space.

The engineers are employees of the Draper Lab where the on-board guidance systems used in Apollo command modules and lunar modules were designed and developed and where the guidance system computer programs for the moon missions are developed and verified by advance simulation.

During each mission to the moon, the Laboratory provides around-the-clock support to the National Aeronautics and Space Administration at Cape Kennedy and Houston and via a closed telephone circuit from Cambridge so that the astronauts in space and the mission controllers on the ground have instant expert assistance available to them in operating the on-board guidance systems should the help be needed.

The Draper Laboratory support system has proved valuable to NASA numerous times during previous missions, but the most dramatic was a year ago during Apollo 14. A faulty abort button in the lunar module began sending spurious signals to the LM guidance computer as the lunar landing was to begin. Had a spurious signal been sent during the landing phase, the landing would have been aborted automatically, even though all systems were performing perfectly.

At mission control in Houston, in an area known as the "backroom" where the Draper Lab engineers who are assigned to duty in

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This workman finds Clement Meadmore's sculpture, "Upended" a handy workbench as he works on the outside lighting at the Student Center.

–Photo by Margo Foote

NSF to Support Student Research

More than 90 students will be employed this summer doing independent research projects under grants totalling almost $100,000 from the National Science Foundation.

The grants--five in all--come from two separate NSF programs and support both individual and group research projects in a wide range of scientific disciplines.

Students involved in the projects will receive stipends of up to $80 per week for ten to twelve weeks of summer work. Although faculty supervisors will coordinate research efforts, students will have the major responsibility for the projects.

The grants range from $13,950 for a ten-student group project studying the flow composition of rivers to $23,400 for 45 students doing individual research in chemistry. The total amount of the five grants is $92,730.

Two group projects will be supported under NSF's Student Originated Studies (SOS) program, in which the students themselves take the initiative in designing and carrying out environmental research projects. Each grant is awarded directly to a student group director who has final responsibility for the project.

One group of ten students headed by Neil B. Cohen, of Cleveland Heights, Ohio, a sophomore in urban studies and planning, will study the possibility of using law as a tool for social change under a $16,820 grant. Members of the group will serve as interns in the Massachusetts Law Reform Institute. Faculty supervisor for the study is Michael S. Baram, associate professor of civil engineering and a lawyer himself.

The other SOS-supported group will analyze physical and chemical flow composition data from local rivers in an attempt to build a general model of river systems. Directed by Robert W. Collier, of Ballston, Lake, New York, a sophomore in civil engineering, the group will study several New England rivers originating in more

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Lewin Launches Largest Balloon

As Tech Talk went to press, a cable was received from professor Walter Lewin reporting the successful launch and flight of an enormous balloon carrying an x-ray telescope in an experiment in Alice Springs, Australia.

"Successful spectacular launch of largest balloon ever on April 5," Professor Lewin cabled. "Twenty-seven hours later payload touched down near Lake Frome in South Australia. Sensational recovery from desert. We obtained fine data."

Thousands to Visit MIT Saturday for Student-Planned Open House

An audience of thousands is expected at the Institute on Saturday afternoon, April 15, for Open House. Open House is organized by students to acquaint people in Boston area with what goes on at the Institute.

By nature, Open House is also an optimum time for members of the Institute community to bring their families to see what life is like at MIT, and to get better acquainted with the Institute themselves.

This year the students have arranged some 200 events for Open House, including tours, films, demonstrations and displays. Tours come in two varieties, student-guided and self led.

Four self-guided tours, in which visitors may take as much time as they wish at exhibits, will be marked with colored arrows along the tour route. The Blue Tour encompassing the Center for Materials Science will display among other exhibits electron microscopy, magnetic fluids, insects at 10,000 times magnification, X-ray diffraction, growth of laser crystals and the digital systems lab.

Note: a complete program for Open House will be found in the centerfold in today's paper.

The Green Tour will include freeze-dried coffee demonstrations, model rocket test-firings, an artificial kidney system, and urban action games and puzzles. The Yellow Tour will feature a computer controlled graphics display, the Ship Structure Lab, the Marine Hydrodynamics Lab and propellor tunnel, and a model dam display, including the causes of dam failure. The Red Tour will include ECOLOG, a participatory planning process, computer-aided urban design display, biomedical electronics lab, lasers and oscilloscopes.

There will also be four guided

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LINAC Ceremony Honors Bates

Last Friday MIT formally named its newest nuclear physics research tool, a linear electron accelerator 600 feet long, in memory of the late US Representative William H. Bates of Massachusetts who was a leading congressional champion of basic scientific research prior to his death in 1969.

More than 250 local, state and federal officials and friends, including several congressmen, were on hand for the naming ceremony and heard a spokesman for the facility announce the late news that scientists and engineers, who hope to achieve full accelerator capability of 400 million electron volts later this year, had reached a quarter of that, or 107 mev, during the early morning hours of Wednesday, April 5. The achievement is a major milestone in bringing to operational readiness the facility located on a 77-acre plot of what formerly was the Essex County Sanatorium in Middleton.

Dr. Wiesner, left, with Mrs. Bates and Mr. Johnson at the dedication of the Bates Accelerator last Friday.

–Photo by Bob Lyon

Dr. Clarence E. Larson, one of five members of the US Atomic Energy Commission which with MIT sponsors and funds the $7 million project in Middleton, in a principal address at the naming ceremony, said the AEC was "deeply pleased" that MIT chose to name the accelerator for Congressman Bates who represented the Sixth Massachusetts Congressional District for nearly 20 years.

As a high-ranking member of the House-Senate Joint Committee on

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Brilliant Fellow

These are high-pressure days in the language and image biz. A word such as "brilliant" for example, is generally thrown away to characterize the merely noteworthy or promising, as in "brilliant student." The word is derived through the Latin *berillus* from the Greek for beryl, and properly used should convey more than "shine", the meaning of the French **briller,** whence it comes most immediately to English. Indeed, as "A brilliant" once meant a diamond, the word ought to summon to mind the qualities of a rare gemstone: hard and cutting, a many faceted, finely chisled, highly polished piece of work, whose glints in light and flashing surface gleam all the brighter for the luminous fire in its depths. It is in all these senses that we wish to say Geroge Steiner's lecture last week, "Priam in the Tent of Achilles," was surpassingly brilliant.

Steiner is a Fellow of Churchill College, Cambridge, a literary critic of the highest carat, author (of *Language and Silence, Tolstoi or Dostoevesky?, Extra-Territorial,* among others), scholar, teacher, and, as we found out at an informal pre-lecture get-together at the Faculty Club, a man of almost passionate warmth and cultivation, with dark hair worn short, an accent hovering somewhere between America and England and penetrating, almost glowing, amber eyes.

Our genial host was Dick Douglas, head of the Humanities Department, which was sponsoring Steiner's appearance at MIT, and arriving in dining room 3, we found Professor Douglas and Mr. Steiner discussing the forthcoming match between Bobby Fischer and Boris Spassky for the world chess championship. "I'm going to cover the match for *The New Yorker,*" Steiner told us. "It's a great event. I hope I'll be able to get it down right."

The odds in England heavily favor Fischer, Steiner reported, adding that he himself thought the Fischer could not be defeated at this point in his career. "He seems a man possessed, right now," Steiner went on, "and he has about him an all but demonic force. In his match with Larsen, for example, which he won by the unbelievable score of six to noghing, that force, I think, *compelled* Larsen to play below his normal form. Fischer has never been able to prove his charge that the Russian were conspiring against him, you know. He'll be going all out on this one. I think he'll destroy Spassky. The Russians are very much worried by Bobby, partly because they're afraid he'll change the character of international chess into a money-making thing. The world champion has, of course, unique position and power. The pressure on Spassky, who is a thoughtful person, must be enormous; he's literally defending his country."

Someone remarked that Boston chess circles were speculating on the possibility of Fischer's using P-Q4 as a surprise opening move, since he has never used it in tournament chess. "Oh, no. P-K4, I think," Steiner said with conviction. "If Bobby's luck holds--and he's in a period of enormous grace just now--he'll get white for the first round. P-K4. Besides, I'm sure Spassky's seen P-Q4 somewhere before." Steiner broke off to say hello to Roy Lamson, who he had known for some 20 years and who was going to introduce his lecture later in the evening. "George, you don't change a bit, do you?" said Professor Lamson taking his hand warmly. They chatted for a minute and then Steiner exchanged greetings with President Weisner, who came by a few minutes later to convey a brief welcome to his illustrious visitor.

In Kresge's Little Theatre, Mr. Steiner addressed himself to his subject. It was translation: at one level, of a particular passage in the Iliad--Book 24, when the bereaved Priam comes to the tent of Achilles to plead for the body of his dead son Hector from the man who slew him--and at another level, of the human soul into something more than human. Part of Steiner's accomplishment as a critic, we thought, lay in precisely his choice of what to illuminate, for the insights he wished to impart were anything but ordinary and his grasp for what is of true importance to the condition of man is uncommonly sure.

He paointed out that this passage in the Iliad contains three motifs that are the raw material for much of western literature. First, the relization of common doom--the doomed king of the doomed city coming to confront a principal agent of his doom, who is himself doomed even in his triumph. Second, equivocation and equipoise--the poetic balance between what Homer calls "unutterable grief" and the body's need, even in the midst of choking anguish, to eat and sleep. Third, a momentary vision of symmetry, in which the old king and the young hero can see themselves in one another.

Steirner traced the handling of these three elements in the work of a number of translators. Chapman--"When Keat's first looked into Chapman's Homer, one got the feeling that it was also the last look. But Chapman gets several things just right. He concentrates on the "man-slaughtering wands which Priam kisses, and on the carving of the ceremonial meat by those same hands. When Priam enters 'so in night', that qurious phrase, I think, puts it absolutely right." Pope--"That meal in the midst of tragedy is simply more than Pope's civilized sensibility can bear, so he hunts around for the most abstract Latin word he can find. 'Refection' couldn't be further from it. But because Pope is truly a great poet he can recoup at once." Cooper--"He made the mistake of thinking Homer was Milton, pointing out with perfect irrelevance that both were blind and mistreated." Lattimore--"Paradoxically, his attempt to fix the future with bland undated words resulted in a translation already dated, the effect is of Eisenhower era prose when it isn't downright ludicrous, as when he has achilles address Priam as 'aged, magnificent Sir.' "

Past translators, and difficulties of translation such as how to convey the absolute blackness of the night through which Priam travels, the physical presence of supernatural deities, the ritual of butchering meat, past these Mr. Steiner delved at last into deeper orders of the untranslatable. "Our loss is in reading between the lines, for it is what is between the lines that gives the lines their setting and their energy." Our time, Steiner thought, is so peculiarly unable to come to grips with three elements in Homer that they are even hard to put into words: Poignant, almost triumphant disparity between magnificent age and magnificent youth; the Homeric adoration of war, in which war is seen not as a social pathology but as the rifhtful testing ground of the male community; and a view of death into song that takes mortality less as termination than as translation, almost as the chief grace of man. Steiner stopped. The mind's eye filled with dazzling after-images and as we departed, we recalled for no reason a few lines by a minor 17th century poet named Jon Hall:

Since Man's but pasted-up of earth,
And never was cradled in the skies,
What *Terra Lemnia* gave thee birth?
What diamond eyes?

11 Receive Guggenheim Fellowships

Eleven MIT faculty members have been awarded John Simon Guggenheim Fellowships for 1972.

The Guggenheim Fellows were selected from more than 2,500 applicants in an international competition. Of the 372 scholars, scientists and artists chosen, MIT's total of 11 placed the Institute in a tie for seventh among colleges and universities in the US.

The awards support study in all subjects, but center in the fine arts and the humanities. The research subjects proposed by MIT Fellows range from geophysics and hydrodynamics to linguistics and psychology.

The MIT faculty members who received the awards and their research topics are: Professor George Bekefi of phsyics, plasma physics; Dr. Jule C. Charney, Alfred P. Sloan Professor of Meteorology, geophysical fluid dynamics; Professor Jerry A. Fodor of philosophy and psycholinguistics, psychology of cognitive processes; Professor Jerrold J. Katz of philosophy semantic structure of causitive constructions; Professor Elliott Lieb of applied mathematics, statistical mechanics; Professor Chiang C. Mei of civil engineering, geophysical hydrodynamics; Professor Alan V. Oppenheim of electrical engineering, digital signal processing; Edward R. Pincus, professor of cinema, film making; Professor Robert Silbey of chemistry, physical chemistry; Professor Jeffrey I. Steinfeld of chemistry, molecular energy transfer; and Professor Sidney Yip of nuclear engineering, statistical mechanics.

Technique Needs Staff

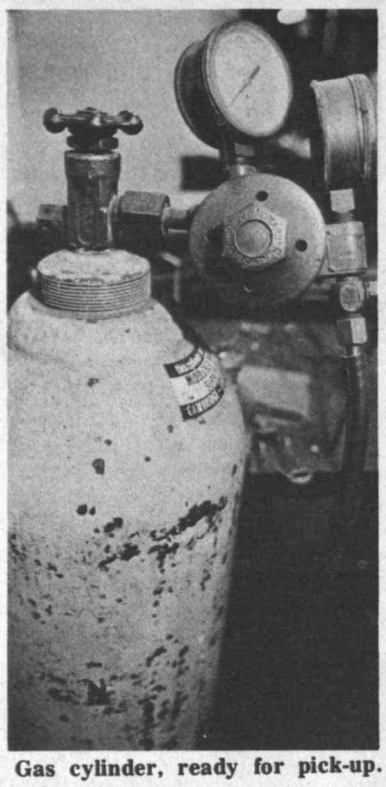
Technique, the Institute's yearbook, needs help.

According to Al Ritter, '73, editor of the 1973 Technique, there are plenty of openings on the staff for anyone interested in producing a first-rate yearbook. People are needed for writing, editing, layout, graphics, photography and sales. (Book and advertising sales are paid on a commission basis.)

Technique is run by students, but everyone in the community is invited to contribute time, effort and advice. Al says, "Yearbooks are generally student-oriented, but Technique is really an annual history of all aspects of life at the Institute. Our audience appeal extends far beyond the student population."

Most of the work done at Technique's weekly meetings, held every Saturday at 11am in Room 457 of the Student Center. Anyone interested in working on the yearbook should attend one of these meetings or call Al on Ext. 2986.

Unused Gas Cylinders Cost $20,000 Yearly



Gas cylinder, ready for pick-up.

"Within the main buildings, the Office of Laboratory Supplies will pick up empty cylinders," he said. "Persons who have cylinders they no longer need should call Ext. 4762. The cylinders will be picked up within 24 hours. People in other areas may take cylinders to the nearest receiving room where they will be collected by the cylinder delivery truck.

"The cost of gases are increasing every year," Mr. Nealand revealed. "We can offset that increase if gas users will cooperate in returning cylinders so that we can reduce the rental charges."

Empty and partially filled gas cylinders are costing the Institute more than $20,000 a year according to G. Edward Nealand, Director of Purchasing.

"By inventory count at the end of February, we had over 3,200 cylinders at the Institute," Mr. Nealand said. "Every cylinder in use is justified, but every empty or barely filled cylinder is costing the Institute a demurrage, or rental, charge.

"Users of compressed gases can contribute to a substantial savings by returning empty cylinders promptly. In addtion," he continued, "holding on to partially filled cylinders can be false economy. If there is no further use for the gas in the cylinder, it is often more economical to return it than incur demurrage."

Still another problem, Mr. Nealand pointed out is many small cylinders which can be stored and forgotten in desk or laboratory bench drawers. These, too, are running up rental fees.

Nominations Being Sought

Nominations are being sought for the Karl Taylor Compton Awards, the William L. Stewart Award and the James N. Murphy Award, all to be given to members of the community at the annual Awards Convocation in May. Nominations for any of these awards should be sent to the Awards Selection Office, Room 7-101, by Thursday, April 20.

Protective Lenses Required by New Law

Times have changed. The federal government recently passed a law requiring protective lenses for everyone who wears glasses. In October a recently enacted Massachusetts law regulating the sale of eyeglasses and sunglasses will go into effect.

Both the federal and state laws require that all glasses be fitted with "plastic lenses, laminated lenses or heat-treated lenses" and that the frames be nonflammable All protective lenses must be capable of withstanding a specified impact test before they are mounted in the frames. These new standards will result in much safer glasses for the individual. A physician or optometrist, however, may direct in writing that a patient use other lenses in order to fulfill individual visual requirements.

Mark Dondero of the Safety Office points out that "safer glasses are not necessarily safety glasses. Regardless of the new laws, persons working in certain areas at the Institute will still be required to wear the industrial-quality safety glasses provided for them. We would, however, urge everyone to wear glasses with protective lenses."

In a speech before the US Senate, Washington Senator Warren G. Magnuson said, "These protective lenses will withstand an impact much greater than ordinary glass lenses. Even if they should break, they will not shatter into the hundreds of blinding slivers and jagged bits of razor-edged glass as ordinary crown lenses do. Personally, I do not believe that anyone would wear a dangerous piece of ordinary glass just a fraction of an inch away from his most valuable sense organ if he knew that a protective device is readily available."

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Mail subscriptions are $7.50 per year. Checks should be made payable to Bursar, MIT, and mailed to the Editor, Room 5-111, MIT, Cambridge, Mass. 02139.

Please address all news and comment to the editorial office, Room 5-111, Ext. 3277.

Bursar's Office Institutes Fee for Returned Personal Checks

The Bursar's Office has instituted a $4 assessment on personal checks which are returned for insufficient funds. The fee is in addition to whatever charge individual banks may impose.

At the same time, the Bursar's Office has stopped cashing third party checks. These are checks written by someone other than the payee. However, checks written to students by their parents are still being honored.

"The number of checks returned for insufficient funds has risen rapidly," according to Mr. Stuart Cowen, Comptroller. "In January alone, more than $9,000 worth of bad checks were cashed here.

"In most cases," he continued, "simple errors in arithmetic have caused the problem. We felt we had to take measures to discourage people from presenting checks which might be returned. However, when we find people who repeatedly present bad checks, we notify them that we will no longer cash their checks at all."

A new sign in the Bursar's Offices outlines the new rules for cashing checks.

–Photo by Margo Foote

James Wilson Wins Scheick Fellowship

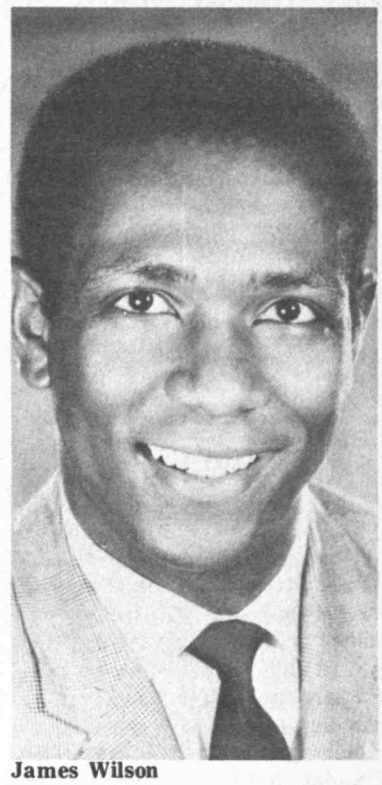
A proposal to ask poor people in Boston what they like and do not like about the low-income housing projects they live in has won a national research fellowship for a graduate student at the Institute.

James Wilson, Jr., a first-year graduate student in the School of Architecture and Planning, has just been awarded the 1972 William H. Scheick Research Fellowship of the American Institute of Architects, which provides an annual grant of $2,500 to assist one graduate architectural student in a one-year research project. Wilson is the second winner of the Scheick Fellowship.

Wilson's winning research proposal, entitled "User Preference Design Study," will compare the design of the low-income residential environment with the satisfaction users derive from the resulting environment.

In the end, Wilson hopes to give future designers a set of guidelines they can use in planning housing projects that will be more suitable than they have been in the past for the people who live in them.

Wilson will survey a random selection of residents in a number of federally assisted, low-income, multi-family housing projects completed in Boston in the last decade, primarily in Washington Park and the South End. He also will find and interview the designers and developers to see what they had in mind. When the survey is completed next fall, he will correlate the design needs as described by the residents with the initial design goals.



James Wilson

The Scheick Fellowship, named for architect William H. Scheick, former executive director of the AIA, is specifically designed to promote original research on human needs in low-income housing.

Wilson comes by his research interest through lifelong personal experience as a resident of the ghetto's fringes. He was born in Meridian, Mississippi, but was raised mainly in Los Angeles. He received the Bachelor of Architecture degree from the University of Southern California in 1969 and the Master of Planning degree from USC's Graduate Program of Urban and Regional Planning in 1971. Last September he was admitted to MIT's School of Architecture as a candidate for the Master of Architecture (Advanced Studies).

Wilson's other awards include the Southern California Gas Company Design Award in 1964, a Ford Foundation Fellowship in Urban Planning in 1969 and the National Society of Interior Designers environmental design award in 1970.

Theatre Guild to Perform 'Company'

The Musical Theatre Guild will be the first amateur group in the country to perform "Company," the award winning musical which played on Broadway for nearly two years.

The MIT production will take place on April 21, 22, 26, 27, 28 and 29 in Kresge. All performances will start at 8:15pm.

"Company" is a comedy about a 35-year-old New York bachelor whose married friends and three single girls try to push him into matrimony. The play takes a satirical look at life in New York City and at marriage in general.

The musical opened in New York in April 1970 and played to full houses for 706 performances until the show closed on January 1, 1972, so that the cast could go to London. Among the many awards "Company" received in 1970 were the Tony Award and the New York Drama Critic's Circle Award for the best musical comedy of the year. Composer and lyricist Stephen Sondheim and author George Furth also received Tony Awards for their work.

Directing the MIT production is Francis (Chip) Piatti, associate director of the Institute's Educational Study Program. Music directors Bill Grossman and Steven Haflich are both alumni. Charles Kiefer, who plays Robert, the popular bachelor, a 1971 graduate of the Institute, is a member of the DSR staff.

The cast and technical crews are composed of members of the Musical Theatre Guild, which is comprised of students, alumni, faculty and employees, and a small number of interested persons from the Boston area. The orchestra is composed chiefly of members of the Concert Band, Jazz Band and Symphony Orchestra.

Admission to "Company" is $3 for performances on April 26 and 27, and $3.50 for the weekend performances on April 21, 22, 28 and 29. Reservations can be made at Ext. 6294 and tickets are on sale in the Maclaurin Lobby. A limited supply of tickets will be available at the door.

Placement Reminder

Graduating students who have not yet found jobs are urged to visit the Placement Office in E19-455 and fill out an address card in order to receive up-to-date job listings.

Dinosaur Dance Group To Perform

A new modern dance company, the New England Dinosaur, will perform in Kresge Little Theatre on Friday and Saturday, April 14 and 15, at 8:30pm, and on Sunday, April 16, at 2:30pm.

Sponsored by the MIT Dramashop, the program will include world premieres of James Waring's "Novelty Sweets," piano rags by Scott Joplin, and Lois Ginandes' "Temptation" with classic tango accompaniment. Dinosaur will also present Toby Armour's "Ruby Turnpike" and selections from the works of Mozart.

Tickets are $2.50 for the general public and $1.50 for students. Reservations can be made by calling Ext. 4720 and a limited number of tickets will be available at the door.

Israelis Plan Independence Celebration

MIT Hillel and the Israeli Club will present a variety of programs from Tuesday, April 18, through Sunday, April 23, in observance of the 24th anniversary of Israeli independence.

A series of short Israeli films will be shown daily from noon to 2pm in the Student Center West Lounge from Wednesday, April 19, through Friday, April 21. In the Center Lounge, an exhibition of photographs, "Jerusalem of Gold," by Yossef Ben-Porat will be on display weekdays from 10am to 3pm.

On Wednesday, April 19, at 9pm in Room 10-250, the Israeli feature film "Three Days and A Child" will be shown. The film has received wide acclaim as well as prizes at the Cannes Film Festival. Admission is 75 cents. On Sunday, April 23, the two clubs will sponsor an Israeli party featuring singer Shuli Natan, the Mandala dance group, Israeli folkdancing and food.

For more information and tickets, visit the Israeli Independence Week booth in the lobby of Building 10. All events are open to the MIT community.

Recycling Depot Set Up

Alpha Phi Omega (APO) and Ecology Action have set up a newspaper and magazine recycling depot for use by the entire community.

The 40 cubic yard dumpster, supplied free of charge by a commercial rubbish disposal company, is located in the southwest corner of Kresge parking lot--a rather out-of-the-way place--but plans are being made to move it to a more convenient site near the Student Center. To date, community response to the recycling program has been minimal--only two tons of paper have been deposited since the program began three weeks ago.

Everyone in the community is urged to deposit unwanted newspapers and magazines in the dumpster. To encourage wider use of the recycling program APO and Ecology Action will try to arrange a pick-up service for offices and living groups that throw away large volumes of paper.

To request a pick-up or find out more about this program, call Ecology Action at their information center in the Student Center basement, Ext. 7922.

Alumni Seminar to Examine Urban Planning Techniques

The Alumni Association will present a two-day seminar on "The Future Character of the Urban Fringe" on April 29 and 30 to investigate the forces shaping the cities and suburbs.

The informal program of lectures, panel discussions and workshops has been designed to acquaint the concerned citizen with the latest techniques and strategies of urban planning as well as to expose him to the realities of bringing plans to fruition. National leaders in the field of urban planning, faculty from the School of Architecture and Planning, and alumni will discuss the urban fringe, each from a unique perspective.

The emphasis will be on examining the facts - economic trends, population statistics, legislation and political realities - to consider the options open in planning for the future. Case studies will provide participants an opportunity to focus on concrete problems and the strategies which may be used to solve them.

The program will be held in Room 26-100 and is open to students, faculty, staff, employees, alumni and interested non-MIT persons. The registration fee is $40 for MIT-affiliated persons and $80 for those not connected with the Institute. Students will be admitted free of charge.

For more information, call the Alumni Association, Room E19-438, Ext. 3768.

Circuit Device Prevents Low-Voltage Shocks

A new type of circuit interrupting device which prevents low-voltage electric shocks is now available at a substantially lower cost than ever before, according to Thomas Shepherd of Physical Plant.

The Ground Fault Circuit Interrupter (GFCI), is a device that shuts off power when it detects the leaking current of a ground fault. Unlike the normal fuse which cuts off the current only when it exceeds the power rating of the device or circuit, the GFCI automatically operates to prevent severe shock injuries when people accidentally enter an electric circuit.

The GFCI has been in common use in other countries for years, but until now its high price had prevented it from becoming popular in the United States. However, mass production techniques have now brought the price down from more than $100 to less than $50 per unit, well within the range of small laboratories and homeowners.

GFCI's can be installed at the original power source or on an individual circuit. For the average residential home, a single master GFCI would provide protection on all the electrical circuits in the house, preventing such common accidents as a housewife who inadvertently touches a faucet while using a defective electric can opener or a child who sticks a paper clip in an electric outlet. Ordinary fuses or circuit breakers probably would not operate in these instances.

GFCI's can also be installed in single cases of large power uses, such as lighting backyard swimming pools, recreational shops, laboratories or hospitals. The ground fault units protect not only people, but valuable equipment as well.

Mr. Shepherd is available on Ext. 6358, Room E18-210, to discuss the application and installation of these devices with interested Institute personnel.

THE INSTITUTE CALENDAR

April 12 through April 21

Events of Special Interest

White Elephant Sale
Sponsored by Cambridge Business and Professional Women's Club to benefit the Olive Libitz Memorial Scholarship Fund. Thursday, April 13, 10am to 2pm, Rm 10-105.

Corporation Joint Advisory Committee**
Open meeting to discuss employment development. Thursday, April 13, 7:30pm, Rm E52-461.

Disarmament and World Peace*
Herbert York, physicist, specialist in the application of atomic energy to national defense, and Acting Chancellor of University of California at San Diego. Lecture Series on World Peace. Thursday, April 13, 8pm, Lobdell. Broadcast live on WTBS (88.1 FM).

New England Dinosaur Dance Company*
Modern character dance performances sponsored by MIT Dramashop. Friday and Saturday, April 14-15, 8:30pm, and Sunday, April 16, 2:30pm, Kresge. Tickets: students $1.50, general $2.50; for reservations, call X4720.

Earth and Planetary Sciences Open House for Freshmen†
Informal discussions with faculty about careers and upperclass programs in Course XII, including the new program in Environmental Earth Science. Tours of facilities and refreshments. Friday, April 14, 3-4:30pm, Rm 54-915.

International Night**
Tech Dames evening of international entertainment, food, costumes, etc. Friday, April 14, 7:30-9pm in Kresge; 9-11pm, Sala de Puerto Rico and Lobdell. Admission $1.

Poetry Reading*
Humanities Dept is sponsoring a free poetry reading by **Richard Wilbur.** Wednesday, April 19, 8pm, Student Center Mezzanine Lounge.

Israeli Independence Week
Movies, films, photographic exhibit of Jerusalem, slides, party with singer **Shuli Natan.** For information, tickets and Israeli oranges, visit booth in lobby of Bldg 10. Wednesday-Friday, April 19-21.

Symposium and Panel Discussion on Bangladesh*
Dr. Ronaq Jahan, University of Dacca and Harvard; **Dr. John W. Thomas,** Planning and Advisory Council, Harvard; **Dr. John Rhode,** Harvard Medical School and Children's Hospital Medical Center. Sangam and Tagore Society Symposium. Thursday, April 20, 8pm, Rm 26-100.

Seminars and Lectures

Wednesday, April 12

Treatment of Structure Change in the Railroad Industry: An Optimal Control Theory Approach**
Prof. James Kneafsey, civil engineering. Civil Engineering Transportation Division Seminar. 3-4:30pm, Rm 1-146. Coffee, 4:30pm.

Aerospace Projections**
Prof. John F. McCarthy, aero and astro. Lincoln Lab Lecture. 3:30pm, Lincoln Lab Cafeteria.

Civilian Nuclear Power–Studies and Projections*
Merrill J. Whitman, Office of Program Analysis, USAEC Division of Reactor Development and Technology. Nuclear Engineering Seminar. 3:30pm, Rm NW12-222. Coffee, 3pm.

The Department of Defense as a User of Technology: The Aircraft Carrier*
Prof. William B. Watson, humanities. History of Technology Seminar. 4pm, Rm 14E-304.

Recent Studies on the Mechanics of the Lung*
Prof. Y. C. Fung, Dept of Bioengineering and Applied Mechanics, University of California at San Diego. Aero and Astro Seminar. 4pm, Rm 35-225. Coffee, 3:30pm, Rm 33-206.

Progress in Determining Lunar Surface Chemical Properties from Remotely Observed Optical Properties*
Prof. Thomas B. McCord, earth and planetary sciences. Earth and Planetary Sciences Colloquium. 4pm, Rm 54-100.

Towards a Covariant Parton Model of Strong Interactions*
Prof. G. Domokos, Johns Hopkins University. Joint Theoretical Seminar. 4pm, Rm 6-120. Tea, 3:30pm, Rm 26-110.

High Resolution Nuclear Magnetic Resonance in Solids*
Dr. R. G. Griffin, chemistry. National Magnet Laboratory Seminar. 4:15pm, 2nd floor conference rm, NML. Tea and coffee, 4pm.

Loch Ness Investigation*
Tim Dinsdale, director of Loch Ness Investigation Bureau. Lecture Series Committee. 8pm, Rm 26-100.

Thursday, April 13

Thermochemical Data of Hydrous Magnesium-Silicates*
Dr. Blair F. Jones, Water Resources Division, US Geological Survey. Earth and Planetary Sciences Seminar. 10am-12n, Rm 54-811.

On the Modelling, Simulation and Control of Distributed Reactor Systems*
Prof. Leon Lapidus, Princeton University. Chemical Engineering Seminar. 10am, Rm 9-150.

The Physical Properties of Bone*
Dr. James H. McElhaney, head, Biomechanics Unit, Highway Safety Institute, University of Michigan. Biomedical Engineering Seminar. 3-4:30pm, Rm 1-114. Coffee, 3pm.

New Aberration Theory for Electron Lenses*
Mitchell D. Brody, electrical engineering. Electron and Ion Optics Seminar. 3pm, Rm 26-217.

The Council on Library Resources, Inc.*
Dr. Foster E. Mohrhardt, senior program officer, Council on Library Resources, Inc. Project Intrex Seminar. 3:30pm, Rm 37-252. Coffee, 3pm.

Interaction of Biological Tissues with Ultrasound*
Prof. P. P. Lele, mechanical engineering. Interdepartmental Acoustics Seminar. 4pm, Rm 5-134. Coffee, 3:30pm, Rm 1-114.

The Transformation of Amorphous Palladium-Silicon Alloys
Dr. R. Maddin, Director, School of Metallurgy and Materials Science, University of Pennsylvania. Metallurgy and Materials Science Special Seminar. 4pm, Rm 4-231.

Geochemistry of Saline Lakes*
Dr. Blair F. Jones, US Geological Survey. Earth and Planetary Sciences Special Seminar. 4pm, Rm 54-425.

Gas-Metal Interactions in Fusion Reactors: Kinetics of Absorption, Permeation, and Desorption of Hydrogen Isotopes
Prof. Robert E. Stickney, mechanical engineering. Thermodynamics Seminar. 4pm, Rm 3-343.

New Directions for US Policies for Science and Technology
Prof. Franklin A. Long, Cornell University. Physics Colloquium. 4:30pm, Rm 26-100. Tea, 4pm, Rm 26-110.

Opportunities in Biomedical Engineering*†
Prof. Robert Mann, mechanical engineering. ASME Student Section monthly meeting. 5pm, Rm 10-105.

Friday, April 14

Teaching a Core of Behavior (Why Teaching a Core of Knowledge is Wrong)*
Lawrence L. Weed, M.D., Department of Medicine, University of Vermont. ERC Colloquium. 12n, Rm 10-105.

Women's Forum
Subcommittee for faculty and research staff. 1pm, Rm 3-310.

The Nature of Materials Science and Engineering
Prof. Morris Cohen, metallurgy and materials science. Metallurgy and Materials Science Spring Seminars Series. 2-3pm, Rm 4-370.

Chemical Engineering Doctoral Seminars
B. Aghazu, "Studies on the Feasibility of Obtaining Protein-Rich Extracts from Tropical Palm Kernels," 2pm; **B. Wersborg,** "Electrical Aspects of Carbon Formation," 3pm; Rm 10-105.

Theory of Invariants and Feedback*
Prof. R. E. Kalman, director of Center for Mathematical System Theory, Dept of Mathematics, University of Florida at Gainesville. Joint Electronic Systems Laboratory and Math Dept Seminar. 3pm, Rm 4-231.

Light Scattering from Solid Helium*
Dr. R. E. Slusher, Bell Telephone Laboratories. Center for Materials Science and Engineering Colloquium. 4pm, Rm 9-150.

Fluid-like Turbulence in a Fully Ionized Plasma
Prof. T. H. Dupree, nuclear engineering and physics. Plasma Dynamics Seminar. 4pm, Rm 26-214.

Mining Exploration–Whither?*
Dr. Arthur A. Brand, director, Geophysical Dept, Newmont Exploration, Ltd. Earth and Planetary Sciences Seminar. 4-5pm, Rm 54-915.

Tuesday, April 18

The Madcap VI Programming Language**
Dr. James B. Morris, University of California and Los Alamos Scientific Laboratory. Project MAC Seminar. 10am, 545 Tech Square, 5th floor conference rm. Coffee and doughnuts following.

Crystalline Field Effects in Metals*
Prof. Peter Fulde, Institut Max van Laue/Paul Langevin, Germany. National Magnet Lab Seminar. 4:15pm, 2nd floor conference rm, NML. Tea and coffee, 4pm.

Wednesday, April 19

Evaluating the Perceptual Process in Clinical Radiology*
Prof. Barry Blesser, electrical engineering; and **Dr. David Ozonoff,** RLE. CIPG Seminar. 12n-1pm, Rm 20B-224.

Kinetics of Immobilized Enzymes and Their Use in Generation of Transport, Regulation and Signals*
Prof. Eric Selegny, University of Rouen. Chemical Engineering and Nutrition and Food Science Seminar. 2pm, Rm 10-105.

A Study of the Philadelphia-Lindenwold Line: Some Economic and Location Results*
Prof. David Boyce, Wharton School, University of Pennsylvania, Civil Engineering Transportation Division Seminar. 3-4:30pm, Rm 1-146. Coffee following.

Heat Production in the Newborn Mammal
Dr. Peter Hahn, Dept of Obstetrics and Gynaecology, Vancouver General Hospital, University of British Columbia. Oral Science Seminar. 3-5pm, Rm E18-301.

Thursday, April 20

Women's Forum
Subcommittee for bi-weekly and administrative staff. 12n, Rm 10-105.

A Nuclear Physicist's View of Neutron Star Matter
Prof. John Negele, physics. Physics Colloquium. 4:30pm, 26-100. Tea, 4pm, Rm 26-110.

Friday, April 21

Fysics in the Phinger Tips: A Reintegration of Mathematics, Ph and Intelligence*
Prof. Seymour A. Papert, mathematics, co-director of Arti Intelligence Lab. ERC Colloquium. 12n, Rm 10-105.

Women's Forum
Subcommittee for faculty and research staff. 1pm, Rm 3-310.

Some Problem Areas for Metallurgy and Materials Science: neering and Public Affairs
Prof. R. W. Dunlap, co-chairman, Program in Engineering and P Affairs, Carnegie-Mellon University. Metallurgy and Mat Science Seminar. 2pm, Rm 4-370.

Chemical Engineering Doctoral Seminars*
J. Dearth, "Cyclic Operation of Tray Absorbers," 2pm; **A. Jeje,** 3pm. Rm 10-105.

Waste Heat Disposal
Prof. Donald R. F. Harleman, civil engineering. Mechanical neering Seminar. 3pm, Rm 3-270. Coffee, 4pm, Rm 1-114.

Superconductivity in Less than Three Dimensions*
Prof. Douglas Scalapino, University of California at Santa Bar Center for Materials Science and Engineering Colloquium. 4pm 9-150. Coffee, 3:30pm.

Resistivity, Impurity Diffusion and Pressure-Gradient Driven Hot Tokamak Plasma
Dr. D. J. Sigmar, Research Laboratory of Electronics. Pl Dynamics Seminar. 4pm, Rm 26-214.

Student Meetings

Premedical Students
Dr. Charles Spooner, assistant dean, University of California a Diego will speak with all premedical students. Wednesday, Apri 12n, Rm 1-103.

Student Information Processing Board Meeting
Every Monday, 7:30pm, Rm 39-200.

Thursday Staff Meeting**
Every Thursday, 8pm, 2nd floor, Walker.

Technique Staff Meeting
Every Saturday, 11am, Student Center Rm 457.

ERGO Staff Meeting
Every Sunday, 6pm, Student Center Rm 443.

MIT Club Notes

Alpha Phi Omega**
Meeting. Wednesday, April 19, 7:30pm, Student Center Rm 407

Tech Dames**
Last meeting of the year, featuring guest speaker **Joyce Chen,** will discuss and demonstrate Chinese cuisine. Wednesday, Apri 8pm, Student Center Mezzanine Lounge.

Diving in Jamaica and Other Places*
Dr. Steven Allen, Draper Lab. Scuba Club talk and slide s Wednesday, April 12, 8pm, Rm 20E-017.

Scuba Club
Pool session. Wednesday, April 19, 8pm, Alumni Pool.

Nautical Association**
1972 season sailing memberships now available in E19-215, stud $6, faculty and staff, $15. For information, call Ext. 4884.

Classical Guitar Society**
Concert guitarist **Hugh Geoghegan** is available for private inst tions for intermediate and advanced students. Call Vo Ta H 661-0297.

Baker House SPAZ Jogging Club**
Daily, 10:45pm, Baker 2nd Floor West.

Unicycle Club*
Every Sunday, 3pm, in front of Student Center. Beginners welco Call Andy Rubel, X3161.

Hobby Shop**
Open weekdays, 10am-4:30pm, duPont Gym basement. students, $6/term or $10/year; community, $15/year. Call X4

MIT/DL Duplicate Bridge Club**
Every Sunday, 2:30pm, Walker Blue Rm. Every Tuesday, 6 Lobdell.

Tiddlywinks Association*
Every Monday, 8-11:15pm, Student Center Rm 491.

Soaring Association**
First and third Mondays every month. 7:30pm, Student Center 473.

Judo Club**
Every Monday, Wednesday, Friday, 5pm; every Saturday, 1 duPont Gym Exercise Rm. Beginners welcome.

Outing Club*
Every Monday, Thursday, 5pm, Student Center Rm 473.

Glee Club**
Every Tuesday, Wednesday, Thursday, 5-6:30pm, Kresge. N members, especially tenors, welcome. Call Cyril Draffin, 247-86

Classical Guitar Society**
Classical guitar classes, group or private. Every Tuesday Thursday, 5-8pm, Rms 1-132, 1-134, 1-136. Anyone interested lessons, call Vo Ta Han, 661-0297.

MIT OPEN HOUSE 1972

APRIL 15 12-5PM

PROGRAM OF EVENTS

HOST SERVICES

The Open House Committee has arranged several services for your convenience this afternoon. There are **Information Centers** located in the lobbies of Buildings 1, 2, 13, 16, and 39. **Welcome Centers** with MIT extension telephones are located in Building 7 Lobby, X2966; and at East Campus Dormitory, X2967. There will be Open House guides, identified by arm bands, throughout the buildings. Feel free to ask them any questions you might have.

Lost children will be taken to Room 7-108. The Information Centers will be notified of any children brought there.

The Open House **Refreshments booth** on the east side of campus will serve popcorn and soft drinks. Hamburgers, hot dogs, pop corn, and soft drinks will be served at the Massachusetts State Science Fair refreshments booth in Rockwell Cage. In addition, the regular weekend food services on campus including Pritchett Lounge (9 AM - 12 Midnight) in Walker Memorial, and Lobdell Dining Room (lunch and dinner) and Twenty Chimneys (2 PM - 1 AM) in the Student Center will be open. Ask at the Information Centers for more information.

OPEN HOUSE TOURS

No one will be able to see every exhibit at Open House. However, by making use of the information contained in this program or by consulting the information desks, you will be able to see those displays and lectures which best suit your own interests. You may go on your own to any exhibit which interests you or you may take advantage of one of the guided tours or self-guided tours we have planned for you.

The guided tours are planned to last about an hour and a half, although some may last longer. Feel free to ask the tour guides any questions that come to mind.

The self-guided tours allow more latitude for your individual preferences. You can pick up a tour anywhere along the route (just follow the numbers on the colored arrows, and find the number of the exhibit in this program – see the back page). Follow the arrows carefully. It's easier than you think to get lost.

An advantage of the self-guided tours is that you may spend as much or as little time on each exhibit as you wish.

OPEN HOUSE WELCOMING CEREMONY

The Open House Welcoming Ceremony, with remarks by MIT President Jerome B. Weisner, will be held on the steps of the main entrance, 77 Massachusetts Avenue, at noon.

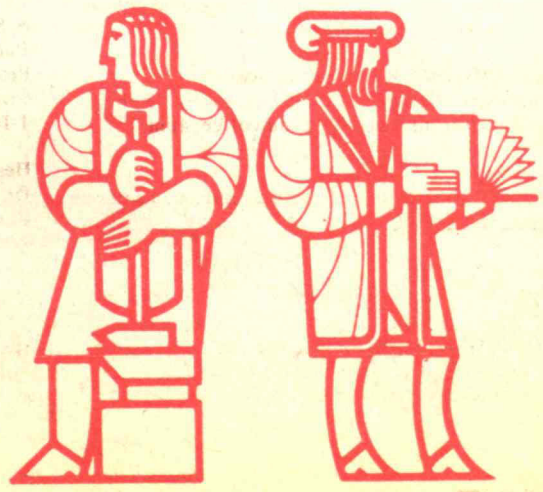
MIT ADMISSIONS OFFICE

The MIT Admissions Office (Room 3-108, on the main corridor) will be open all day to answer questions for prospective students.

MIT INFORMATION CENTER

The Institute Information Services will have the MIT Information Center (in the Building 7 Lobby) staffed during the day to answer any questions not relating to Open House.

HAVE A GOOD DAY!



Exhibits

CIVIL ENGINEERING

Electron Microscope	1-073
Model Dams, including dam failures	1-347
Computer Controlled Graphics	1-147
Fluid Mechanic Phenomena	48-1st Floor

MECHANICAL ENGINEERING

Speech Articulation	3-143
Analog Computer Demonstration	3-143
Columbia Point "People Mover"	3-143
Air Cushion Vehicle Research	3-143
Mousetrap Car Race	3-143
Pressure Measuring Hip Prosthesis	3-143
Sensory Aids for the Handicapped: Path Sounder Tactile Pager	3-143
A Noninvasive Arterial Pressure Pulse Recorder	3-143
Cryobiology Display	3-143
Blood Oxygenator	3-143
Diagnostic and Therapeutic Medical Ultrasonics	3-143
Levitation of Super Conducting Lead Rings	3-143
Critical Point Demonstration of CO_2	3-143
Air Pollution	3-143
The Pneumatic Palleted Transportation System	3-143
KINSYN—An Interactive Computer System for the Kinematic Synthesis of Mechanisms	1-115
Manipulation—Telediagnosis—Man-Machine Control	1-013
Urban Vehicle Design Competition	1-013

METALLURGY AND MATERIAL SCIENCE

Aluminum Casting of MIT Medallions	8-404
Insects 100,000 Times Larger than Life	13-4041
Superplastic Alloys	13-4079
Fatigue and Stress Corrosion	13-4079
Magnetic Fluids	13-4071
Mechanical to Electrical Energy	13-4071
Crystal Growth of Semiconductors	13-4136
Microscopic Characterization of Semiconductors	13-4119
Talk to a Computer	13-5157
X-ray Diffraction Lab	13-4027
Origin of Meteorites	13-4011
Slide Show: Medical Application of Materials	Bldg. 13 (4th Floor)
Photochromic Glasses	13-4071
Fiber Optics in Action	13-4071
Metal Sculpture	4-133

ARCHITECTURE

Student Built Structure	Bldg. 7 (Lobby)
Exhibitions, Student projects and Work areas	7-412
Architecture Machine (Interactive display screen)	9-551

CHEMISTRY

Organic Spectroscopy Laboratory	18-085
Undergraduate Laboratory	4-440
Transport Processes	6-223

ELECTRICAL ENGINEERING

Digital Systems Laboratory	10-397
Lasers and Oscilloscopes	10-475
Biomedical Electronics Laboratory	3-402
Bullets Breaking Balloons	4-409 & 4-410

INTREX

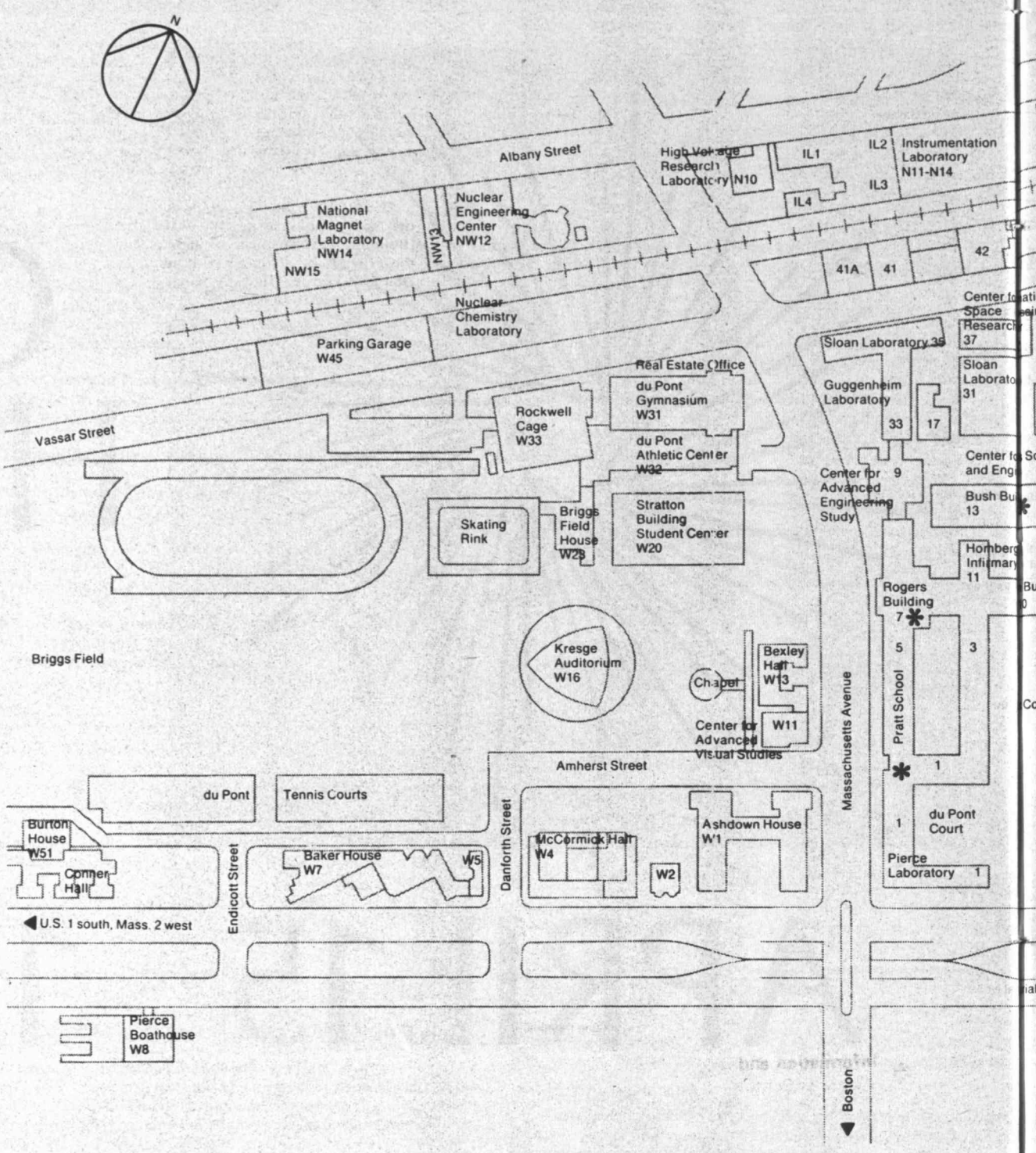
Intrex Consoles	10-550
Microfilm Service Area	l0-550

BIOLOGY

Slime Molds	16-410
Human Polio Receptor Genes	16-410

PHYSICS

Undergraduate Physics Laboratories	4-351 & 4-355
Hands-on Demonstration Experiments on Electricity, Mechanics and Laser Optics	4-309
Linear Accelerator Model	26-100 (Foyer)
Radio Interferometer	26-204
X-ray Astonomy Laboratory	37-576
PEPR—Optical Scanner Reading Bubble Chamber Photographs	575 Tech Sq. (4th Floor)
Fabricating Thin Aluminum Foils	26-040
Multi-wire Proportional Chamber with Delay Line Readout	Bldg. 58
Tunneling into Superconductors	8-409
Dye Laser	13-2009
Josephson Junctions	8-409



CHEMICAL ENGINEERING

Headquarters for Exhibit	12-124
Chemical Engineering Computation Laboratory	12-164
Synthetic Cartilage for Joint Replacement	12-169
Therapeutic Relief of the Hyaline Membrane Disease	12-170
Artificial Kidney System	12-170
Electron Microscope	12-033
Fuels Research Laboratory	Bldg. 31A (2nd Floor)
Solid Waste Incinerator	Bldg 31A (2nd Floor)

URBAN STUDIES

ECOLOG—A Participatory Planning Project	7-345
Computer Aided Urban Design	7-345
Urban Design	7-345

EARTH AND PLANETARY SCIENCE

Earthquakes—Detection, Prediction and Prevention	Bldg. 54 (5th Floor)
Planetary Science	37-484

OCEAN ENGINEERING

Ship Model Towing Tank	48-015
Marine Hydrodynamic Laboratory and Propeller Tunnel	3-269
Hart Nautical Museum	Bldg.5 (Lobby)
Ship Structures Laboratory	5-017
Acoustics and Vibrations Laboratory	5-222A

MANAGEMENT

Systems Dynamics	4-156
Managerial Psychology	4-160
Linear Programming	4-151

AERONAUTICS AND ASTRONAUTICS

Hovercraft Demonstration	33-Lawn
Airtraffic Control Simulation	35-216
Laser Systems	33-214 & 33-011
Man Machine Systems and Biological Engineering reasearch	37-146
Student Projects	33-015
Anechoic (Silent) Wind Tunnel	33-015
Effects of Wind on Tall Buildings	Bldg. 17

MATHEMATICS

Computer Black Jack	2-125
Probability	2-102
Topology and Geometry	2-102
Properties of Liquids	2-102
Games and Puzzles	4-182
Biographical History of Mathematics	2-1st Floor

METEROLOGY

Weather Radar	54-1815
Teletyped Weather Reports	54-1625
Hurricane Forecasting	54-1625
Mosaic of Satellite Pictures	54-1625
Current Weather Maps	54-1600
The Barbados Expedition	54-1510
Jupiter's Atmosphere	54-1510
Forcasting Technique	54-1510
Time Lapse Movie of Cloud Development	54-1311
Mediterranean Sea Water Flow	54-1311
Recently Developed Oceanographic Equipment	54-1311
Two Layer Tidal Flow	54-1510
Currents and Current Oscillations	54-1311
Temperature Effects on Sewage and Cooling Water Disposal	54-1311

NUTRITION AND FOOD SCIENCE

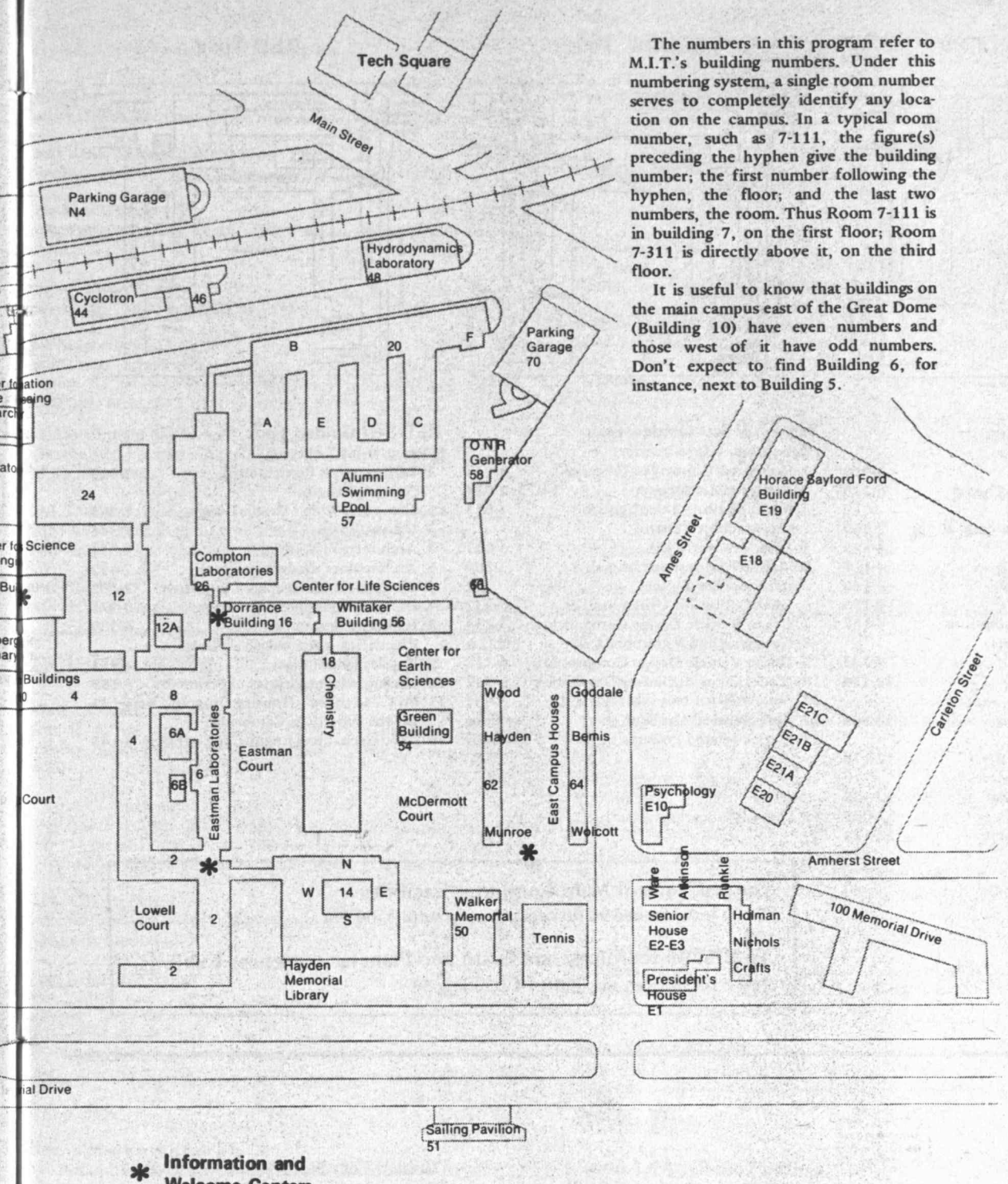
The Staff of Life—A Look to the Future	16-012
Animal Nutrition	16-012

HUMANITIES

Classroom Text and Audio-Visual Aids	14N-132
Worksheets, Books, Poetry by Department Members	14 first floor

NUCLEAR ENGINEERING—REACTOR

Neutron Radiography	Bldg. NW12
Neutron Activation Analysis	Bldg. NW12
Medical Applications	Bldg. NW12
Neutron Spectroscopy	Bldg. NW12
Fast Breeder Reactor	Bldg. NW12



* **Information and Welcome Centers**

The numbers in this program refer to M.I.T.'s building numbers. Under this numbering system, a single room number serves to completely identify any location on the campus. In a typical room number, such as 7-111, the figure(s) preceding the hyphen give the building number; the first number following the hyphen, the floor; and the last two numbers, the room. Thus Room 7-111 is in building 7, on the first floor; Room 7-311 is directly above it, on the third floor.

It is useful to know that buildings on the main campus east of the Great Dome (Building 10) have even numbers and those west of it have odd numbers. Don't expect to find Building 6, for instance, next to Building 5.

INDEPENDENT ACTIVITIES PERIOD
January Activities Display — 10 Lobby

INFORMATION PROCESSING CENTER
$11 Million Computer Facility — 39-200
souvenir SNOOPY printouts free

JOINT CENTER FOR URBAN STUDIES
Literature and Display of Current Work — 5-237

LIBRARIES
Contemporary techniques in Micrographics — 14-0551

LINCOLN LABORATORIES
Photo Display Panels: Air Traffic Control, Educational Technology, Communications Satellite, Seismic Work — 16-134

MIT REAL ESTATE OFFICE
MIT "Turnkey" Housing Program for the Elderly in Cambridge — 4-111

Movies

MECHANICAL ENGINEERING
Clean Air Car Race (every half hour) — 3-143

ARCHITECTURE
Cinematic Circus — Bdlg. E21
12:00—The Eclipse (John Terry)
12:45—Panola (Ed Pincus)
1:10—Chiefs (Richard Leacock)
2:00—Student Films
2:30—Primary (Richard Leacock)
3:00—Happpy Mother's Day (Richard Leacock)
3:30—One Step Away (Ed Pincus)
4:30—Student Films (repeat)

CHEMISTRY
Continuous showing of Chemistry Films — 6-120

PHYSICS
Assorted 5-10 Minute Films on Physical Effects (12:30-1:00; 2:45-3:15; 4:15-5:00) — 26-100

EARTH AND PLANETARY SCIENCES
An Active Volcano in Evolution—Movie (Hourly) — 54-100

OCEAN ENGINEERING
Movies (12:30 & 3:00) — 5-314
12:30 & 3:00—Racing Yacht Design "Specification: 22 Meters"
1:00 & 3:30—Underwater Welding
1:02 & 3:32—Hydrofoil-Equipped Sailboat
1:10 & 3:40—Mission Oceanography
1:40 & 4:10—Building Supertankers

AERONAUTICS AND ASTRONAUTICS
Apollo Moon Landing (continuous) — 35-225

MATHEMATICS
Evolution of Spiral Galaxies — 2-131
Computer Cenerated Films (1:00 & 3:00)

Talks

ELECTRICAL ENGINEERING
Stroboscopic Effects and Its Use in Science and Industry (continuous) — 10-275

PHYSICS
Invisible Forces, Electric and Magnetic Fields — 26-100
Professors V. F. Weisskopf and M. S. Feld (1:30 & 2:00)

Physics in Biology and Medicine — 26-100
Lecture: Professor H. F. Stanley (3:30-4:00)

PSYCHOLOGY
Illusions and Delusions—A Perceptual Demonstration (2:00) — 9-150

POLITICAL SCIENCE
The 1972 Elections—Panel Discussion (3:00) — 1-190
Mainland China—Panel Discussion (2:00) — 2-190
Films about China (12:00 & 3:00) — 2-190

MATHEMATICS
Can Math Apply to Everyday Life: — 2-131
Prof. Steve Minsker (2:00)

NUTRITION AND FOOD SCIENCE
Baking Demonstration (1:00 & 4:00) — 16-012

RESEARCH LABORATORY OF ELECTRONICS
Reading Machine for the Blind (1-1:30 & 3-3:30) — 20B-201

FOREIGN LITERATURES AND LINGUISTICS
Language Lab — 14-0641
Coffee with Faculty — 14N-225

CENTER FOR MATERIALS
Shoot Dice Against a Mini-computer — 13-1143
Solution Growth of Laser Crystals — 13-3143
Ant Eye at 10,000x Magnification — 13-2096
Transmission Electron Microscopy — 13-5127 & 13-5128

RESEARCH LABORATORY OF ELECTRONICS
Gas Laser Breakdown — 20A-115
Laser-Plasma interaction — 20A-115
High Power Gas Laser — 20A-115
Speech Synthesis — 20B-145
Anechoic Chamber — 20B-145
Voice Spectrograph — 20B-145
Computer Music, Games and Simulations — 26-220
Laser Frequency Stabilization — 35-011
Laser Doppler Velocometer — 35-011
Holography — 35-011

BITTER NATIONAL MAGNET LABORATORY
Ten Megawatt High Field Magnet — NW14
High Power CO_2 Laser — NW14
Physical Property studies — NW14
Five Field Magnets — NW14

EDUCATION RESEARCH CENTER
USSP Electronics Laboratory — 20B-140
Minuteman Missile Guidance Computer — 20B-140
Temperature Control to Microdegrees — 20B-140
Math Learning Laboratory — 20B-136
Perception Laboratory—Optical Illusions — 20B-129
Space War on a Computer — 20C-106
ERC Shop Facilities — 20C-212
Freeze Dry Coffee — 8-119
Strobe-light Waterfall — 7-102
High-voltage Plasmoid Generator — 7-102
Film Loops and Projectors — 7-102
USSP & UROP Descriptions

DRAPER LABS
Inertial Guidance Demonstration — 13 Lobby
Apollo Hardware — 13 Lobby
Apollo Models and Photos — 13 Lobby

SEA GRANT PROJECT OFFICE
Marine-related Projects — 5 first floor
Marine Resources Reading Center — 5-331

COMMITTEE ON VISUAL ARTS
Landscape Paintings — Bldg. 14

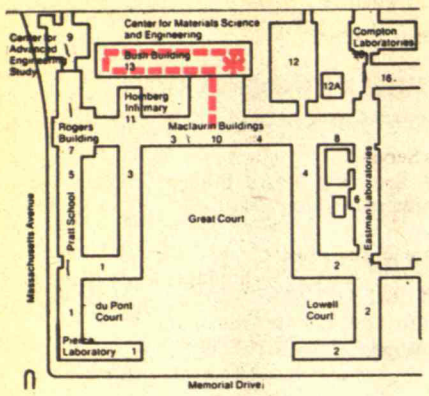
MIT EDUCATIONAL STUDIES PROGRAM

The Educational Studies Program (ESP) provides the opportunity for students at MIT and other area colleges to plan and teach classes on subjects of their own choosing to high school students from the greater Boston area. You are welcome to visit any of these classes.

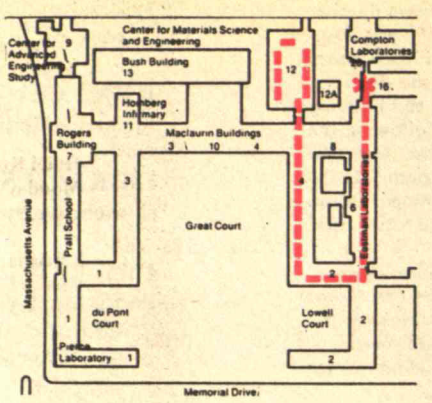
An Open Approach to M. Literature — 4-159
American Poetry Now — 1-136
Philosophy — 1-134
Very Basic Photography — 8-205
Explorations with Sound — 2-131
Origami — 7-106
Beginning Chess — 5-232
Geometry — 2-132
Topics in Algebra — 2-135
Vector Analysis — 2-151
Problem Solving — 2-136
Education Seminar — 4-145
Biology — 24-110
Project Chemistry — 16-141
Molecular Biology — 12-142
Modern Physics — 12-122
Galactic Astronomy — 12-102
Viewpoints — 5-216
Radical Education and American Society — 4-145
American Foreign Policy — 4-153
The Modern President — 4-155
Indochina — 4-163
Sociology of Education — 1-132
The New Improved Course — 4-161
Bury Me Not — 24-4th Floor
Camp Counselling — 4-145
Performance Workshop (3:00-5:00) — 24-4th Floor

Self-Guided Tours

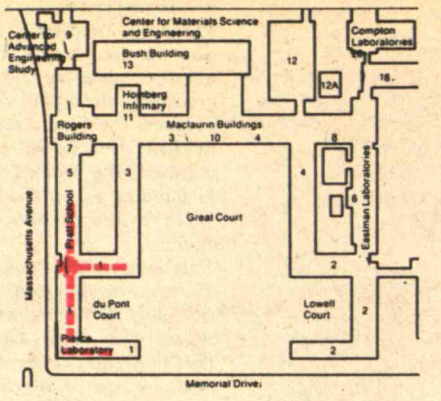
BLUE Tour



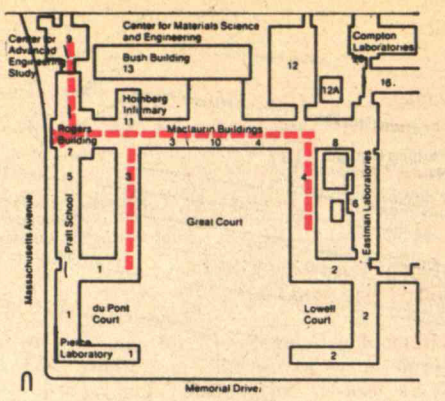
GREEN Tour



YELLOW Tour



RED Tour



BLUE Self-Guided Tour

(Start: Bldg. 13 Lobby)

1. Transmission Electron Microscopy— Structure of Rocks at 40,000 x — 13-5127
2. Transmission Electron Microscopy— Surface of a Metal — 13-5128
3. Interact with a Computer — 13-5157
4. Microscopic Characterization of Semiconductors — 13-4119
5. Heat Effects in a Superplastic Alloy — 13-4079
6. Fatigue and Stress Corrosion — 13-4079
7. Magnetic Fluids — 13-4071
8. Photochromic Glasses — 13-4071
9. Conversion of Mechanical to Electrical Energy — 13-4071
10. Fiber Optics in Action — 13-4071
11. Insects 100,000 Times Larger than Life — 13-4041
12. X-ray Diffraction Lab — 13-4027
13. Origin of Meteorites — 13-4011
14. High Temperature Crystal Growth of Semiconductors — 13-4136
15. Digital Systems Lab — 10-397
16. Solution Growth of Laser Crystals — 13-3143
17. Look an Ant in the Eye at 10,000 x Magnification — 13-2096
18. Dye Laser — 13-2009
19. Like to Shoot Dice? Try Your Luck Against a Mini-Computer — 13-1143
20. Inertial Guidance Demonstration — 13 Lobby
21. Apollo Hardware — 13 Lobby
22. Apollo Models and Photos — 13 Lobby

GREEN Self-Guided Tour

(Start: Bldg.16 Info Center)

1. Freeze Dry Coffee — 8-119
2. Statistical Mechanical Theory of Transport Processes — 6-223
3. Model Rocket Engines—Test Firing — 2-205
4. Games and Puzzles — 4-182
5. Urban Action—Slide Show — 4-167
6. Managerial Psychology — 4-160
7. Systems Dynamics — 4-156
8. Linear Programming Solutions of Management Sciences — 4-151
9. Metal Sculpture — 4-133
10. Chemical Engineering Computation Lab — 12-164
11. Synthetic Cartilage for Joint Replacements — 12-169
12. Therapeutic Relief of the Hyaline Membrane Disease — 12-170
13. Artificial Kidney System — 12-170
14. Electron Microscope — 12-033
15. Headquarters for Exhibit — 12-124

YELLOW Self-Guided Tour

(Start: Bldg. 1 Info. Center)

1. Computer Controlled Graphics — 1-147
2. Electron Microscope — 1-073, 1-074
3. Manipulation—Telediagnosis—Man-Machine Control — 1-013
4. Ship Structures Lab — 5-017
5. Marine Hydrodynamics Lab and Propeller Tunnel — 3-269
6. Joint Center for Urban Studies — 5-237
7. Urban Vehicle Design Competition — 5-234
8. Acoustics and Vibrations Lab — 5-222A
9. Urban Vehicle Design Competition — 5-218
10. Model Dams, Including Dam Failure — 1-347
11. Marine Resources Library — 5-331
12. Hart Nautical Museum — 5-1st floor
13. Marine-related Projects — 5-1st floor

RED Self-Guided Tour

(Start: Bldg. 7 Lobby)

1. ECOLOG—A Participatory Planning Process — 7-345
2. Computer-Aided Urban Design — 7-345
3. Urban Design — 7-345
4. Architecture Machine — 9-551
5. Architecture student projects — 7-412
6. Biomedical Electronics Laboratory — 3-402
7. Lasers and Oscilloscopes — 10-475
8. Hands-on desmonstrations Electricity, mechanics and lasers — 4-309
9. Physics laboratories — 4-351
10. Undergraduate Physics experiments — 4-355
11. MIT "Turnkey" Housing Program for the Elderly in Cambridge — 4-111
12. - 27. Mechanical Engineering exhibits — 3-143

Guided Tour of Main Computer Facilities
Tours leave from 39-200 continuously until 3:00 PM

Tour of Meteorology and Earth and Planetary Sciences Exhibits
Tours begin from the lobby of Building 54

Guided Tours

Guided Tour No. 1

(Start: Bldg. 7 Lobby)

1. Fuels Research Lab — Bldg 31A (2nd floor)
2. Solid Waste Incinerator — Bldg 31A
3. Effects of wind on tall buildings — Bldg 17
4. Laser Frequency Stabilization — 35-011
5. Laser Doppler Velocometer — 35-011
6. Holography — 35-011
7. Man-Machine Systems — 37-146
8. X-Ray Astronomy Lab — 37-576
9. Air Traffic Control Simulation — 35-216
10. Laser systems — 33-214
11. More lasers — 33-011
12. Aero/Astronautics student projects — 33-015
13. Anechoic (Silent) Wind Tunnel — 33-015
14. MIT Atomic Reactor — Bldg. NW12
15. Bitter National Magnet Laboratory — Bldg. NW12

Guided Tour No. 2

(Start: Bldg. 13 Lobby)

1. Inertial guidance — Bldg 13 lobby
2. Apollo Hardware — Bldg 13 lobby
3. Apollo models — Bldg 13 lobby
4. Intrex consoles — 10-550
5. Microfilm Service — 10-550
6. Bullets breaking balloons —Strobe Lab — 4-409 & 4-410
7. Chemistry Undergraduate Lab — 4-440
8. Aluminum Castings of MIT Medallions — 8-404
9. Tunneling into Superconductors — 8-409
10. Slime Molds — 16-410
11. Human polio receptor genes — 16-410
12. Freeze Dry Coffee — 8-119

Guided Tour No. 3

(Start: Bldg. 2 Info. Center)

1. Topology and Geometry — 2-102
2. Properties of liquids — 2-102
3. Computer Black Jack — 2-125
4. History of Mathematics — Bldg 2 (1st floor)
5. Landscape paintings — Bldg 14 (Hayden Gallery)
6. Language Lab — 14-0641
7. Techniques in Micrographics — 14-0551
8. Organic Spectroscopy — 18-085
9. The Staff of Life —A Look to the Future — 16-012
10. Animal Nutrition — 16-012
11. Thin Aluminum Foils — 26-040
12. Linear Accelerator model — 26-100 foyer
13. Multi-wire proportional chamber with Delay Line readout — Bldg 58
14. Department of Architecture Film Theatre — Bldg E21
15. The Great Sail — McDermott Court

Guided Tour No. 4

(Start: East Campus Welcome Center)

1. Computer music and games — 26-220
2. Radio Interferometer — 26-204
3. Reading machine for the blind — 20B-201
4. Tech Model Railroad — 20E-214
5. ERC Shop Facilities — 20C-212
6. Speech Synthesis — 20B-145
7. Anechoic (Silent) Chamber — 20B-145
8. Voice Spectrograph —"How We Recognized Howard Hughes" — 20B-145
9. USSP Electronics Laboratory — 20B-140
10. Minuteman Missile Guidance Computer — 20B-140
11. Temperature Control — 20B-140
12. Math Learning Laboratory — 20B-136
13. Optical Illusions — 20B-129
14. Space War on a Computer — 20C-106
15. Fluid Mechanic Phenomena — Bldg 48 (1st floor)
16. Ship Model Towing Tank — 48-015
17. Optical scanning — 575 Tech Sq. (4th floor)

Student Activities

Rain, MIT's Literary Magazine	Student Center Plaza
MIT Folk Dance Club	Student Center "Sala"
Tech Squares	Kresge Plaza
Student Art Association— Classes in progress	W20-439
Unicycle Club	Kresge Court
MIT Tiddly Winks Team— 1972 WORLD CHAMPIONS	10-105
Tech Model Railroad Club	20E-214
Model Rocketry Society— Static Test Firing of Model Rocket Engines	2-205
Alpha Phi Omega—Architectural Barriers in Boston	10-Lobby
Urban Action—Slide Show of Student Projects in Boston Area	4-167
Urban Vehicle Design Competition— Slide Show	5-218
Environment Information Center	W20-002
WTBS—MIT Radio Station	88.1 FM on your dial

Science Fair

MASSACHUSETTS STATE SCIENCE FAIR

High school students from across the state will be displaying their science projects today in Rockwell Cage. This competition is sponsored annually by MIT and the Boston Globe.

Athletics

Baseball (Freshman) MIT vs. Boston University (2:00)	Briggs Field
Outdoor Track (Varsity) MIT vs. Bates (12:30)	Briggs Field
Tennis (Varsity) MIT vs. Wesleyan (2:00)	DuPont Courts

Special Events

12:00 Welcome to MIT—Opening Ceremony	77 Massachusetts Ave.
12:00 *Mainland China*—Film	2-190
1:00 **Staff of Life**—Baking demonstration	16-012
1:00 *The Evolution of Spiral Galaxies* —Film and talk	2-131
1:00 **Reading Machine for the Blind** —Demonstration	20B-201
1:30 **Invisible Forces: Electric & Magnetic Fields** —Part I, Prof. V. Weisskopf and Prof. B. Feld	26-100
2:00 **Mainland China**—Panel discussion	2-190
2:00 **Invisible Forces: Electric & Magnetic Fields** —Part II, Prof. V. Weisskopf and Prof. B. Feld	26-100
2:00 **Can Mathematics Apply to Everyday Life**—Lecture, Prof. S. Minsker	2-131
2:00 **Illusion and Delusion**—A perceptual demonstration	9-150
3:00 *Mainland China*—Film	2-190
3:00 *The Evolution of Spiral Galaxies* —Film and talk	2-131
3:00 **The Elections of 1972 and Student Participation in Them**—Panel	1-190
3:00 **Reading Machine for the Blind** —Demonstration	20B-201
3:30 **Physics in Biology and Medicine** —Lecture, Prof. E. Stanley	26-100

Nautical Association**
Basic Sailing Shore School, repeated every Monday and Thursday throughout the spring, 5:15pm, Sailing Pavilion, non-members welcome.

Fencing Club**
Every Tuesday, 6-9pm, duPont Fencing Rm.

Rugby Club
Practice. Every Tuesday and Thursday, 5pm, Briggs Field.

Urban Vehicle Design Competition
Volunteer meetings. Every Wednesday, 3pm, Rm E40-250.

Table Tennis Club***
Practice session, every Wednesday, 7:30-10:30pm, T-Club Lounge, duPont.

Science Fiction Society*
Every Friday, 5pm, Rm 1-236.

Student Homophile League*
Meeting and mixer meets Fridays, 7:30pm, Mission Church, 33 Bowdoin St, Boston. For gay help (anonymous) at MIT, call the student gay tutor, 492-7871 anytime.

MIT Students for McGovern
Canvassing and leafleting every Saturday. Meet at 11am, Goodale 103, East Campus.

ACBL Duplicate Bridge*†
Bridge Club. Every Saturday, 1:30pm, Student Center Rm 473. Members, free; non-members, 75 cents.

Chess Club**
Every Saturday and Sunday, 1:30-5:30pm, Student Center Rm 491.

Social Events

Society of Sigma Xi**
Informal coffee hour. Thursday, April 13, with **Prof. J. Little.** Thursday, April 20, with **Prof. J. Dugundji.** 4-5pm, Student Center Rm 407.

Pot Luck Coffeehouse**
Friday, April 14: music and singing with **Ray Magliozzi.** Saturday, April 15: guitarist and vocalist **Gaytha Hillman** and **Steve Phister** on electric piano. 8-12pm, Student Center Mezzanine Lounge.

Muddy Charles Pub**
Join your friends at the Muddy Charles Pub, 110 Walker, daily 11:30am-7:30pm. Call X2158.

Friday Afternoon Club**
Music, conversation and all the cold draft Budweiser you can drink. Featuring folk singer Rich Holloway. Every Friday, 5:30pm, Ashdown basement Games Rm. Admission: men $1, women 50 cents. Must be over 21.

Movies

Bridge on the River Kwai
Humanities Film Series. Wednesday, April 12, 6pm, Rm 10-250.

Channel Flow of a Compressible Fluid*
Fluid Mechanics Films. Thursday, April 13, 4-5pm, Rm 3-270.

La Sangre del Condor
Humanities Film Series. Thursday, April 13, 8pm, Rm 26-100.

Walkabout**
LSC. Friday, April 14, 7pm and 9:30pm, Rm 26-100. Tickets 50 cents. Must show ID.

Cool Hand Luke**
Student Center Committee. Friday (Saturday morning), April 14, 12:30am, Sala de Puerto Rico. Free.

Soldier Blue**
LSC. Saturday, April 15, 7pm and 10pm, Rm 26-100. Tickets: 50 cents. Must show ID.

Milan*
Sangam. Sunday, April 16, 3:30pm, Rm 26-100. Tickets: $1.50. Call 491-0080.

Israeli Short Films*
Israeli Club. Wednesday-Friday, April 19-21, 12n-2pm, Student Center West Lounge. Free.

Le Bourgeois Gentilhomme
Humanities Film Series. Wednesday, April 19, 8pm, Rm 26-100. Free.

Three Days and a Child*
Israeli Club. Wednesday, April 19, 9pm, Rm 10-250. Tickets 75 cents.

8½
Humanities Film Series. Thursday, April 20, 6pm, Rm 10-250. Free.

The Forbidden Planet
Humanities Film Series. Thursday, April 20, 6pm, Rm 4-370. Free.

Belle de Jour
Humanities Film Series. Friday, April 21, 2pm, Rm 14N-0615. Free.

Willard**
LSC. Friday, April 21, 7pm and 9:30pm, Rm 26-100. Tickets: 50 cents. Must show ID.

The Great Race**
Student Center Committee. Friday (Saturday morning), April 21, 12:30am, Sala de Puerto Rico. Free.

Music

Chamber Music*
Flamenco and classical guitar pieces, featuring **Dik Visser,** professor at Music Lyceum and Conservatory of Music in Amsterdam. Wednesday, April 12, 8:30pm, Kresge. Free.

Noonhour Concert*
"Fantasia-Coperario" with **Eva Linfield** on recorder and **Audley Green** on harpsichord. Thursday, April 13, 12n, Chapel.

Zamir Chorale of Boston*
Program includes "Sacred Service" by Ernest Bloch. Thursday, April 13, 8pm, Sanders Theatre, Harvard. Tickets: $2. Call Robert Rosenschein, dorm X8564.

Dance

Folk Dance Club*
Folk Dance workshop. Saturday, April 15, 2-5pm, Sala de Puerto Rico.

Folk Dance Club*
International folk dancing. Every Sunday, 7:30-11pm, Sala de Puerto Rico (exceptions to be posted).

Modern Dance Technique Class**
Elementary/Intermediate. Every Monday, Wednesday, Friday, 5:15pm. Every Sunday, 1pm. McCormick Gym.

Folk Dance Club*
Balkan folk dancing. Every Tuesday, 7:30-11pm, Student Center Rm 407.

Tech Squares*
Every Tuesday, 8-11pm, Rm 10-105. Call dorm X0888 or 492-5453.

Folk Dance Club*
Israeli folk dancing. Every Thursday, 7:30-10pm, duPont Gym T-Club Lounge.

Exhibitions

To Look on Nature*
Exhibiton of 19th Century landscape painting of France, England, America, Germany, Holland, Italy and Spain. Hayden Gallery, April 7 through May 8.

Photography Exhibit*
Photographs by MIT students **Peter Sramek** and **Baldwin Lee.** Hayden Corridor Gallery through April.

Jerusalem of Gold*
Photographic exhibit by Israeli artist **Yossef Ben-Purat.** Wednesday, April 19 through April 28, 10am-3pm, Student Center "Center Lounge."

Hart Nautical Museum*
Exhibits include "Naval Undersea Research and Development Center," "The Art of Rigging," and "French Undersea Research" (through April). Bldg 5, first floor.

Main Corridor Exhibitions*
Presented by students and departments. Bldgs 7, 3, 4, 8.

Athletics

Varsity Lacrosse*
Tufts. Wednesday, April 12, 3pm, Briggs Field.

F Tennis*
Governor Dummer. Wednesday, April 12, 3pm, duPont Tennis Courts.

Varsity Tennis*
Colby. Friday, April 14, 3pm, duPont Tennis Courts.

Varsity Sailing*
Open Regatta. Saturday, April 15, Sailing Pavilion.

Lightweight Crew*
Yale. Saturday, April 15, Charles River Basin. F, 10:15am, JV, 10:45am; Varsity, 11:15am.

JV/F Baseball*
Boston University. Saturday, April 15, 2pm, Briggs Field.

Frosh and Varsity Tennis*
Wesleyan. Saturday, April 15, 2pm, duPont Tennis Courts.

Varsity Outdoor Track*
Bates. Saturday, April 15, 3:30pm, Briggs Field.

Varsity Sailing*
Geiger. Sunday, April 16, Sailing Pavilion.

Varsity Sailing*
Oberg Trophy. Monday, April 17, Sailing Pavilion.

Varsity Baseball*
WPI. Tuesday, April 18, 3pm, Briggs Field.

Varsity Lacrosse*
Bowdoin. Tuesday, April 18, 3pm, Briggs Field.

Varsity Tennis*
Boston College. Tuesday, April 18, 3pm, duPont Tennis Courts.

Varsity Golf*
Babson, Boston University, Maine. Thursday, April 20, 12:30pm, Crystal Springs Country Club. Haverhill.

Varsity Baseball*
Harvard. Thursday, April 20, 3pm, Briggs Field.

Varsity Tennis*
Massachusetts. Thursday, April 20, 3pm, duPont Tennis Courts.

Frosh Tennis*
Belmont High School. Friday, April 21, 3pm, duPont Tennis Courts.

Religious Services and Activities

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

Roman Catholic Mass*
Sunday, April 16, 9:15am and 12:15pm only. Chapel.

Roman Catholic Mass*
Every Sunday, 9:15am, 12:15pm, 5:15pm, Chapel.

Christian Worship Service*
Every Sunday, 11am, Chapel.

Christian Discussion Group*
Bible study and discussion of Christianity today. Every Sunday, 9:30-11am, McCormick Seminar Rm A. Call Ron Gamble, X6712 or 547-4279.

Hillel Religious Services*
Monday-Friday, 8am, Rm 7-102; Fridays, 7:30pm, Chapel; Saturdays, 9:30am, Chapel.

Christian Science Organization*
Meeting includes testimony of healings. Every Tuesday, 7:15pm, Rm 8-314.

Latter Day Saints Student Association**
Religious seminars. Every Tuesday, 8am, Student Center Rm 473.

Christian Bible Discussion Groups*
Every Wednesday, 12:30pm, Rm 4-343; every Thursday, 12:30pm, Rm 20B-222. Call Prof. Schimmel, X6739, or Ralph Burgess, X2415.

Christians for Dinner*
United Christian Fellowship. Every Thursday, 6-7pm, Walker Dining Hall (under sign of the fish).

Praying, Singing, Sharing Meeting*
United Christian Fellowship. Every Thursday, 7-8pm, East Campus Lounge.

Islamic Society Prayers*
Every Friday, 1pm, Kresge Rehearsal Rm B.

Vedanta Services*
Every Friday, 5:15pm, Chapel; discussion hour, 6pm, Ashdown Dining Hall.

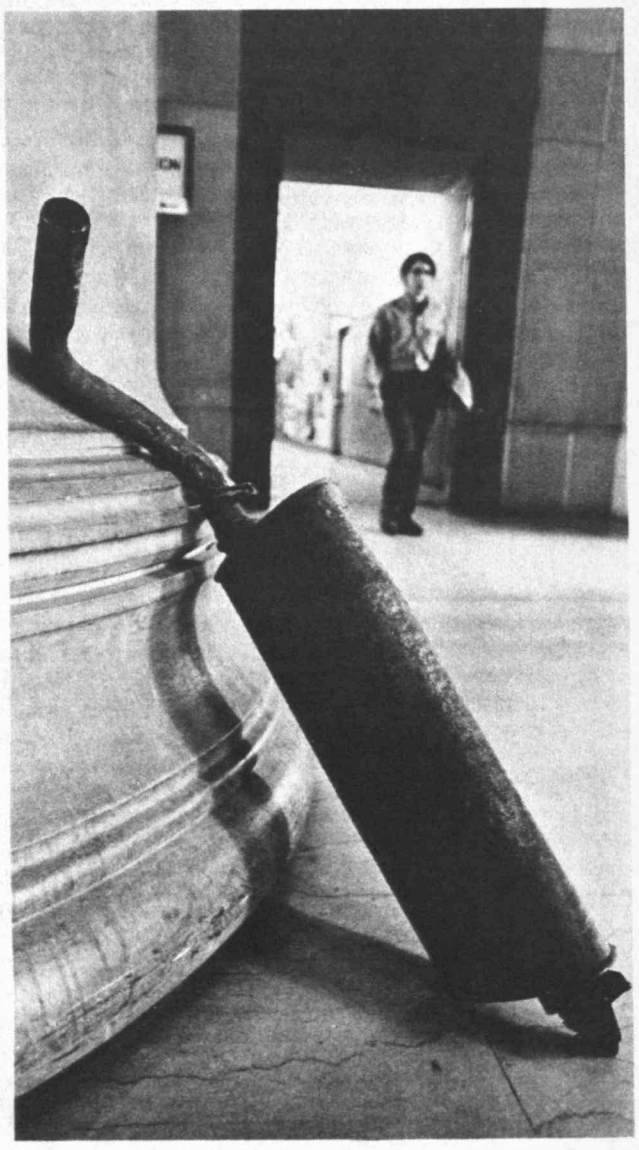
College Life Campus Crusade for Christ*
Brothers and sisters for fellowship and a time of teaching from the Open Book. Every Friday, 7-9pm, Rm 1-132.

Islamic Society Discussion*
Isha prayers followed by discussion of various aspects of the Islamic way of life. Every Friday, 7:30pm, Student Center Rm 473. Coffee and doughnuts served.

Free Draft Counselling*
Hillel, 312 Memorial Drive, X2982. Call or visit 10am-5pm.

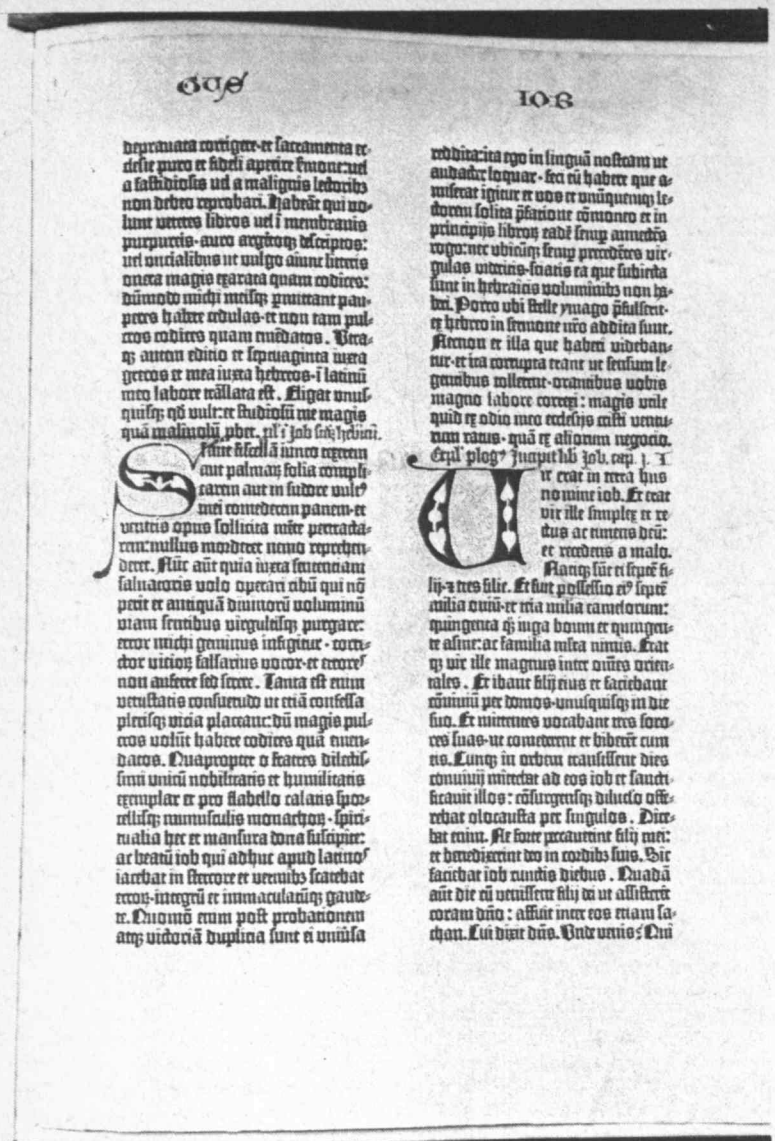
***Open to the Public**
****Open to the MIT Community Only**
*****Open to Members Only**
†Freshmen encouraged to attend

Send notices for April 19 through April 28 to the Calendar Editor, Room 5-111, Ext. 3279, by noon Friday, April 14.



--Photo by Margo Foote

Lose a muffler? This one appeared in the lobby of Building 7 last week, much to the bewilderment of passersby.



The newly acquired leaf from the Gutenberg Bible.

–Photo by Margo Foote

Gutenberg Bible Leaf Is Gift of Edward Davis

How often does a stranger walk into an office and say, "I would like to give you a page from the Gutenberg Bible?"

Not very often, but that's just what happened a few weeks ago in the Director of Libraries Office. A book dealer, Colonel Stancisko, walked into the Humanities Library and announced that he had a valuable gift which he was bringing to the Institute in the name of Edward Davis, a 90-year-old alumnus in the Class of 1901.

The Gutenberg leaf from Job is bound with an introduction by A. Edward Newton which describes how an incomplete copy of the Bible, printed in Mainz in 1450-55, was broken up in the 1920s and its leaves sold separately. Some of the leaves, including the one given to MIT, had been vandalized--the illuminated initials were cut out for use in other manuscripts. Mr. Davis' leaf, however, has been restored very carefully and only close examination reveals the repair.

There are ten complete copies and perhaps 28 single leaves of the Gutenberg Bible in the United States. Another leaf, from II Kings, was given to MIT by Professor William Emerson, former dean of the School of Architecture.

Mr. Davis' gift included much more than the Gutenberg leaf. Colonel Stancisko also brought a book on the Gutenberg Bible and a scrapbook of clippings. The scrapbook contained three items of special interest--a printed page and illustration from an 18th century edition of the Japanese novel *The Genji Monogatari;* a woodcut of an old Japanese work on Buddhism; and a leaf from the *Saddaharmapundarika,* the text of Kumarajiva in Chinese which had been copied by a Japanese priest in 1834.

MIT Credit Union Ends Signature Requirement for Married Women

The Board of Directors of the MIT Federal Credit Union has voted to end a mandatory practice which required a husband's signature for loans made to married women working at the Institute.

According to the vote which was taken April 4, "the Credit Committee has the discretion to require, if they deem necessary, a spouse's signature on a Credit Union note."

Until now the Credit Committee could not lend money to a married woman without the signature of her husband regardless of the woman's earning power or credit rating. Under the new system a second signature will be required only if the borrower is considered a credit risk, and a man with a poor credit rating could be required to produce his wife's signature.

The new ruling comes after several months of struggle by women at the Institute who have been refused loans from the Credit Office. According to Prof. Sheila Widnall, of the aeronautics and astronautics, it began with a complaint from a woman engineer at the Draper Laboratories who was required to have her husband sign a loan note before it could be granted.

The woman refused and took the matter to her supervisor, Margaret Hamilton, who petitioned the Board of Directors to have the rule changed.

According to Professor Widnall, she later went to apply for a loan and was informed that it would not be granted without her husband's signature. Professor Widnall refused and complained to the Board of Directors. Eventually she was given the loan without her husband's signature.

Leo Green, Manager of the Credit Union, said the rule requiring married women to have the husband's signature was a policy which the Board of Directors required the Credit Committee to carry out. With the new ruling, he said, the "Board has taken the handcuffs off the Credit Committee."

According to Mr. Green, the rule has been in effect since at least 1957 when he came to work at MIT. Only in the past two or three years has there been any questioning of it, he said, and only in the past year has there been any open resistance.

He indicated that in the past men have also occasionally been required to have their wives sign loan notes. The example Mr. Green gave was that of a known gambler who came to the institute for a loan.

The Credit Union has processed four loans for Institute women since the change of rules by the Board of Directors; all have been given the requested loans without the husband's signature.

Registrar's Reminder

Registration material for the 1972 summer session will be available in the Registrar's Office, Room E-19-335, beginning Wednesday, April 19. Registration forms must be filled in and returned to the Registrar by Wednesday, May 10.

Displays, Guided Tours to Highlight Open House

(Continued from page 1)

tours. Tour 1 will feature a simulated solid-waste minicipal incinerator, wind effects on tall buildings in the Write Brothers Wind Tunnel, a holography demonstration, Air Traffic Control simulated pilot's cockpit display, the Nuclear Reactor and the Francis Bitter National Magnet Laboratory, which houses the world's most powerful magnet.

The Open House Committee will hold a special meeting tonight (April 12) at 7:30pm in Lobdell. Tour guides and anyone else interested in working during Open House should attend.

Tour 2 will include a demonstration of the Apollo inertial guidance system developed for the NASA by the Draper Laboratory, interactive computer consoles in Project Intrex's computer-based library system, the famed Stroboscopic Light Lab, and biological wonders such as slime molds and human polio receptor genes. Tour 3 will present, among other exhibits, a topology and geometry demonstration, computer Black Jack, baking "the Bread of Tomorrow," the language lab, and a linear accelerator exhibit. Tour 4 will feature computer music, a reading machine for the blind, the anechoic (silent) chamber, a minuteman missile guidance computer, a space war game played by computer console, and the model ship towing tank.

Who's New in the News

--Professor John J. Donovan, Jr. of electrical engineering has published a book entitled "Systems Programming" which includes such topics as the use and implementation of assemblers, macros, loaders, compilers and operating systems.

--Dr. Harold E. Dreyer, director of personnel at Draper Laboratory, has been named to the board of directors of the Massachusetts Easter Seal Society for Crippled Children and Adults.

--Dr. Edwin R. Gilliland, Warren K. Lewis Professor of Chemical Engineering, has received the 1971 Founders Award of the American Institute of Chemical Engineers, along with Professor John J. McKetta of the University of Texas.

---Radiodiffusion - Television Francaise has completed five special films dealing with language, human behavior, the brain, artificial intelligence and the humanization of science - all filmed at MIT and narrated by Provost Walter A. Rosenblith.

--Professor Dietmar Seyferth of chemistry will receive the American Chemical Society's Frederia Stanley Kipping Award in Organosilicon Chemistry at the Society's national meeting at the Sheraton-Boston Hotel on Monday, April 10.

--Physics Professor Vytenis M. Vasyliunas and his father, Izidorius Vasyliunas, recently presented a piano and violin duo recital in Jordan Hall, featuring the first Boston performance of a Lithuanian sonata composed by John Bavicchi.

--Associate Director of Libraries Natalie N. Nicholson has received the annual Alumni Achievement Award from the Simmons College School of Library Science for "significant contributions in academic librarianship and for distinguished service in academic library administration.

--A film entitled "Flame Orchard", done by Professor Gyorgy Kepes, director of the Center for Advanced Visual Studies, and several CAVS fellows, is being shown at "Transformation," an exhibition at the Carpenter Center of Harvard University, through May 15.

--Professor Stanley Backer of mechanical engineering has been elected Honorary Member of the American Society for Testing Materials in recognition of his "eminent qualifications as one of the world's foremost textile engineers; outstanding contributions to textile science; and for dedication to teaching, textile research, lecturing, and advisory services to your colleagues and country."

--Professor John Harbison, composer, pianist and music theorist, has received a Music Award from the National Institute of Arts and Letters.

LINAC Named for William Bates

(Continued from page1)

Atomic Energy, Congressman Bates, Dr. Larson said, gave major attention and interest to matters having to do with basic atomic research in general and the Middleton accelerator in particular.

"Judging by performance, I am certain that this new accelerator ably operated by MIT will reflect honor to the memory of William H. Bates," said Dr. Larson.

Howard W. Johnson, chairman of the Corporation and presiding officer at the ceremonies, said the naming of the accelerator for the late congressman was "altogether fitting" because "no single individual worked harder nor believed more firmly" in the importance of basic fundamental scientific research to the national interest.

"Although he was not a scientist by training, he had a deep respect for basic research and for the endless nature of the challenge of penetrating the unknown," he said. "He had a profound understanding of the crucial role of basic research in providing the underpinning to the nation's atomic energy program, to our national defense, and to the development of technology for the betterment of mankind."

Congressman Bates' widow, Mrs. Jean Bates, now of Washington, D.C., was present for the naming ceremony and presented MIT with a portrait of her late husband and an American flag that once flew over the US Capitol in Washington. Both will be placed on display at the accelerator facility.

President Jerome B. Wiesner traced the long and productive relationship between the scientific activities of the AEC and MIT and recalled the history of the Laboratory for Nuclear Science, which is building and which will operate the Bates Accelerator. LNS is one of several interdisciplinary centers reporting to Provost Walter A. Rosenblith. LNS, President Wiesner said, through the work of such scientists and engineers as Jerrold Zacharias, Bruno Rossi, Martin Deutsch, Robley D. Evans, Edwin R. Gilliland, Ivan A. Getting and Victor F. Weisskopf, among many others, has made powerful contributions to man's understanding of the structure of the nucleus and the peaceful uses to which atomic energy is presently applied.

"Despite some of the current problems of funding before us, we have no intention of abandoning or diminishing the quality and intensity of nuclear research at MIT," he said. "Nuclear studies are central to the Institute's overall research and educational plan and they will continue to represent a basic part of our commitment to keep this institution deeply rooted in science and engineering."

Dr. Peter Demos, director of LNS and one of the principal architects of the accelerator, reported the new beam intensity achievement. The Bates Accelerator earlier this year achieved a beam of 20 million electron volts intensity which was a major milestone in bringing the facility to operational levels. The newly-achieved level of 107 mev is still another such milestone, proving the feasibility of design and components.

An open house for residents of Middleton and other North Shore towns and cities will he held from noon to 5 pm Saturday and Sunday, April 15 and 16, at the new William H. Bates Linear Accelerator in Middleton.

Al Dopfel Greatest Pitcher Ever At MIT

Al Dopfel, a senior and co-captain of this year's Tech baseball team, is probably the most talented pitcher to wear MIT flannels in the twenty-five years of the sport at the Institute.

The right-hander has not hung up an impressive won|lost record to date this spring, but his effectiveness on the mound is near perfect. In twenty-eight innings, Al has allowed only .96 earned runs per game, and has struck out twenty-four of the opposition.

In his most recent outing Dopfel faced strong Boston College in the opening game for both teams, in the Greater Boston League. Dopfel, a fierce competitor, toed the slab against BC in near freezing sub-normal New England spring weather.

Dopfel and his Tech teammates toiled for 3¼ hours to a 1-1 tie before darkness ruled out further play. Al allowed but two singles in nine innings and they were the only balls hit out of the infield all day. Dopfel, in complete control, struck out 15 Eagles, tying the MIT nine innings, single game mark.

When Al is not pitching, he's leading the club in hitting. The club's leading batter last year with a hefty .360 batting average, Dopfel is off and running again this year, batting .333. Added hitting heroics against Florida Southern, Al came off the bench with MIT trailing, 4-3, to stroke a two run homer in the last inning to beat the host Sunshine Staters, 5-4.

Dopfel is under close observation by resident professional baseball scouts. It has been known that the Boston Red Sox and Pittsburgh Pirates have watched Al toil on the mound and have gone away satisfied with what they've seen.

With an 11-12 record in 1971, (Dopfel was 5-4) the Engineers see themselves as contenders in the tough Greater Boston League and a chance to break the all-time MIT single season victory mark of eleven which they equalled last spring.

Not far behind Dopfel in talent and determination, is southpaw Chuck Holcom. Holcom, 5-2 with a 2.73 earned run average in 1971, gives the Engineers a strong pitching tandem, important in a usually busy collegiate baseball season which is cramped into a six week campaign.

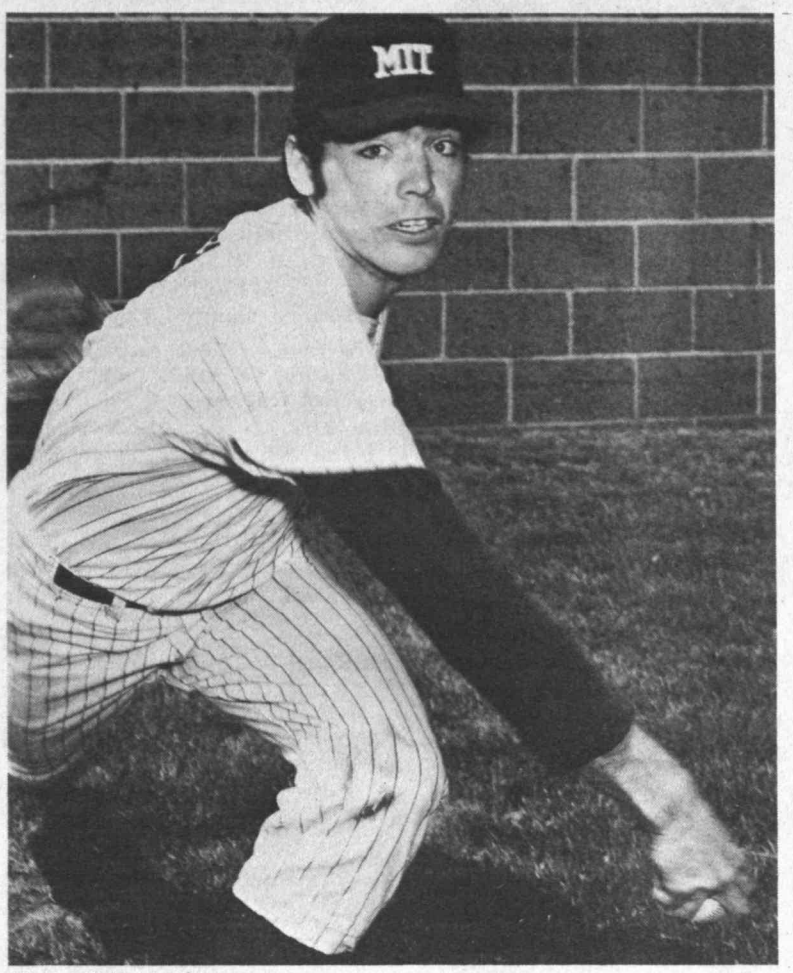
While Coach Fran O'Brien relies heavily on his pitching corps, he sees the team at every position as one of the best in Tech's history.

"Strong pitching and sharp defense are our assets" admits O'Brien. "We"ll be involved in a lot of tight games, I'm sure. With Dopfel, Holcom and company playing, this MIT Team believes it's going to take a lot better team to beat us."

MIT's keystone combination of senior Rich Roy at short and senior co-captain Ken Weisshaar at second could be the tops in New England. Weisshaar, a .277 hitter last year, is now hitting .333. At third is sophomore Dave Tirrell, a good glove and an excellent table setter for the more potent bats of Weisshaar and Dopfel. At first is freshman Herb Kummer, as neat a defensive first sacker as Tech has ever seen

In the outfield, leading off in the lineup and playing center field, is sophomore Steve Reber. Surrounding Reber on both sides are two fellow classmates, Kevin Rowland in the left and Joe DeAngelo in right. Tech catching duties have been ably handled by junior, Richard Charpie.

MIT's all time team highs in baseball have been eleven victories in a season and four wins in the GBL and a fourth place. This season could mean all the way for MIT and maybe a GBL pennant, which by the way, means a spot in the NCAA regional baseball championships.



Al Dopfel in action.

'Beards' to Play in Softball League

The Draper Lab Noon Softball League will have an unusual team this season--the Beards. The Beards will accept only players who have genuine beards; sideburns and moustaches are optional.

According to team manager, Sam Benichasa, artificial beards will not be accepted, but prospective players have until the opening game on April 24 in which to grow some whiskers.

The Noontime softball season runs from mid-April through mid-August. Call Sam Benichasa at Ext. 6989 or 5379 before April 18 for further information and to sign up.

Draper Lab Engineers Support Apollo 16 Mission to the Moon

(Continued from page 1)

Houston are located, the problem was quickly relayed to Cambridge on the closed telephone circuit. In Cambridge, computer specialists, quickly worked out--and verified by simulation--a computer keyboard sequence for the astronauts to use which caused the computer to ignore the spurious signal. Apollo 14 went on to a successful landing.

The Draper Laboratory will begin deploying its support forces for Apollo 16 this week preparatory for launch from Cape Kennedy Sunday, April 16.

"We will have a team of engineers at Cape Kennedy supporting the pre-launch and launch operations there," according to David G. Hoag of Medway, director of the Laboratory's Apollo Group. "We will have another team at mission control in Houston helping them with the entire flight from launch to splashdown."

At the same time, he said, shifts to communicators will be on duty at all times at the Lab in Cambridge. They will have constant and uninterrupted communications via the closed telephone line with NASA and Draper engineers at Houston and, during the pre-launch and launch period, at Cape Kennedy.

Shift communicators in Cambridge will have available to them telephones where more than 50 key specialists can be reached day and night. Nights and weekends, if these specialists leave their homes they will call in to shift communicators temporary numbers where they can be reached.

"We can mobilize the entire Apollo engineering force on very short notice should an emergency arise and the full complement be needed," Hoag said. "That is unlikely, however, since the problems that arise require the services of just a few specialists in whatever area of the guidance system is affected."

Apollo communicators, L to R: Warren Prince, Ken Kido, Bill Woolsey, Bob Werner and Ed Grace. –Photo by Margo Foote

MIT Dames to Hold Show

International Night, a popular event sponsored annually by the Technology Dames, will be held on Friday, April 14.

Beginning at 7:30pm in Kresge, the Dames will demonstrate international folk dancing and singing. At 9pm the festivities will shift over to the Student Center. Booths representing more than 25 countries from around the world will be set up in the Sala de Puerto Rico and Lobdell. The booths will include displays of international crafts, costumes, travel information, and foreign cuisine.

Everyone in the community is invited to attend International Night. Admission is $1 and advance tickets will be available in the lobby of Building 10 from 10am to 2pm.

White Elephant Sale Planned

The Cambridge Business and Professional Women's Club is sponsoring a White Elephant Sale on Thursday, April 13.

The sale will be held in the Bush Room (Room 10-105) from 10am to 2pm. All proceeds will go to the Olive Libitz Memorial Scholarship Fund, a benefit fund for a Cambridge high school senior.

Some of the bargains included in the sale are: antiques and "newtiques," plants, baked goods, handcrafts, jewelry, prints, books, frames, a vintage typewriter, a bird cage, ceramics and appliances.

All donations for the sale are welcome. Call Julia McLellan, Room 3-103, Ext. 4770.

Community Aid Projects Supported

Summer grants are now available for students who wish to develop community service or other urban-related projects aimed at serving community needs.

The proposed program is sponsored by the President's Fund for Community Affairs, the MIT Community Service Fund, the Undergraduate Research Opportunities Fund Program, and the Off-Campus Work Study Program of the Student Employment Office. Financial support will be provided on a modest scale for student stipends, materials and supplies, and for other project expenses.

To be eligible for grants, proposed projects must involve full-time (40-hours per week or equivalent) commitments for the students and include both on- and off-campus planning, advice and sponsorship. The content and objectives of each project must be jointly defined by the students and community groups. Provisions must be made for a written report to be submitted at the end of the summer.

Written proposals for projects are due no later than April 15. The selection of recipients will be made by a review panel including representatives of the sponsoring agencies, members of the faculty, staff and student body. For more information, call Timothy Bird of the President's Fund for Community Affairs, Ext. 7440, or the Urban Action Office.

90 Students To Receive NSF Summer Support

(Continued from page 1)

or less primitive areas and flowing through rural and industrial locations before reaching the sea. Their faculty supervisor is Frederick A. Frey, assistant professor of earth and planetary sciences.

The other three grants were awarded under NSF's Undergraduate Research Participation program, which also provides funds for student salaries, but supports individual as well as group research with greater faculty supervision.

In the Department of Nutrition and Food Science, 10 students will do basic research in biochemistry, food engineering and animal pathology under a $16,180 grant. The work may be individual or joint and the students will be supervised by both faculty members and graduate students. Charles L. Cooney, an instructor in the department is overall project coordinator.

In the Department of Biology between 20 and 30 undergraduates will perform laboratory studies in biochemistry, microbiology and cell biology under a $22,380 grant. Project coordinator is Professor Harvey F. Lodish.

In the Department of Chemistry, 45 students will

In the Department of Chemistry 15 students will be employed this summer and 30 more over the next 18 months in established research groups working on a variety of projects, under a grant of $23,400. Departmental coordinator is Dr. Frederick D. Greene II, professor of chemistry.

Under the three Undergraduate Research Participation grants only 60 percent of the participating students may come from MIT. The other 40 percent will be students at other, principally local, universities.

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 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. 3270** or mailed to Room 5-105. The deadline is noon Friday.

For Sale, Etc.

New belted Uniroyal wsw tires (5), H78-14 or 8.55x14, $29 ea. X6722.

Free refrigerator–yours for the taking. Dennis Merritt, X560 Draper 7.

Util trailer, 4'x6', homemade, fair cond, $60 or best. Earl Hunter, X267 Linc.

Kenwood KR70 stereo recvr, 2 Goodmans spkrs, $180. Barth, 247-8275.

Dual 1019, $90; Tandberg 1600, $125, both in gd cond, wl haggle. Kenny, 661-9648.

KLH 6 spkrs, exc cond, retail $380, selling for $250. Mike Goodman, X1588 or dorm X9747.

Whirlpool 5000BTU air cond, 1 yr old, operates on 110v, $100. John Horos, X2961 lv message.

Hart std 185 cm skis w/Solomon bndgs, $60; le Trappeur boots, ladies 7½, $35. Linda, X7024.

Yellow shag rug, 12'x15', nds cleaning, $50. David Dove, X286 Draper 7.

Tires, 6.00x13, one new, 4 w/2K, $14 ea. Joanne, X427 Linc.

New Dunlop tire, whitewall, 6.00x12 on new Toyota Corolla wheel, $25. Andrew, X7010.

Kenmore port sewing mach, $25; Emerson TV, $25; Zenith port stereo, $35; 3-drawer bureau, $15; small common house plants. Caron, X1872.

Expresso pot, 2 cups, $3; manual coffee grinder, $2.50; small 3-drawer desk, $5; Remington elec knife, new, $7.50. Milton Lavin, X6680.

Concord tape deck and recrdr, 3 heads, stereo, exc cond, was $300, now $150. Ziggy, 536-5497.

Child's car seat + elegant baby carriage, best offer. Ferne, X3645.

Vintage Electrolux vacuum, weak suction, quaint attachments, best offer. John, 354-8170.

Tire rims, 2, 15", for '67 Ford, $8 total. Don, X5869 Linc.

Motorcycle tire 350x18 + 12 volt car battery, both exc cond, $10 ea. Paulie, X2253.

Volvo tires, 2, 6.85x15, only 1K, $10 each; luggage rack, $10. X7054.

Two Mich X 165-15 radial tires, uneven wear but gd for spares, $15 each w/tube. Ed, X5943.

Photovolt densitometer, Model 525, w/varicord & integraph for chromotography & electrophoresis, essentially unused, best offer. Dr. Linden, X6759.

Typwrtrs, 1 Smith-Corona Galaxie II, gd cond, $35; 1 Smith-Corona Galaxie Deluxe, exc cond, $55. Michelle or John, 734-3902.

Mod chrs, huge oak desk, maple dbl bed, classical & pop records, new Polaroid 440, new Minolta MC Rockor, 1.8-35mm lens, Triumph GT6. Sally, X7769.

VW luggage rack, used once, was $28, now $15. Ed Jones, X571 Draper.

Elec stove, 40" w/2 storage drws, perf cond, best offer. X3961.

Kenwood KT1000 stereo tuner, new cond. Steve, X1721.

Furniture, appliances, sew mach, K ware; gar sale Fri & Sat, 4/14 & 15, 131 Pond St, Randolph. X1742.

Hollywd sgl bed, Simmons matt, exc cond, $50; 5-drw dresser, $5; 3-drw desk, $5; Garrard stereo, nds needle, $25; gold rug, cleaned, 6'x9', $10; wd skis & bndgs, 205cm, $10. Susan, X2697.

Boy's bikes, 2, 20'. w/high rise bars, Schwinn, $18, Ross w/generator light, $25. Pete, X191 Draper 7.

J. Press spt jacket, 40, linen w/ polyester, nat, 3 buttons, patch pockets, worn once, was $72.50, now $40. Sylvia, X4905.

Solid teak vanity, 2-drw w/sliding comp, mirror inside, $125; Portacrib, lk new, adj height, mesh sides, $15; new Norelco lady's shaver, $10. Gay, X6363.

Baby walker, infant seat, misc. George, X6326.

Free used tires, gd cond: 4 Continental 6.40x13, mud & snow; 2 Firestone ww, 7.00x13 w/5-lug wh. X7573.

TV Pic tube, 17DQP4, new, in ctn, $15. Bob, X7549.

Nikon F cam body, $125; micro Nikkor, $110; 135mm f/2.8 auto Tamron, $40; Yashica D 2¼ TLR w/case, $50. Jeff or Charlie, Dorm X0496.

Oriental rug 8'x11', red & gold, $60; nvr used thick 9'x12' rug pad, $18; misc baby furn, $2-$10; boy's & man's ice skates, 6&8, $2 & $5. David Parker, X6688.

Min electron calc, 8 digit led +, -, X, div, 3x5" nicad batt, br new, asking $150. Mitch, X4626.

Kastle 210cm skis, gd bndgs, $50; Humanic buckle boots, 10½, $25. Dorm X9378.

Hawaiian steel guitar w/amp, bar & pics, gd for beginner, $50. X3694.

Mamiya/Sekor range finder w/needle exp control, 15mm f/1.5, $125; Yashica electro half frame auto exp, 32mm f/1.7, $60. X6464

Electrovoice Woverine 12" spkrs, sturdy home made encs, asking $50 or wl trade for gd amp. X7628 Linc.

Solid mahog lady's desk, beaut, $50; oak rocking chrs, best offer; elec coffeepot, $3. Call 923-9726.

European baby stroller, compact, $15; crib, $12; high chr, $5; hair dryer, $7. Jan, X1619.

Lady Baltimore grey-green 3-pc hard side lugg, train case, 20 & 26" suitcases, gd cond, $15 comp. Roberta, X302 Draper 7.

Kestral swim pool, 18' dia, 4' deep, Lomart pump, filter, skimmer, cleaner, net, larder, test kit, 4' fence w/gate, $150. Al, X149 Linc.

Tires, 8.45x15, 1 exc, 1 gd, both for $25. David, X7652.

Colombian maxi-ponchos, wool, ideal for spring, $30 ea. Call 876-2152.

Usable F78-14 glass belt tires. Michael, X7622 Linc.

Hotpt 12 cu ft refrig, 70-lb frzr top, $100; yellow tufted bar w/grey formica top, 3x5', 3 stools, $75. Ralph, X2518.

Vehicles

'55 Mercedes Benz 210S, new clutch, exc cond, $1000. Andy, X2109.

'62 VW, mech exc, new R, seatcovers, $215. Dorm X8461.

'64 Ford V8, R & H, orig owner, gd mech cond, $175. Dick, X340 Draper 7.

'65 Mustang convert, 60K, gd running cond, best offer. Morris, X3645.

'65 Mustang, V-8, 289 cu in, best offer. Roberta, X7805, lv msg.

'66 Chevy sta wgn, V8, R&H, gd mech cond, $500. X3878.

'66 Toyota Corona, $200. X7466.

'66 Austin Cooper S, 1275cc, gd cond, wh w/bl top, $1000; Vivatar auto telezoom lens, 85-205mm, br new, exc cond. X5047.

'68 Opel coupe, exc cond, 22K, $895. King, X5309.

'68 Pontiac sta wag, executive model, w/4 new trs, AM/FM, spkrs in rear, $1200. X7409 Linc.

'68 Dodge Coronet 500, 2-dr hrdtp, new tires, air cond, V-8, auto, NH title, some dents, $950. Jim, X7379 Linc.

'68 VW sedan, R, gd tires, new sticker, gd cond, dk green, $950 or best. Jerry, X7377.

'68 Fiat A, rec valve job & timing chain, asking $750. Frank, X1733.

'69 MGB convert, wire wheels, R&H, new batt & tires, toneau, 26K, exc cond, $1900 or best. Ziggy, X3782.

'69 Buick Skylark, exc cond, low mi, $1800. Susan, X3231.

'69 AMX 390, 4 spd, 4 new wide treads, exc cond, extras, best offer. David Walker, X2738.

'69 Toyota Corolla 2 dr wgn, R, 4 cyl, gd cond, $1075. Carol, X3369.

'69 Olds 98, 2 dr hdtop, air cond, all pwr, tinted glass, asking $2300. George Stamen, X3981.

'69 Plymouth Signet, $1295. Call 1-256-3519.

'69 Cougar, 4-spd, AM/FM, hvy duty suspension, many extras, active warranty, exc cond. X7174.

'70 Volvo 142A, auto, dark green, 19K, exc cond. Gay, X5775.

'71 Triumph TR6, white, overdrive, radial snows, $3000 or near offer. Aitken, X7166.

'71 VW camper, red pop-top, 10K, 1 yr warranty, exc cond, many options–VW tent, FM stereo, 4 spkrs, sonagard alarm, snows, ww carpet, $3300. Dick, X2119.

'71 VW sqbk, warranty, exc cond, 18K. Amy, X6044.

'71 Datsun 2402, 8K, exc cond. X6002.

'71 VW pop-top camper, 19K, under transfer warranty, top cond, $3300. Ralph Robins, X450 EDC.

'71 Opel, 18K, exc cond, best offer. Don, X4500.

'66 Yamaha 250 Scrambler, $200. Kemball Letteney, X7418 Linc.

'67 Yamaha 250cc, new pistons, clutch, oil pump, exc run cond, $350 will haggle. X2579.

'68 Yamaha 250cc, reblt eng & trans, new batt, lock, chain, helmets, elec starter, $250. Jeff, 876-3735.

'70 Honda CB350, exc cond, many extras, $575. Tom, 536-3202.

'71 Yamaha HS1, 90cc twin eng, $225. Call 262-5010 evgs.

'71 BMW R50/5, 500cc, 3.6K, saddle bags, stored all winter. Pete Adler, X117 Draper.

Fiberglass 12' boat w/controls & windshield, $200 + new trlr, $75, both for $250. Carl, X112 Millstone after 4pm.

Snipe class sailboat, No. 12970, fast, must sell, best offer over $500. Art Anderssen, X5318.

Aqua cat 12' catamaran, 90 sq ft sail, exc cond, custom built trlr, $500. Tom Murray, X7875.

Vega 27' sloop, new 6/71, all equip & dinghy, $11,300; '71 VW sqbk, exc cond, $2000, lving country, must sell. X7381.

Thunderbird class cruising/racing sloop, 26' sleeps 4, very competitive, MORC, w/trailer. Tally, X4673.

Scamper 60 sailboat, model 106, new $297, asking $200. Howard, X2808.

Housing

Allston, 2BR mod apt, heated, air cond, $250. Pat Crosly, X5180.

Brighton, summer sublet 6/1-9/1, 1BR furn, quiet bldg, nr T, $165. Bill, X4560.

Brk mod 1BR apt nr Cool Corner, sublet 6/1 w/option, $215. Jay, X5809.

Buzzards Bay, cott, priv clear pond, gd fishing, swim, conv loc. X461 Linc.

Camb, Porter Sq, 4BR, LR, K, unfurn, sublet 6/1 w/opt, $250/mo htd. Steve, X7456.

Camb, Green St, 2BR apt, lg LR, AC, w-w carpet, free pking, sublet w/opt, $235/mo. Kathy, X5775.

Camb, 3BR apt, 15 min walk from MIT, avail 6/1, $240. Call 868-7095 6-8pm.

Camb, Harv St nr Ctl Sq, ½ of 2BR, 2 B, brand new apt, priv bath & entrance, air cond, avail 5/1-7/31 or 6/1-8/31, $150. Marjorie, X1826.

Camb nr Tech Sq, 1BR apt, furn, avail 6/1, $150. Call 547-2045 evgs.

Camb 1BR apt summer sublet, furn, 5 min walk to MIT, $155. Nourani, X2531.

Chelsea, rms, v gd loc nr T, 5-rms w/ht & gas, 1st fl, $180/mo; 4-rms w/ht & gas, 2nd fl, $180/mo. Tony, X7611 or 7571 Linc.

Concord spa 4BR cape on ½ acre wded lot, conven to pond, stable, tennis, golf, stores, train, avail 2 yrs on 7/15, $450. Willis Kellogg, X7670 Linc.

Fla, 1 or 2 acre homesites, ready to build on, Gen Devel Corp, planned community, Port Charlotte & N. Port Charlotte, GDC price $2695 & $2895, asking $2290 & $2460. Frank Gargiulo, X112 Millstone.

Newbury St, 1-BR apt, furn, sublet June-Aug w/opt, fem or married cpl, $175/mo. Call 266-5984.

Rangeley, Me, new contemp 3+ BR hse, frontage on lg clear lake, mt view, hike, swim, fish in unspoiled wilderness, canoe incl, summer rental. Jeanne, X3584.

Sngl rms to sublet for summer in 4-man apt, 10 min walk to MIT, $70 + gas & elec. Ned, X4192.

Wayland, 8½ rms, 4BR, 2B, lg wooded lot, nr sch, Pike, shopping, asking mid $40s. X4541.

Westgate, sum sublet, 2BR, comp furn avail 5/28. Call 661-1626.

Animals

Free gerbils. Joel, X4722.

Alaskan malamutes, 12 wks old, bl, tan & wh, v affec. Peter, X584 Draper 7.

Sealpt Siamese ktttens, select lineage. Ross, X465 Draper 7.

Pekingese puppies, AKC, ready 4/19, $100 & up. Walt, X3105.

Free: 2 grey tiger kittens w/shots. Taz, X4724.

CFA reg Siamese kittens, 8 wks, $25. Dottie, X7729.

Lost and Found

Lost: gold Grecian coin earring, value more sentimental than real, $5 reward. Claudia, X4270.

Wanted

Car radio for BMW. Ron, X1477.

Man's 3-spd 26" or 10 spd bike, gd cond, reas price. David Butler, X7677.

Mature adults to join group for summer cottage rental. Rich, X520 Draper 11.

Male rmmte for 4 rm mod sunny house, 8 min walk from MIT, ww carpet, own BR, $92.50 + gas and elec, avail 5/1. Alan, X7296.

Well-cared for Martin or Gibson acoustic guitar. Vin, X5461 Linc.

O'Day sailer. Mel, X7986.

Creative writer to re-work stories w/gd charac & NE flavor but lack plot, author deceased. X4105.

Ride for 2 to Utica & back 4/15-17. Mike, X5567.

Five gallon crock. Tom, X3120.

Ride to Toronto 4/14 wkend and other wkends. Miller, X6337.

Baby stroller. Gerhard, X1637.

Man's 26" 3-spd bike, wl pay up to $30. Michael, X391 Linc.

Location of densitometer to measure film densities. Eric, X5720.

Daily ride, Billerica to MIT, 8am, return after 3pm. Jim, X7261 Linc.

Apt or hse, 3BR to rent for summer. Dr. Kandel, X5586 or 5530.

Pr 15" wheels for '69 Plymouth. Sorrenti, X283 Linc.

Man's bicycle, pref 3-spd, to buy or rent through June. Also auto wide angle lens for Nikormat. Ben, X6339.

Minolta 100mm f/3.5 MC Roccor lens. Filene, X476 Draper 7.

Miscellaneous

Experienced tech typist wl do fast reas work. X5345.

Wl sand, refinish floors. Denny, X5605.

Will do gen typing on SCM elec. Ron, X7273.

Positions Available

Secretary IV to head and other faculty of History Section in Department of Humanities. Excellent shorthand and typing skills essential for correspondence, manuscript typing, book reviews. Experience in coordinating assignments and establishing priorities desired to assure smooth operation of the section.

Secretary III, IV with an interest in fund raising activities to develop intelligence information and do some statistical work. Will also operate MTST, handle correspondence, make travel arrangements. Good typing and flair for writing required.

Campus Biweekly, Ext. 4251

Technical Typist III – Several openings in report preparation group, experience in technical typing desired but will train people with very good typing. 40 hour work week.

Telephone Operator II – Two openings on a four position board for experienced telephone operators. Some typing knowledge desirable. 40 hour work week.

Lincoln Lab Biweekly
Jane Notaro, Ext. 7305 Linc.