Massachusetts Institute of Technology



Volume 21 Number 34 May 4, 1977

NAS Elects 4 From MIT

Four MIT professors were among 60 new members elected to the National Academy of Sciences, and an MIT professor received a NAS Award, at the 114th annual meeting last week in Washington,

The four professors elected were: Dr. Michael Artin, professor of mathematics; Dr. Louis N. Howard, professor of mathematics; Dr. Samuel C.C. Ting, Thomas **Dudly Cabot Professor of Physics,** and co-recipient of the 1976 Nobel Prize in Physics, and Gerald N. Wogan, professor of toxicology in MIT's Department of Nutrition and Food Science.

Their election brings to 74 the number of MIT faculty members who have been elected to the NAS.

Dr. Chai-Chaio Lin, Institute Professor and professor of applied mathematics, was awarded the National Academy of Sciences Award in Applied Mathematics and Numerical Analysis for his outstanding contributions to the fields in 1976. He is also a member of the NAS.

Election to the NAS is considered to be one of the highest honors that can be accorded to an American scientist or engineer.

Several MIT alumni were also among the 60 new members of the

They are:

William R. Hewlett, '36, president and chief executive officer of Hewlett-Packard Company, Palo

Martin J. Klein, '48, Eugene Higgins Professor at Yale University.

Burton Richter, '52, professor of physics, Stanford Linear Accelerator Center, Stanford University, Calif., who shared the 1976 Nobel Prize in Physics with Dr. Ting.

AARP Chapter First Meeting Set

Installation of officers and a reception for new members will officially launch the MIT-Cambridge chapter of the American Association of Retired Persons on Sunday, May 15, at 3:30pm in Morse Hall at Walker

The chapter was formed earlier this spring to encourage fellowship among older members of the community, particularly those who are not eligible for the Quarter Century Club. To date more than 200 have enrolled in the new organization.

Membership in the chapter is open to all members of the MIT community and residents of Cambridge aged 55 or older. Chapter dues are \$2 per person annually.

Meetings will be held monthly at 5pm on the fourth Tuesday except in July, August, December and January. Location and topic of each meeting will be listed in the Community Notices section of the Institute Cal-

Officers to be installed at the May 15 meeting will be: President-Robert J. Radocchia, Vice President-Ruth L. Dawson, Secretary-Mary Frances Daly and Treasurer-Max

Other members of the board of directors are: Samuel D. Clark, Miles P. Cowen, Dorothy Donahue, Harold Dryer, Joseph F. Lynch, Francis B. Magurn, Waiter L. Milne, Richard A. Osborne, Zachary Taylor, Joseph S. Mercurio, and Antoinetta Murphy.

Following the installation of officers and the board, refreshments will be served and there will be music for dancing.



CLEAR VIEW SPECIALISTS—The four-story high windows flanking the pillared entrance to MIT's William Barton Rogers Building at 77 Massachusetts Ave., are cleaned of a long winter's grime by William Canty, left, and Mel Burnham, both of Charlestown, employees of Arro Contracting Co., Inc., of Charlestown, MIT's window cleaner since 1947. The building, MIT's main entrance, is named for the founder of the Institute. Phil Mack, who heads Arro, said there are more than 100,000 lights (windows) of glass in Buildings 1 through 11 alone.

President Jerome B. Wiesner has released the following statement to members of the MIT community:

The April 28 issue of the campus newspaper Thursday contained a full page article that many in this community, judging by the letters and telephone calls I and others have received, found extraordinarily offensive and a gross violation of our norms of taste and of regard for privacy. I share this sense of revulsion and am deeply concerned at the evidence of the absence of editorial control at Thursday with respect to matters of taste, possible libel, concern for veracity, and the human sensibilities of others on this campus.

"This act raises serious questions as to the use of the Institute name and facilities by a publication which so flagrantly disregards Institute norms. The identification with MIT tarnishes us all.

"The issue here is primarily not one of freedom of the press but of continued provision of institutional support for a potentially libelous disregard for the privacy of persons in this community. The university, of all institutions, must be in the vanguard both of the protection of privacy and the right to publish, and must act with care in balancing invasion of the former with constraint of the lat-

"One immediate reaction in this case would be to revoke the privilege of Thursday's use of the Institute's name and facilities. Actions are under way through the regular procedures of the Institute, however, to consider the harm done to this community and certain of its constituents. In addition to the review process of the Faculty Committee on Discipline, the Dean for Student Affairs is initiating, through the Association of Student Activities, a review of the status of Thursday as a recognized student activity, which is a precondition for use of the Institute name and facilities.

These actions will proceed. In the end, however, we must rely on a sense of responsibility on the part of those who publish to respect the rights, values, and dignity of the community they seek to inform.'

Visitors will be greeted in the

'World Change' Lectures Concluded

'Short of thermonuclear war itself, (population growth) is the gravest issue the world faces over the decades immediately ahead."-Robert S. McNamara, April 28.

"However well-intentioned, I am convinced that the Administration's nuclear energy policy is a formula for nuclear isolationism."—U.S. Senator Frank Church, May 2.

Talks by Robert S. McNamara, President of the World Bank, and United States Senator Frank Church, Democrat of Idaho, brought to an end MIT's "World Change and World Security" lecture series.

In the series, which began in December, ten world leaders discussed questions of world security in the time frame of the next two decades and in the context of changes they think might develop or be brought about during these decades.

Mr. McNamara, a former Secretary of Defense who has headed the World Bank since 1968, told a Kresge Auditorium audience Thursday night (April 28) that a significant decline in fertility may have at last begun in developing countries. There is an urgent need to accelerate the decline, however, he said, in order to avoid a world of 11 billion people, "a world none of us would want to live in," by the end of the next century.

The decline in fertility in developing countries over the past two decades, Mr. McNamara said, "appears to have been general and widespread. It has occurred in 77 of the 88 countries for which estimates are available.'

(Continued on page 8)

Versator II to Begin Fusion Experiments

VERSATOR II, the newest of MIT's experimental fusion devices, went "on the air" officially Monday, May 2, at an informal turning-on celebration held in Room 36-272.

About 75 persons attended the event, including faculty and staff from the Research Laboratory of Electronics, the MIT Department of Physics, and the Plasma Fusion Center, which provides a focus for fusion work at MIT.

A congratulatory message was sent by the Energy Research and Development Administration, which has pledged additional support to upgrade the machine to higher magnet-

The federal agency is the sponsor of the new machine and also of AL-CATOR, the Institute's larger fusion device in the Francis Bitter National Magnet Laboratory.

Hosts for the VERSATOR celebration were Dr. George Bekefi, professor of physics, and members of his team that designed and built the ma-

Like ALCATOR and other major fusion devices, VERSATOR is of the so-called tokamak design-a doughnut shaped apparatus in which the fusion plasma is contained by a mag-

Although smaller and designed to be operated at lower temperatures and magnetic fields than those of ALCATOR, the new machine provides great experimental versatility -and thus is so named-to allow a wide range of plasma physics experiments.

With the new machine, MIT now has three experimental fusion machines. The third, named RECTOR, allows studies of toroidal plasmas with an elliptical cross-section.

VERSATOR II is an upgraded version of VERSATOR I, a highly sim-(Continued on page 3)

Tony Smith Sculpture Installation Planned

Tony Smith's monumental steel sculpture, For Marjorie (1961)-a recent addition to MIT's Permanent Collection-will be installed at MIT's West Campus on May 11.

The artist will attend an informal celebration on Thursday, May 12, at 4pm around the new work to Austrian pines at the entrance to the Westgate complex. The entire MIT community is invited to attend. In case of rain, the celebration will be held in New House 3 Lounge.

The event will provide a unique opportunity for the MIT community to meet the artist and to exchange responses to the sculpture. Refreshments will be served.

Smith, a patriarchal figure among sculptors of the 1960s and an early proponent of the Minimalist movement, studied at the New Bauhaus in Chicago and was a racticing architect for 20 year before turning to sculpture in 1960. In 1967, at age 55, he had his first one-man show. It established him as mentor and master to a younger generation of artists.

His work clearly reflects interest in the modular principle espoused (Continued on page 8)

Breakthroughs and History Combine at Open House

Breakthroughs in science-like the Alcator project-and glimpses of history—like laboratory equipment used in the World War II development of radar-are two of more than 50 exhibits and events to be explored at Employees Open House on Saturday, May 7, from 10am to 5pm.

More than 5,000 employees, their families and friends are expected to come and see what makes MIT tick at the second biennial event.

House buttons and programs by a core of members of the Open House committee to direct them to whichever activities they find most interesting.

main lobby with balloons and Open

Activities range from movies such as "The Sand Box Derby," record of this year's competition in Introduction to Design (2.70) to "hands on" experience in the cockpit simulator and television studios, "Invisible Forces in

(Continued on page 8)



MIT DRAMASHOP actor Gary Maciag, the director in Pirandello's Six Characters in Search of an Author, tells Susan Morgello, the stepdaughter, how to play a particular scene. Six Characters in Search of an Author, Dramashop's major spring production, will be performed this weekend, Friday and Saturday, May 6 and 7, at 8pm in Kresge Little Theatre. Tickets costing \$2.50 may be reserved by calling Ext. 3-4720.

-Photo by Calvin Campbell

Traditional Eastern Music Lecture/Demonstration Set

Traditional music of China, Thailand, and Indonesia-including a performance by the largest and only all-American Chinese orchestrawill be presented at a lecture/demonstration at 3:30pm on Thursday, May 12, in Kresge Auditorium at

The lecture/demonstration, sponsored by the MIT Music Section, will be open to the public free of charge.

The musicians are 13 advanced students in the Ethnomusicology Program of the Department of Music at Northern Illinois University. They work under the direction of Dr. Kuo-Huang Han, professor of music and director of the program.

They will perform in several different ensembles, describe the instruments, and demonstrate playing technique and the learning process.

For the Chinese orchestra as many as 25 instruments are used to perform chamber combinations and large orchestral works in styles rarely heard on recordings. Among the instruments used will be the pyiba (lute), jeng (16-stringed zither), dyitz (horozontal flute), ellhwa (2-stringed fiddle), sanshyan (3stringed banjo), and suoonah (oboe).

The Lo-Ku Ensemble will perform northern-style parade music using Chinese gongs and drums.

Thai music will be played on khaen (mouth organ) accompanied by khlui (bamboo recorder), saw-u (low fiddle), saw-duan (high fiddle) and punctuated by ching (hand bells) and mong (gong).

The Angklung Ensemble will per-

Citicorp Article

James W. Meyer, program manager at the MIT Energy Laboratory, is the author of an article in the April issue of Solar Age which details solar energy studies made by MIT and ERDA for Citicorp's 914-foot office tower in New York City and explains why the company decided, on economic grounds, to abandon plans to use solar energy.

form Javanese and Balinese tunes on West Javanese-tuned bamboo rattles. Each player shakes one or two rattles and can make just one or two pitches. The resulting music depends on group coordination.

Another ensemble will play fourpitched Balinese Gamelan Angklung music on tone bells and other instruments. The playing requires fast hand movement and damping (silencing one instrument as another is played) skills. Interlocking patterns will be demonstrated.

Players to Present Ionesco's Macbett

Ionesco's Macbett will be presented by the MIT Community Players on Thursday, Friday, and Saturday, May 12, 13, and 14, at 8pm in Kresge Little Theatre at MIT.

The play, an absurd comedy, thumbs its nose at politics, Shakespeare, and the supernatural.

"Superficially it's a funny, funny play. Ultimately, it's not really funny at all," said Danny Gordon, the play's director and a project coordinator in the Clinical Research

Macbett was first produced in France in 1972 and received its first US production with the Yale Repertory Theatre in 1973.

Co-producing the play are Gail Rivest, a secretary in the Department of Humanities, and Owen Deutsch, assistant professor of nuclear engineering in the Department of Nuclear Engineering. Serving on the crew are Len Adleman, an instructor in the Department of Mathematics; Charles Berney, MIT '54, a senior research associate in the Department of Nuclear Engineering; Paul Green, MIT '73, and Ronald Rivest, assistant professor of computer science and engineering in the Department of Electrical Engineering and Computer Science.

Tickets-\$3 or \$2.50 for students with IDs-will be sold in Lobby 10 the week of May 9 and may be reserved by calling Ext. 3-4720.

BPL to Host Shakespeare Ensemble

The MIT Shakespreare Ensemble will perform scenes for a group of about 150 senior citizens at the Boston Public Library at 2pm on Thursday, May 12.

They will present scenes from Shakespeare's Richard III, Troilus and Cressida, and King Lear; Iones-

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co's The Bald Soprano, and Fugard's Hello and Goodbye. All but the first scene are new to the Ensemble's repertoire. Discussion will follow the performance.

The presentation was arranged through the Library's Adult Program. The Ensemble works under the direction of Murray Biggs, assistant professor in the MIT Depart-

ment of Humanities.

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CABLE TV SCHEDULE X3-3625

May 4-May 10

Wednesday, May 4 Channel 8: 9:30-10am

PRISONER'S DILEMMA by Martin Perlmutter.
POLITICS & TELEVISION #9 With
Ed Diamond (R)
RHETORIC & JOURNALISM #8 with Ed Diamond (R)
24-30 FPS. With Ricky Leacock.
Live from the Film Section
NOTES ON THE 'VISION By Mike
Moser. Live

4-5pm

12noon-1pm

MIT PROFILES With Nancy Lukitsh and guest Paul Samuelson.

Thursday, May 5 Channel 8:

BASEMENT VIDEO PRESENTS BASEMENT VIDEO PRESENTS
(R)
IMMUNITY OF MYELOMA
TUMORS by Dr. Herman Eisen,
Professor of Immunology, MIT.
Live from Harvard University.
POLITICS & TELEVISION #10
With Ed Diamond. Live from 9-350.

7:30-8:30pm

RHETORIC AND JOURNALISM
#9 With Ed Diamond. Live from BASEMENT VIDEO PRESENTS

Friday, May 6 Channel 8: 9:30-10:30am

(time approx.)

BASEMENT VIDEO PRESENTS Live from 9-355.

Tuesday, May 10 Channel 8: 11am-12noon

1-2pm

POLITICS & TELEVISION #10 With Ed Diamond (R) BASEMENT VIDEO PRESENTS RHETORIC & JOURNALISM #9

With Ed Diamond (R)
BASEMENT VIDEO PRESENTS

INSTITUTE **NOTICES**

Announcements

Annual Competition for Overseas Study-Approximately 550 awards to 50 countries available for 1978-79 academic year for graduate study or resrch abroad and professional training in creative and performing arts. Grants provided under terms of Mutual Educational and Cultural Exchange Act of 1961 (Fulbright-Hays Act) and by foreign governments, universities and private donors. Applicants must be US citizens, generally hold bachelor's degree or equivalent, and must, in most cases, be proficient in language of host country. Except for certain specific awards, candidates may not hold the PhD and are ineligible for a grant to a country if they have been doing graduate work or conducting research in that country during the academic year 1977-78. Creative and performing artists are not required to have a bachelor's degree, but must have 4 years professional study or equivalent experience. Social work applicants must have at least two years professional experience after Master of Social Work degree; candidates in medicine must have an MD. Selection based on academic and/or professional record, validity and feasibility of proposed study plan, language preparation and personal qualifications. Preference given to those who have not had prior opportunity for extended study or residence abroad. Contact: Yvonne Littlewood, Graduate School Office, Rm 3-136. Deadline: Sept 19.

Attention Foreign Students-If you plan to travel outside the US during the summer, please come to the Foreign Student Office as soon as possible to obtain the appropriate certificate of eligibility in order to re-enter the

Class of '81-Freshman admitted lists (\$4 per copy) and mailing labels (\$5 per copy) ordered before Friday, May 13, will be available Friday, May 27. Contact FAC Office, Rm 7-103,

Freshman Advisors-Needed for the 1977-78 academic year to assist freshmen with various academic and non-academic decisions and situations they will face. If you'd like to get to know a few freshmen well and feel you can offer something to them in their adjustment to MIT, contact Freshman Advisory Council, Rm 7-103, x3-6771 for information.

MIT Furniture Exchange-Open Tues & Thurs, 10am-2pm, 25 Windsor St, to buy or sell used furniture.

Summer Session—Registration material must be returned to the Registrar's Office, Rm E19-335 by Wednesday, May 11. \$5.00 fine on any material received after May 11.

New UROP Listing

Department of Civil Engineering

This project is concerned with the analysis of travel behavior data currently being collected in Cairo, Egypt, as a portion of a Technology Adaptation Program project studying transportation options for the Cairo metro area. A junior or senior level student with knowledge of hardware systems, and in particular ICL-type systems preferred. This would in-

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volve 10 hours per week, to start immediately and continue for an indeterminate period of time, including at least June 15 through August 15. Knowledge of Fortran essential. Student will be working jointly with a graduate student from the University of Cairo.

Contact Tom Brigham x3-1976 (leave message

Capron Lighting Co. Inc. Needham Heights Capron designs, builds, rents and arranges lighting for theatres, films, discos, television and rock bands. They are interested in having an undergraduate work on the design of new circuits, new lighting equipment that they would then manufacture. The specific project will be based on the interests of the students involved. Pay is available.

UROP at Wellesley

Wellesley College has support (\$900 for the summer) available to MIT students interested in doing science research with Wellesley Col-

Contact Stan Hudson at UROP

Department of Nutrition and Food Science

An investigation is centering on the influence of (-)- hydrosycitrate on acetylcholine synthe sis in the brain. (-)- hydroxycitrate is an inhibitor of citrate cleavage enzyme which has been shown to depress fatty acid synthesis and appetite. This compound is therefore considered as a potential drug for the treatment of obesity and hypertriglyceridemia. Participation in this program involves handling of rats and mice, sampling of brains and assaying acetylcholine in the samples. It is expected that the students will be biochemically-oriented and have some lab experience. This is a non-smoking lab.

Contact Dr. H. Brunengraber, x3-6783, Rm

Graduate Studies

Health Care Industry Dissertation Grants

The Pharmaceutical Manufacturers Association is offering doctoral dissertation research grants of \$2,500 to encourage original research in areas relating to the socioeconomic aspects of the health care industry. Applicants must be doctoral degree candidates pursuing a degree in economics or related social and administrative sciences. Deadline: July 15. Contact: Graduate School Office, Rm 3-136, for

further information.

Faculty Opportunities

Fulbright—Hays Awards Abroad

The Council for the International Exchange of Scholars has announced the university teaching and advanced research opportunities abroad for 1978-79 under the Fulbright-Hays Act. Deadlines: June 1 and July 1, depending upon the country. Contact: Graduate School Office, Rm 3-136, for

further information.

Other Opportunities

Project AHEAD

Project AHEAD of Chinatown Health Clinic in New York City is sponsoring a summer program starting in mid-June. This eight-week long program is designed for Asian-American college students interested in health careers. Project AHEAD is a federally funded program with an emphasis to develop interest among future health professionals to serve in underserved communities like ours. The summer program is a stipend internship program which aims to expose students to their respective career interests on the one hand and to get them involved in community health activities on the other. Contact the Preprofessional Advising and

Education Ofice, Rm 10-186, x3-4158.

Student Jobs

On Campus: 24 Coffeehouse Manager, Ordering and personnel. Opening immediately. For rest of term, also for summer and terms to come. 8-10 hours per week, \$35 per week plus any hours taken at \$2.55/hr. Contact Student Center Committee, x-3196

Off Campus: Babysitting in exchange for room and board. Mostly evenings, possibly 1 weekend day, for a young infant. Contact Mrs. Stein, 876-7143. Near Harvard Square.

House managers (4) for a community residence for former mental patients. Begin June 1. Hours: 4 day-3 day rotation, mainly nights. Salary-\$5000. Contact Task Oriented Communites in Waltham, 894-0404 or 894-9297.

Rouffa Furniture Co., needs someone as a general worker in their furniture store. Must be a driver. Part time or full time. Rouffa Furniture Company, 543 Cambridge Street, Eas Cambridge, 876-7536.

For information about other student jobs. visit the Student Employment Office, Rm

Club Notes

MIT Archery Club**-Shooting practice Sun, 10am, Rockwell Cage.

MIT Ballroom Dance Club*—All invited to join in the fun. You too can tango. Info or lessons by phone: Fern Crandall, x5-8534 Dorm. Volun-

MIT Bridge Club*-ACBL Open pairs duplicate bridge. Thurs, 7pm, Stu Ctr Rm 407.

MIT/DL Bridge Club**-ACBL Duplicate Bridge. Tues, 6pm, Stu Ctr Rm 473.

MIT Chess Club*-Informal speed chess. analysis, etc., every Sat, 1pm, Stu Ctr Rm 407. Info: Brad, Burton Rm 141G.

MIT Comic Book Club*-Wkly meetings, Wed, 7:30-9pm, Rm 7-102.

Gays at MIT*-(formerly SHL) Coffeehouse/meeting, first Sunday each month, 5pm, Gay Lng (Walker Rm 50-306). Everyone welcome. Info or just an ear listen: x3-5440, or

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

MIT Madrigal Society**-Group singing, primarily English madrigals. All voices (soprano, alto, tenor, bass) welcome, come add yours. Tues, 7:30-9:30pm, Rm 4-160. Brian Wibecan, Nw Hse 4-312, x5-7570 Dorm.

ing for intercollegiate competition & self-defense. Given by 6th degree black belt. Thurs, 8pm; Fri, 6pm; Sun, 10am, duPont T Club Lng. Info: x3-7220

MIT Shotokan Karate Club**-Rigorous train-

MIT Space Habitat Study Group*—Interdisci-plinary studies on space colonization. Thurs, 7pm, Rm 37-252.

Tae Kwon Do Club*-Workouts on Tues, T-Club Lng (W31-125), & Thurs, W31-225, 6-7pm. Info: Jim Cole, x3-3283.

Tech Model Railroad Club-Meetings, Sat, 4pm; Operating Sessions, Fri nights; Rm 20E-214, x3-3269

MIT Tiddlywinks Association*—Meetings Thurs, 8pm, Stu Ctr 473.

MIT Word Games Club*—Meetings (Scrabble games) Mon, 7pm, Rm 1-134. Bring sets. Info: Jeff Jackson, 492-6983.

Religious Activities

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

Hillel Services*-Orthodox: Fri, sundown, Rm 50-005: Sat. 8:30am, Rm 10-105.Traditional/Egalitarian: Sat, 10am, 312 Memorial Dr (Religious Counselors Bldg). Reform: Fri, 7:30pm, Chapel.

You are invited to the weekly Interdenon inational worship and holy communion, Wed, 5:05pm, Chapel. Get-acquainted supper follow-

Prayer Time**—Lunch hour Bible classes led by Miriam R. Eccles. Fri, 1-2pm, Rm 20E-207, prayer, music, guest speakers and refreshments. All welcome

Protestant Worship Service*-Worship, prayer, praise & teaching. Sun, 10:45am, Chapel. Coffee, donuts & fellowship following. MIT Seekers-Group of students will meet at

mick to attend services at Park St Congregational Church. Tech Catholic Community*—Mass Tues & Thurs, 5:05pm; Fri, 12:05pm; Sun, 9:15am,

9:55am & 4:55pm each Sun in front of McCor-

12:15pm; all in Chapel. United Christian Fellowship*-Fellowship meeting Tues, 6:30pm, Rm 1-236, a time of praise, prayer, testimony and teaching. Everyone welcome. Contact: David Hoicka,

MIT Vedanta Society*-Meditation and discourses on the Gita by Swami Sarvagatananda, of the Ramakrishna Vedanta Society of Boston. Fri, 5:15pm, Chapel.

Echoes

50 Years Ago

Dr. Samuel C. Prescott '94, head of the Department of Biology and Public Health was elected President of the Technology Alumni Association. Internationally known for his work in biology, Dr. Prescott specializes in the industrial field.

40 Years Ago

The Intrafraternity Council dance will feature Benny Goodman and his orchestra at the Hotel Statler ballroom.

Three hundred persons have signed a petition protesting the Institute's acceptance of an invitation to attend the two hundredth anniversary celebration of Goettingen University in Germany. The petitioners feel that this gala will turn into a meeting for the dessemination of Nazi propaganda as did a similar celebration in Heidelberg a year ago.

25 Years Ago

Tech sailors were victorious over Harvard in the fifth annual competition for the Harvard-Tech trophy. The event was witnessed by visitors to the Institute's Open House.

Prepared by Marcia Conroy, MIT Historical Collections, x4444.

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trestently premiered by the BSO. at Disneyworld's "Mainstreet, USA

Chamber Players to Give Final Concert May 10

The MIT Chamber Players will give the final concert of their 1976-77 season at 8pm, Tuesday, May 10 in Kresge Auditorium. The concert will be open to the public free of charge.

The concert will include Stravinsky's Pastorale for Violin and Wind Quartet (1934), Purcell's King Arthur (1691), Gabrielli's Canzona per sonare, No. 1 (1608), Stravinsky's Concertino for 12 instruments (1952 version) and Adagio for Clarinet and String Quartet (1833) attributed to Wagner. Following intermission the Players will perform Schubert's Octet for Winds and Strings in F, Op. 166 D803 (1824).

Chamber Players concerts give MIT students an opportunity to perform alongside young, professional musicians from the Boston area, members of the MIT music faculty, alumni, and staff.

Violist Marcus Thompson, associate professor of music in the MIT Department of Humanities, who formed the Chamber Players in 1974 and serves as group director, will conduct the two works by Stravinsky. The rest of the music will be played without conductor.

The program was selected for the wide variety of instruments used. Stravinsky's Pastorale for woodwind quartet and violin solo

French Art Songs In Chapel Concert

A concert of French art songs will be performed by Vincent Ricento, baritone, and Thomas Zajkowski, pianist, at 8:30pm on Wednesday, May 4, in the MIT Chapel.

The concert, sponsored by the French Section of the MIT Department of Humanities, is open to the public free of charge.

The program will include songs by Cherubini, Fauré, Debussy, Duparc, Hahn, Poulenc, and Satie.

Mr. Ricento received a graduate degree from the New England Conservatory of Music and has continued his studies in the US and abroad. He has appeared in many opera productions in Boston, Philadelphia, Salzburg, and St. Jean de Luz. His most recent recitals have included the first American performances of several works.

Mr. Zajkowski received the master's degree from the New England Conservatory of Music and then studied with Margaret Chaloff and Byron Janis. He has recorded the complete keyboard works of Cherubini. Radio broadcasts in Boston, New York, and Amsterdam have carried some of the recordings. He has given many recitals and last summer played with the Orchestre du Capitole de Toulouse in France at the Academie Internationale Maur-

Harbison Takes Part in Panel On Sessions

Composer John Harbison, associate professor of music at MIT, participated in a recent panel discussion of Roger Sessions' cantata, When Lilacs Last in the Dooryard Bloomed.

The Boston Symphony Orchestra (BSO) sponsored the discussion as prelude to their performances of the work in late April. Other panelists were Gunther Schuller, president of the New England Conservatory; Michael Steinberg, BSO director of publications; Justin Kaplan, noted Whitman expert, and Fred Lerdahl, a composer who teaches at Harvard. They gave an introduction to the Sessions score, a setting for chorus, soloists, and orchestra of Whitman's

The panel was part of a week-long tribute to Sessions who is celebrating his 80th birthday this year. Sessions attended the panel, received the Horblitt Award from Boston Symphony Trustees and an honorary degree from Boston University, and supervised the BSO performance and recording of his cantata.

Professor Harbison published an article on Sessions' Montezuma last spring, and his composition Diotima was recently premiered by the BSO.

will be performed by Janet Packer, violin, Wellesley '70; Nelson Gore, oboe; Carl Schlaikjer, English horn, MIT '66 with a graduate degree in chemistry; Stephen Umans, clarinet, a research associate in electrical engineering and computer science, and Tom Stephenson, bassoon, MIT '70.

Purcell's King Arthur and Gabrielli's Canzona per sonare, two early works for brass, will be performed by Robert Pettipaw, trumpet, director of the MIT Brass Ensemble; Herbert Stortz, trumpet, a sophomore from Boston; Mark Nowitzky, trombone, a sophomore from Simi Valley, Calif., and Esther Horwich, trombone, a senior from Alexandria, Va. Mr. Stortz, Mr. Nowitzky, and Ms. Horwich, all members of the MIT Brass Ensemble, are all majoring in electrical engineering and computer science.

Stravinsky originally composed Concertino in 1920 for string quartet. He reorchestrated the work in 1952 for 12 instruments. The wind quartet, violin, and brass quartet of the first part of the program will combine for this work and be joined by second bassoon, Alice Barkan, a junior in biology from Ardsley, N.Y.; flute, Kenneth Weiner, a junior in physics from Miami, Fla., and cello, Mark Sim-

Adagio for Clarinet and String Quartet, attributed to Wagner, is an early work. Written for woodwind solo with string quartet, it is almost the complete opposite of the program's first piece, the Pastorale, written for violin solo with woodwind quartet. Joining Mr. Umans, clarinet, will be Ms. Packer, violin; Arthur Hu, violin, a freshman from Reston, Va., and co-concertmaster of the MIT Symphony Orchestra; David Allcott, viola, a sophomore from West Allis, Wis.; Mr. Simcox, cello, and Dewey Dellay, bass, a student at Berklee College of Music and member of the MIT Symphony Or-

Schubert's Octet for Wind and Strings in F, the most famous piece on the program, is probably, at 65 minutes of playing time, the longest composition in chamber music repertoire. The six musicians who play the Wagner Adagio will also play the Schubert Octet, being joined by Mr. Stephenson, bassoon, and James Impara, French horn, a junior in architecture from Rockville, Md.

Epstein Receives Artists Fellowship

Dr. David Epstein, MIT professor of music and conductor of the MIT Symphony Orchestra, has received a \$3,000 Artists Fellowship in Music Composition from the Massachusetts Arts and Humanities Foundation.

He was one of eight Massachusetts composers selected from 115 applicants by a panel of three out-of-state composers. Selections in the blind competition were based on quality of work submitted. The grant is unrestricted and without time constraint.

or Epstein has composed commissioned works for the New York State Council for the Arts, the Boston Symphony Orchestra, and the Philadelphia Quartet. He is currently composing a Cello Concerto for Robert Sylvester.

The MAHF's Artists Fellowship Program awards about 55 annual fellowships to creative artists in 11

Logs a Hit In Florida

The MIT Logarhythms recently returned from a successful 10-day concert tour in Florida.

They performed for students at seven high schools in Tampa and Miami, staying after each performance to answer questions about MIT. They met many alumni when they provided entertainment for the annual dinner of the MIT Tampa Bay Alumni and for an alumni party held for prospective freshmen from the Miami area.

Highlight of the tour was a concert at Disneyworld's "Mainstreet, USA".

'The Trip' Is Back

With summer coming on, thoughts of vacations come to the fore.

To help them along, the Quarter Century Club and the Community Service Fund are this week offering "The Trip," a lottery with trips for two to Paris and the Alps as first prize and to Peru as second

Chances-at \$1 each or three for \$2-are available daily from 11:30am to 1:30pm in the lobbies of Buildings 7. 10, E19, Walker and Lobdell. They will also be sold from 11am to 2pm at Employees Open House on Saturday, May 7, in Lobby 7.

The drawing will be held Saturday in the Sala de Puerto Rico at approximately 3pm during the Employees Open House reception.

Carter Energy Plan Good For Nation, NEEMIS Says

A preliminary analysis by a computer-based energy management and modeling system at MIT indicates that President Carter's energy conservation plan can be good for the nation and for New England.

Dr. John Donovan, associate professor at the Sloan School of Management and director of MIT's New England Energy Management Information System (NEEMIS), and Dr. Richard Tabors, NEEMIS economist, analyzed the potential effects of the Carter plan Thursday following the President's address to Congress Wednesday night. The NEEM-IS system was developed in 1973, under the sponsorship of the New England Regional Commission, to assist energy policymakers in New England in dealing with problems brought on by various aspects of the energy crisis.

The President's plan, the preliminary analysis showed, has the poten-

When MIT's new tokamak fusion device, VERSATOR II, officially went "on the air" Monday, May 2, hosts for the informal celebration to mark the event included Dr. George Bekefi, professor of physics, and leader of the team that designed and built the machine, and Alan S. Fisher, a graduate student from Toronto, Canada, and a member of the team.

Versator II to Begin **Fusion Experiments**

plified tokamak configuration developed by Dr. Robert J. Taylor, presently at the University of California at Los Angeles.

Members of Professor Bekefi's team include Peter Dandridge of Atomics Limited; Edward W. Fitzgerald, Ivan Mastovsky, John J. McCarthy, Anthony Pastori and Kenneth Rettman, MIT engineering staff members; Alan Fisher, Stephen Knowlton, David B. Laning, Alan Palevsky, Burton Richards, and David S. Stone, graduate students; and Kirk A. Frey, Manuel Gonzalez, Jonathan B. Green, and David S. Stone, undergraduates; and Ady Hirschcovitch, a postdoctoral fellow.

Research to be conducted with VERSATOR II will concentrate in particular on methods of heating the fusion fuel. In this work, the group will work closely with the ALCATOR team and also with the Princeton Plasma Physics Laboratory.

Helen W. Slotkin Appointed To Institute Archivist Post

Helen Willa Slotkin, former head of the Special Collections Department of the University of Cincinnati Libraries, has been appointed Institute Archivist in the MIT Libraries, effective May 1, Jay K. Lucker, director of Libraries, has announced.

The position of Institute Archivist becomes full-time with Ms. Slotkin's appointment. Professor E. Neal Hartley was MIT's first Institute Archivist, dividing his time between that position and teaching from 1966 to December 1976, when he stepped down to return to teaching full-time in the Department of Humanities. Under his direction the Institute Archives developed significantly as a depository for MIT's records and as a resource for the history of 19th and 20th century technology.

In her new position, Ms. Slotkin will administer the Institute Archives and MIT's collections of manuscripts, personal papers, oral history, and rare books. She will work closely with members of the faculty to promote use of the collections in educational programs. She will identify and acquire new collections, and implement Institute policy for the collection and preservation of official records. She will also develop a policy manual covering access to archival material.

Ms. Slotkin was music librarian at

the Brookline Public Library and at Hilles Library of Harvard University before going to the

University Cincinatti braries in 1972 assistant as archivist. She became head of the Special Collections De-

in Ms. Slotkin partment 1973 with responsibility for Cincinatti's archives, rare books, manuscripts, and related materials.

Among the major collections she was responsible for were the University Archives, the Archives of Medical History including the papers of Dr. Albert Sabin, the Urban Studies Collection, and a regional collection of Ohio government archives. She organized the archives of the Ohio Mechanics Institute, including records from its founding in 1828.

Mr. Slotkin received the BA degree from Queens College, City University of New York, and the MLS degree from Simmons College.

She is a member of the Society of American Archivists and its College and University Archives Committee. She is also active in the Society of Ohio Archivists.

- Provide better mechanisms to secure equalization of the price of energy throughout the country. (For example, natural gas and oil prices in New England are heavily dependent on higher foreign prices because 90 percent of New England energy is petroleum based, with 70 percent of that imported. Raising prices of internal gas and oil will help New England achieve parity with the rest of the country.)

Increase the price of energy gradually, thus easing the economic and social impact of the inevitable price increases that will occur as petroleum resources are depleted.

Accelerate the introduction of new techniques through the price mechanisms in the plan.

Encourage conservation through the same mechanisms.

Drs. Donovan and Tabors cautioned, however, that vet-to-be-specified rebate plans could detract from some of these benefits for New England if the redistribution of funds is not carefully thought out.

The scheme may also have an unknown effect on supplies of gas and oil, they added.

They also had these comments on specific components of the plan, based on their computer study:

Natural Gas-Deregulation of natural gas and hence, increasing the price, could be a good action for New England and for the country. Among the benefits: More resources will be discovered; more gas will be available. New England may receive an added benefit compared to other regions because it may be less dependent on the current low price, regulated gas that will have sharp price increases under the plan.

Coal-The idea of letting prices of presently inexpensive but exhaustible forms of energy rise and encouraging the use of coal is sound. For coal to be of use in New England, however, serious attention must be given to the railroad capacity since the railroad may be the essential link between coal producers and utilities. At present, the rail industry faces serious problems that may constrain its ability to deliver coal to New England. Overall, in order for coal to be a viable alternative in New England, four factors must be addressed: technology, quantity and quality of resources, disposal of ash, and transportation and distribution.

Insulation (and other homeowner energy saving measures)-The idea of the Carter program to encourage conservation in the home is sound. Twenty percent of all energy consumed in New England, and 10 percent in the United States, is consumed in home heating.

The payback for installation of such energy savers as storm windows, storm doors and insulation will be one to two years less than it would have been without the Carter plan. What is needed for public policy in New England is information as to what proposals are the best and most effective for the region.

Drs. Donovan and Tabors conclude that New England may serve as an energy early-warning system for the rest of the nation.

"New England is furthest from sources of United States coal production and is projected to remain with a reliance on foreign oil. It is closest to foreign petroleum and furthest from United States sources of energy.

"It will be the least secure region under any United States energy sup-

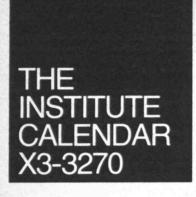
"Hence, the New England region's energy security problems are even more acute and sharply focused than the other United States regions, and its high cost of energy focuses attention on the economic and social problems of energy source transi-

"For these reasons, energy problems facing New England will, in many respects, be the forerunners of those facing other regions.'

Thornburn Honored

Dr. David Thorburn, associate professor of literature in the MIT Department of Humanities, has been awarded a 1977 Rockefeller Foundation Fellowship in the Humanities. In this third annual competition, more than 1300 young men and women competed for 35 fellowships.

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May 4 through May 15

Events of Special Interest

First Annual John Wulff Lecture Series** — Professor Wulff will address undergraduate students on Haynes Stellite 21 — the History of an American Alloy. Thurs, May 5, 4pm, Rm 6-120. Refreshments 3:30.

Building Tour: Boston Area Women Architects* — Bus trip to contemporary and historical buildings designed by women, and discussion with a woman architect. Sun, May 8, 12:45-5pm, Departing from Hayden Gallery (Hayden Gallery will be open from 11am-1pm). Advance registration required. Info: x3-4400, \$3.50.

Gay Warner Memorial Lecture* — Alice F. Emerson, president of Wheaton College, Norton, MA will speak on Have Women Outgrown the Liberal Arts? Introduction by Chancellor Paul Gray. Discussion following talk. Sponsored by Women's Forum. Wed, May 11, 6pm, Stu Ctr Mezzanine Lng. Refreshments 5:15.

Awards Convocation* - Thurs, May 12, 11am, Kresge Little Theatre.

Seminars and Lectures

Wednesday, May 4

Bond Graph Modelling and Simulation of Large-Scale Dynamic Reaction-Transport Systems in Chemistry and Biology** — Henry M. Paynter, mechanical engineering. Special Lecture Series. 11am, Rm 3-343.

Homogeneous Nucleation: Theory, Experiment & Application* — J.L. Katz, Clarkson College of Engineering. Chemical Engineering Seminar.11am, Rm 66-110. Coffee available.

Coherent Excitation of Atoms by Charged Particles* — Herman Robl, US Army Research Office, Research Triangle Park, NC. Modern Optics & Spectroscopy Special Seminar. 11am, Rm 36-428. Coffee 10:30am.

Mixing Processes Along the Continental Shelf Between Cape Cod and Cape Hatteras* — Hugo Fischer, physical oceanography, WHOI. Oceanography Sack Lunch Seminar. 12n, Rm 54-915.

A Perspective on Solar Energy* — M. McKinstry, G. Energy Assessment Group Seminar. 12n, Rm 12-142.

Three Present Dangers to International Peace* — Lord Caradon, former Minister of State for Foreign & Commonwealth Affairs, UK Representative to the UN. CIS & System Dynamics Seminar. 12n-2pm, Rm E53-482.

Laser Gyroscopes* — Irl Smith, Raytheon. EECS Optics Seminar. 1pm, Rm 39-500.

The Coherent Flame Model for Turbulent Diffusion Flames* — Frank E. Marble, fluid mechanics & jet propulsion, California Institute of Technology. Aero/Astro Seminar. 3pm, Rm 37-212. Coffee preceding seminar, Rm 33-222.

Dynamic Measurements of Middle Ear Mechanics* — William T. Peake, electrical engineering. Biomedical Engineering Center for Clinical Instrumentation Seminar. 4pm, Rm 4-253. Refreshments 3:45pm. Note room change.

Newly Discovered Physiologic Effects of Linoleic Acid* — Dr. Antoine J. Vergroesen, Unilever Corporation, Netherlands. Nutrition & Food Science Seminar. Bldg 2, 665 Huntington Ave., First Floor Nutrition Seminar Room, 4pm.

The Toroidal Fusion Reactor Blanket Design Using Liquid Metal as Coolant* — J. Chao, G. Nuclear Engineering Seminar. 4pm, Rm NW12-222.

Ultrametamorphism and Granitoid Genesis — the Origin of Granites*
— B. W. Chappell, Australian National University. Earth & Planetary Science Colloquium. 4pm, Rm 54-915. Tea 3:30.

Waste-Water Technology and the Evolution of State Regulation: A Retrospective Analysis* — Joel Tarr, history, technology & urban affairs, Carnegie-Mellon University. Technology Studies Seminar. 4pm, Rm 20D-205. Coffee 3:30pm.

The Country's Energy Dilemma* — Henry Kendall, physics. Undergraduate Physics Colloquium. 4:15pm, Rm 4-339. Social hour follows.

Work in Progress* — Rosamund Purcell, photographer. Creative Photo Lab Lecture and Slides. 4:30pm, Rm W31-310.

Thursday, May 5

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Regulatory Factors in Prostaglandin Biosynthesis* — Dr. A.J. Vergroesen, Unilever Research, Vlaardingen, The Netherlands. Nutrition and Food Science Seminar. 11am-12n, Rm 66-114.

Technical Developments in Laser-Induced Fusion* — K. Boyer, Los Alamos Scientific Laboratory. RLE & the Spectroscopy Laboratory seminar on Modern Optics & Spectroscopy. 11am-12n, Rm 66-110. Coffee 10:30am.

Space Flight Via Maxwell's Equations: Research Directions: Where to, and How* — Gerard K. O'Neill, Jerome Clarke Hunsaker Professor of Aero/Astro. Aero/Astro Seminar. 3pm, Rm 37-252.

The Upper Atmosphere of Venus from Mariner 10* — Shailendra Kumar, Jet Propulsion Laboratory, California Institute of Technology.

Earth & Planetary Sciences Colloquium. 3pm, Rm 54-611.

Darwinism, Intellectual History and the Growth of Knowledge** — Marjorie Grene, philosophy, University of California, Davis. Darwinism and Culture Seminar sponsored by Technology & Culture Seminar and Cambridge Humanities Seminar. 4-5:30pm, Rm 9-150.

Chemical and Geochemical Characterization of a Petroleum Crude Oil*
— Jose M. Torradas, G. Seminar in Analytical Chemistry. 4pm, Rm 8-105.

Community Organizing* — Fred Ross, organizer for United Farmworkers (UFW) Union. Tech Catholic Community Lecture. 7:30-8:30pm, Rm 4-231.

Stochastic Optimal Control Theory* — Dimitri P. Bertsekas, University of Illinois at Urbana-Champaign. Control and Communications Seminar. 4-5pm, Rm 39-500.

Socialism in the Serengety: Man & Mammals in Tanzania* — Harold Hayes, former Editor-in-Chief of Esquire. New Directions for Development in the Third World Series, Seminar on International Students and Participation in Development. 5-6:30pm, Mezzanine Lng. Stu Ctr.

Community Organizing* — Fred Ross, organizer for the United Farmworkers (UFW) Union. Tech Catholic Community lecture. 7:30-8:30pm, Rm 4-231.

Parallax, Two Perspectives on Photography* — Robert Heinecken, photographer. MIT Creative Photography Gallery & Polaroid lecture and slides. 8pm, Rm 26-100.

Friday, May 6

Bond Graph Modelling and Simulation of Large-Scale Dynamic Reaction-Transport Systems in Chemistry and Biology** — Henry M. Paynter, mechanical engineering. Special Lecture Series. 11am, Rm 3-343.

Current Topics in Air Cargo Operation and Management* — John Mahoney, Vice President, Seaboard World Airlines. Center for Transportation Studies Luncheon/Seminar. Luncheon, 12n, \$1, lecture, 12:25pm, free, Stu Ctr Mezzanine Lng.

Investigation of the Analogies Between Viscometric and Linear Viscoelastic Material Functions of Polystyrene* — Y. Yasuda, G. Chemical Engineering Seminar. 2pm, Rm 66-110.

Ecosystems Research: Dynamics, Measurement and Control* — Alician V. Quinlan, Arthur D. Little Assistant Professor of Environmental Sciences & Engineering. Mechanical Engineering Seminar. 3pm, Rm 3-133. Coffee 4pm, Rm 1-114.

How to Evaluate Airline Jets for Profit Potential* — Asad Y. Nasr, general manager, Middle East Airlines. Flight Transportation Lab Seminar. 3pm, Rm 33-422.

Partical Beam Fusion Research at Sandia Laboratory* — Georld Yonas, Sandia Laboratory, Albuquerque, NM. MIT Fusion Center — Plasma Dynamics Seminar. 3:30pm, Rm 36-261. Refreshments 3pm.

Sweetener Sector within the Agribusiness System** — William Hale, Food and Agribusiness Section, Arthur D. Little. Nutrition & Food Science Seminar. 3:30pm, Rm 16-134.

The Only Real Probabilities in Quantum Mechanics* — Nancy Cartwright, University of Pittsburgh. Philosophy Department Seminar. 4pm, Rm 37-212.

The Two-Dimensional Electron Gas in Silicon Inversion Layers* — S. James Allen, Jr., Bell Laboratories, Murray Hill, NJ. Center for Materials Science & Engineering Colloquium. 4pm, Rm 9-150. Refreshments 3:30pm.

Monday, May 9

Bond Graph Modelling and Simulation of Large-Scale Dynamic Reaction-Transport Systems in Chemistry and Biology** — Henry M. Paynter, mechanical engineering. Special Lecture Series. 11am, Rm 3-343.

Fortification: Retrospective and Prospective View* — Dr. Henry Sebrell, Medical Director, Weight Watchers Inc. International Nutrition Policy & Planning Program Seminar. 3pm, Rm 26-414.

Chronic Electrical Stimulation of the Cerebellum for Epilepsy & Human and Animal Studies* — Sid Gilman, MD, Neurology, College of Physicians and Surgeons of Columbia University. Harvard-MIT Rehabilitation Engineering Center Seminar. 4pm, Rm 37-212. Coffee 3:30pm.

Homogeneous Catalysis* — Carol Meyer, chemistry. Undergraduate Chemistry Seminar. 4pm, Rm 4-231. Refreshments preceding, Rm 6-321.

Unstable Spiral Modes in Disk Galaxies* — Yue-Ying Lau, mathematics. Applied Mathematics Colloquium. 4pm, Rm 2-338. Tea 3:30, Rm 2-349.

Statistical Inference on Stationary Random Fields* — Wallace Larimore, The Analytic Sciences Corporation. Control and Communications Seminar. 4-5pm, Rm 39-500.

Women in Architecture* — Winifred Freeman, architect, Washington DC. Monday Lecture Series. 5:15pm, Rm 7-431.

Tuesday, May 10

Teaching and Learning About Architecture* — Panel discussion. Alicra Kreimer, urban studies and planning, Ann Vernex-Moudon, architecture, and women students. 12n-2pm, Rm 9-451.

The Phonological Consequences of Syllable Structure* — Dan Kahn, Bell Labs. Linguistics Colloquium. 12n, Rm 36-155.

On the Modeling of Coherent Structures in Boundary Layer Turbulence* — Marten Landahl, aero/astro. Aero/Astro Seminar. 3pm, Rm 33-206. Coffee preceding seminar, Rm 33-222.

Predicting the Effect of Architectural, Acoustical Treatment on a Large Industrial Facility* — Bill Hanson, Senior Research Assistant, Liberty Mutual, Hopkinton, MA. Applied Mechanics Seminar. 3pm, Rm 3-133.

Screening for the Early Detection of Cancer* — Arthur Albert, mathematics, Boston University. Math & Statistics Seminar. 4pm, Rm 2-338. Coffee & tea 3:30pm, Rm 2-349.

Energy Transfer in SF₆* — Donald S. Frankel, Jr. Naval Research Laboratory. Seminar in Physical Chemistry. 4pm, Rm 4-370. Coffee 3:45pm, Rm 6-321.

External Pneumatic Compression for the Prevention of Deep Venous Thrombosis* — Roger Kamm, Research Assistant, mechanical engineering. Fluid Mechanics Laboratory Seminar. 4pm, Rm 1-203. Coffee 3:50pm.

Upper Atmosphere Studies by High-Powered Radar Part II* — John V. Evans, Lincoln Lab and Senior Lecturer, meteorology. Meteorology Seminar. 4pm, Rm 54-100. Tea & coffee, 3:30pm, Rm 54-923.

Deuterium and Hydrogen in the Local Interstellar Medium* — Andrea Dupree, Center for Astrophysics. Astrophysics Colloquium. 4:15pm, Rm 37-252. Coffee 3:45pm.

Mutagenic Specificity in the Laci Gene of E. Coli* — Dr. Jeffrey Miller, University of Geneva, Geneva, Switzerland. Biology Colloquium. 4:30pm, Rm 6-120. Coffee 4pm, Bldg 56, 5th floor vestibule.

Wednesday, May 11

Bond Graph Modelling and Simulation of Large-Scale Dynamic Reaction-Transport Systems in Chemistry and Biology** — Henry M. Paynter, mechanical engineering. Special Lecture Series. 11am, Rm 3-343.

The Steady State Solution of a Topographically Forced Quasi-Geostrophic Model* — Eugenia Rivas, meteorology. Oceanography Sack Lunch Seminar. 12n, Rm 54-915. Bring lunch, coffee available.

Grass Roots Support of Nuclear Energy in Small Communities* — D. Dube, G. Energy Assessment Group Seminar. 12n, Rm 12-142.

Parsing Structures and Constraints on Transformations* — Janet Fodor, University of Connecticut, Storrs. Linguistics Colloquium. 1:30pm, Rm 66-168.

Engineering Problems with Tethered and Untethered Underwater Research Vehicles* — Edwin A. Link, Vice President, Engineering Harbor Branch Foundation, Inc. Fort Pierce, FL. MIT Sea Grant Program Seminar. 2pm, Rm 1-236.

Inertial and Finite Beta Effects in Tokamaks* — Jay Fisher, G. Nuclear Engineering Seminar. 2pm, Rm 38-166.

Atmosphere — Motivation and Approach* — R.G. Bennett, G. Nuclear Engineering Seminar. 4pm, Rm NW12-222.

Non-Invasive Measurement of Cardiac Output by CO₂ Rebreathing*— Kenneth A. LaBresh, MD, Senior Medical Resident, Brown University. Biomedical Engineering Center for Clinical Instrumentation Seminar. 4pm, Rm 36-428. Refreshments 3:45pm.

The Rings of Uranus* — Jim Elliot, Center for Radiophysics & Space Research. Earth and Planetary Sciences Colloquium. 4pm, Rm 54-611. Tea 3:30pm, Rm 54-923.

Self-Restraint in Science: The Case of Nuclear Fission* — Spencer Weart, Director, Center for History of Physics. Technology Studies Seminar. 4pm, Rm 20D-205. Coffee 3:30pm.

Phonons, Molecules and Tissue* — John King, Francis Friedman Professor of Physics. Undergraduate Physics Colloquium. 4:15pm, Rm 4-339. Social hour follows.

Search for Late-Type Giants with a Radio Telescope* — Hiram J. Hab-

ing, Leiden Observatory and J.I.L.A. Astrophysics Colloquium. 4:15pm, Rm 37-252. Coffee 3:45pm.

Housing and Women's Lives: Domestic Misogyny and Domestic Feminism* — Dolores Hayden, Assistant Professor of History & Architecture. Committee on the Visual Arts & Dept. of Architecture Seminar. 7:30pm, Rm 66-168. Hayden Gallery will be open following the lecture.

Thursday, May 12

Doppler-Free Laser Spectroscopy of Molecular Hydrogen* — W.L. Lichten, Yale University. RLE & Spectroscopy Laboratory Seminar. 11am-12n, Rm 66-110. Coffee 10:30am.

Protein Sequencing by Gas Chromatographic Mass Spectrometry, The Structure of Monellin* — Gail A Hudson, G. Seminar in Analytical Chemistry. 4pm, Rm 8-105.

Genetic Differences in the Metabolism of Carcinogens and Other Environmental Chemicals* — Daniel W. Nebert, Chief, Developmental Pharmacology Branch, National Institute of Child Health and Human Development. National Institutes of Health, Nutrition and Food Science Seminar. 4pm, Rm 16-134.

Soaring: The Art of Getting a Lift Out of Physics* — Lloyd P. Hunter, University of Rochester. Physics Colloquium. 4:15pm, Rm 26-100. Refreshments, 3:45pm, Rm 26-110.

Friday, May 13

Bond Graph Modelling and Simulation of Large-Scale Dynamic Reaction-Transport Systems in Chemistry and Biology** — Henry M. Paynter, mechanical engineering. Special Lecture Series. 11am, Rm 3-343.

The Ultrastructural Localization of Low Density Lipoprotein in the Arterial Wall* — J.J. Schnitzer, G. Chemical Engineering Seminar. 2pm, Rm 66-110.

Nonthrombogenic Synthetic Surfaces* — A. K. Dincer, G. Chemical Engineering Seminar. 3pm, Rm 66-110.

Radiopharmaceutical Preparation with Short-lived Positron Emitters*
— Paul V. Harper, University of Chicago. Harvard/MIT Program in Radiopharmaceutical Development. 3:30pm, Rm NW12-222. Refreshments 3:15pm.

Mixed Valent Phase Transitions — When is an Atom Atomic?* — Bruce Patton, physics. Center for Materials Science and Engineering Colloquium. 4pm, Rm 9-150. Refreshments 3:30pm.

The Forgotten Symbolism of Architectural Form* — Denise Scott Brown, Partner, Venturi and Rauch, Architects and Planners, Philadelphia. Second Annual Lawrence B. Anderson Lecture. 4:30pm, Rm 54-100.

Parallax: Two Perspectives on Photography* — Brassai, photographer. MIT Creative Photography Gallery and Polaroid Seminar & Slides. 8pm, Rm 26-100.

Community Meetings

MIT Ecology Action* — Slide show and discussion of proposals for new national parks and wildlife refuges in Alaska. Wed, May 4, 8pm, Rm 9-150. Info, Doug Ruby 267-2199.

Wive's Group** — Group leaders: Charlotte Schwartz, sociologist & Myra Rodrigues, social worker, both from Medical Dept; Carol Hulsizer, faculty spouse in residence, Ashdown Hse. Wed, 3-5pm, Stu Ctr West Lng. Babysitting Stu Ctr Rm 473. Cheryl, x3-4911. May 4: News & How it Covers Foreign Subjects** — Edwin Diamond, political science, Commentator for Post-Newsweek Broadcast Group.

The Honorary Matrons Spring Luncheon*** — David Karp '78 and Warren Seamens, Director of Historical Collections, will present their film, MIT 1900-1950. Acceptance cards will be mailed. Thurs, May 5, 12n sherry, 1pm luncheon, Stratton Stu Ctr. Info: Mrs. Robert S. Harris, Chairman, 527-0901.

1977 Pre-Retirement Seminar — Harold E. Dreyer, Compensation Benefits and Union Relations, Draper Lab, will speak on Wills, Finances. Taxes. Thurs, May 5, 9:15-11:15am, Rm A-166 Lincoln Lab. Info: Benefits Office, x658 Lincoln.

TOPS* — Tech Organization of Professional Secretaries. Meetings Thurs, 12n, Walker Blue Rm.

Low Back Problem Exercise Class* — Thurs, 1-2:30pm, Maggie Lettvin, 48 Mass Ave. Bring 3 pillows and on OK from your doctor. \$15/ea class. Info: x3-4138. Mon. 9am-5pm.

Wine & Cheese Social — For 7-B students and faculty in Department of Nutrition and Foods Science. Thurs, May 5, 4-6pm, Rm 16-134.

Charles River Cleanup* — Sponsored by the Charles River Watershed Association, organized by Alpha Phi Omega. Sat, May 7, 9am-4pm, Meeting at Pierce Boathouse.

AMITA Luncheon and Speaker** — Paula Gold, Massachusetts Assistant Attorney General and Head of the Consumer Protection Division will speak on Consumer Protection. Sat, May 7, 11am, Social hour; 12n Lunch; 1pm. Speaker; Endicott House, Dedham. Reservations, Call Sandy Yulke, x3-6330. \$5.50 for lunch.

Technology Wives Excercise Class** — Marilyn deKleer, instructor. Sponsored by TWO, An hour of serious exercising. Newcomers welcome. Mon, 8pm, Exercise Room, Dupont Gym. Admission, 50c.

Forum* - The MIT Grievance Procedure, Dr. Mary Rowe, ial Assistant to the President and Chancellor for Women and Work, ead a general discussion. Mon, May 9, 12n, Rm 10-340.

Pre-Retirement Seminar — Social Security, James Dube, Social Representative: Medicare and Medex, Fay Donohue-Rolfe, Blue Blue Shield Representative. Tues, May 10, 2:30-4:30pm, Rm 66-110.

ifery in Modern Obstetrics* - Helena McDonough, RN, CNM. atal and Parent Education Group Meeting sponsored by MIT Health mation Office. Tues, May 10, 12n-1:30pm, MIT Infirmary W-5, 3rd

ct mug meeting* — Wirewrapped prototypes of the ECD Micro-mind nstration. Sponsored by the Micro-mind Users Group. Tues, May 10, 196 Broadway.

Pre-Retirement Seminar — Social Security, James Dube, Social y Representative: Medicare and Medex, Fay Donohue-Rolfe. Blue Blue Shield Representative. Thurs, May 12, 9:15-11:15am, Rm A-166

of the Short Story* - Laura Furman, published in The New will read from her fiction and discuss her work in Barry Spacks' All are welcome. Thurs, May 12, 11am, Rm 4-156.

camb AARP Chapter Meeting — Installation of officers, social g with music & refreshments, dancing if desired. Sun, May 15, 4-Walker Memorial Morss Hall.

cial Events

Mezz** - MIT talents give performances in relaxed coffeehouse phere. Wine, cheese, coffee & donuts. Come relax & enjoy! Fri, May 6, n, Stu Ctr Mezzanine Lng.

nd Bisexual Women's Get-Together* — informal gathering to meet gay/bi women. Fri, May 6, 7:30pm, Rm 50-306. Dessert will be served. arol, x5-8532 Dorm

Rat - Sponsored by Student Center Committee. Fri, May 13, -lam, Sala. Light & dark beer only 35¢/16 oz. We play requests all Free with college ID.

ovies

ion in Winter** - LSC. Fri, May 6, 7 & 10pm, Rm 26-100. 75¢ or Wellesley ID.

Harry** - SCC MidNite Movie. Fri, May 6, 12m, Sala. Free.

er on the Orient Express** — Sat, May 7, 7 & 10pm, Rm 26-100. 75¢ or Wellesley ID.

Like it Hot** - LSC. Sun, May 8, 6:30 & 9pm, Rm 26-100. 75¢ w/-

usand And One Hands (Souhel Ben Barka)* - Mastering the City: and Survival in the Third World, film & discussion. Tues, May 10, Rm 3-133.

of the Afternoon (Deren & Hammid); Dog Star Men (Brakhage); ro Street (Baillie); Our Trip to Africa (Kubelka)* — MIT Film Sec-Tues, May 10, 7:30pm, Rm E21-010.

e President's Men** — LSC. Fri, May 13, 7 & 10pm, Kresge. Admis-75¢ w/MIT or Wellesley ID.

oy and His Dog** — LSC. Sat, May 14, 7 & 9:30pm, Rm 26-100. Ad-ion: 75¢ w/MIT or Wellesley ID.

Panther** — LSC. Sun, May 15, 6:30 & 9pm, Rm 26-100. Admission: MIT or Wellesley ID.

Mains Sales; Therese* — French films with English subtitles sponby Humanities Dept. Sun, May 15, 7pm, Kresge Little Theatre.

Music

Noon Hour Concert Series* - Thurs, 12n-1, Chapel. May 5: Mark Kroll, harpsichord; May 12: Carol Lieberman, baroque violin.

Borodin Quartet* - Abramowitz Memorial Concert. Wed, May 4, 8pm, Kresge. Selections by Tchaikovsky, Haydn, and Shostakovich. Ticket re-

A Concert of French Art Songs* - Compositions by Cherubini, Faure, Debussy, Duparc, Hahn, Poulenc, and Satie. Sponsored by French Section, Dept. of Humanities. Wed, May 4, 8:30pm, MIT Chapel. Free.

Chamber Music Society Concert* - Wed, 5:15pm, Music Library. Info:

MIT Symphony Orchestra Concert* - Marcus Thompson conducting works by Copland, Moussorgsky, and Ravel. Joy Blackett, mezzo-soprano, will be soloist. Sat, May 7, 8:30pm, Kresge. Admission: \$1 at door, free w/-MIT ID in Bldg. 10 Lobby the week of the concert.

MIT Choral Society* - Performance of Vesperae Solonelles De Confessore, K. 339 and Requiem Mass in D Minor, K. 626 by Mozart under the direction. of John Oliver. Sun, May 8, 7:30pm, Kresge. Tickets: \$4, or \$2 w/-MIT ID, avail at door or by calling x3-2906.

Renaissance Vocal Music* - Sponsored by Chamber Music Society. Auditions & rehearsal Sun, 7:30pm, Rm 4-160. Yves, x3-5810.

MIT Chamber Players Concert* - Pieces by Stravinsky, Wagner, Schubert. Tues, May 10, 8pm, Kresge. Free.

Ethnomusicology Program of University of Illinois* - Concert and demonstration including Anklung Ensemble, Thai instruments and a Chinese Orchestra. Thurs, May 12, 3:30pm, Kresge. Free.

Robert and Catherine Strizich* - Italian and English lute duets of the Sixteenth Century. Fri, May 13, 5:15pm, Kresge.

Spring Concert* - MIT Concert Band, John Corley, conductor. World premiere of Matthew Marvuglio's Evocation, Gould's Symphony for Band, Vaughan Williams' Toccata Marziale, and works by Holst, Persichetti, and Bavicchi. Sat, May 14, 8:30pm, Kresge. Free. Tickets: Avail Lobby 10, week

Spring Concert* - MIT Women's Chorale. Sponsored by MIT Women's League. Sun, May 15, 2:30pm, MIT Chapel. Free.

Theatre

Six Characters in Search of an Author* - MIT Dramashop. May 6 & 7, 8pm, Kresge Little Theatre. Admission: \$2.50, \$1.50 opening night. Info, x3-

Ionesco's Macbett* - MIT Community Players. Thurs, May 12 thru Sat, May 14, 8pm, Kresge Little Theatre. Tickets on sale in Lobby 10 week of May 9, \$3, \$2.50 w/stu ID. Reservations, x3-4720.

Dance

Renaissance Dance* - Sponsored by MIT SCA. Beginners welcome. Wed, 8pm, Burton dining hall. Info: Beth Parkhurst, 964-1840.

Renaissance Dance Band* - MIT SCA Dancing. Inviting players of recorders or other early instruments, expertise not necessary. Wednesday nights, 8pm, Burton Dining Hall Info: Ron x3-7814.

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

MIT Dance Workshop — Sponsoring a number of different projects for second term. Please check Workshop bulletin board, duPont Armory, Bldg

Exhibits

John Messina: Photographs* - Thru Wed, May 25, Creative Photography Gallery, Bldg W31. Mon-Sat, 10am-6pm, Sun, 12n-8pm.

Pottery and Art Sale* - MIT Student Art Association. Wed May 4, 10am-

Women in American Architecture: A Historical and Contemporary

Perspective* - exhibition documents the role women have played in the history and development of American architecture. Sponsored by the Committee on the Visual Arts & the MIT Department of Architecture. Hayden Gallery, Mon thru Sat, 10am-4pm, free. Public preview, Fri, May 6, 8-

Exhibition and Sale of Original Graphic Art: Early and Modern* -Representative from Ferdinand Roten Galleries, Inc showing oriental prints and manuscripts. Sponsored by the Student Art Association. May 9 & 10, 11am-6pm, West Lng, Stu Ctr.

MIT Historical Collections* - Permanent exhibition Mon-Fri, 9am-5pm, Bldg N52, 2nd floor. Bicentennial Exhibits: Katharine Dexter McCormick, '04; Vannevar Bush, '16; Karl Taylor Compton; Norbert Wiener, and 1876 Exhibit, Bldg 4 corridor. The New Technology Exhibit 2nd floor balcony of Lobby 7. Energy Exhibit Bldg E40, 1st floor. Radiation Laboratory Exhibit main corridor, Bldg 8.

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

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

Graphics by MIT Design Services* — On exhibit in Bldg 7 corridor.

Canones* - Music Library, Rm 14E-109. Examples of the use of canons from 7 centuries of music.

Lobby 7 Events

Technique Photography Display* - Weeklong exhibit of the yearbook photography staff's best work. Mon, May 9 thru Fri, May 13, Lobby 7.

Athletics

Home Schedule* — Thursday, May 5 — V Baseball. Mass Bay Comm. College, 3pm, Briggs Field. W. Softball. Gordon College, 3pm, JV Baseball Diamond. VM Tennis. Amherst, 4pm, du Pont Tennis Court. Saturday, May 7 — HVWT Crew. Cochrane Cup, Dartmouth & Wisconsin, 11:30am, Charles River Basin. V Lacrosse. Brandeis, 2pm, Briggs Field. Monday May 9 - JV M Tennis. Buckingham Browne & Nichols, 4pm, du Pont Tennis Court.

Maggie's Self-Designed Fitness Class — Classes 12n-1pm, du Pont fencing & wrestling rms; 5-6pm, du Pont T Club Lng. PE credit course, but all are welcome.

Freshmen are encouraged to attend departmental lectures and seminars. Even when these are highly technical they provide students one means to learn more about professional work in a department and

*Open to the public

Open to the MIT community only *Open to members only

Send notices for May 11 through May 22 to the Calendar Editor, Room 5-111, Ext. 3-3270, before noon Friday, May 6.

Wheaton President to Give Warner Memorial Lecture

"Have Women Outgrown the Liberal Arts?" is the title of a lecture Alice Frey Emerson, president of Wheaton College, will give at 6pm on Wednesday, May 11, in the Student Center Mazzanine Lounge.

Sponsored by Women's Forum, the lecture will be the second annual Gay Warner Memorial Lecture. The entire MIT community is invited to

Refreshments will be served at 5:15pm. MIT Chancellor Paul E. Gray, chairman of Wheaton's board trustees and of the search committee that selected Dr. Emerson as Wheaton's president, will introduce the speaker. Questions and discussion will follow.

Dr. Emerson is completing her second year as Wheaton's first woman president. She received the AB degree from Vassar College in 1953 and the PhD degree from Bryn Mawr College in 1964. Before going to Wheaton in 1975 she taught political science at Bryn Mawr and the University of Pennsylvania, and was dean of women (1966-69) and dean of students (1969-75) at the University

of Pennsylvania. She is vice-chairman of the American Council on Education's Commision on Women and serves on the advisory board of Higher Education Resource Services (HERS) Mid Atlantic and of the Institute for Paralegal Training in Philadelphia. She is a member of Harvard Overseers' Committee to visit the Department of Athletics and the Long-Range Planning Committee at Wheeler School. This year she became a director of Penn Mutual Life Insurance Company, Philadelphia, and First National Boston Corporation,

The Gay Warner Memorial Lecture is an annual event sponsored by Women's Forum in memory of Gay Warner who was an MIT employee and member of the Forum Steering Committee at the time of her death

Charles Cleanup **Project Seeks** 200 Volunteers

It's picnic time once again around MIT and on the banks of the Charles River, and MIT's Alpha Phi Omega service fraternity is recruiting volunteers to assist the Charles River Watershed Association clean up the river banks on Saturday, May 7, between 9am and

Ms. Lisa S. Chabot, a junior in electrical engineering and computer science from Quartz Hill. Calif., is project chairman for

Ms. Chabot is hoping for a turnout of about 200 students, staff and employees from MIT. They will concentrate on the Cambridge side of the river, from the Pierce boathouse to the Stop & Shop area. Although the cleanup effort is scheduled from 9am-4pm, any help anyone can give during that period -even if only for an hour or so-would be greatly appreciated.

For more information or to sign up to volunteer call APO, x3-3788, or stop by the booth in the Building



WOMAN'S BUILDING, designed by Sophia Hayden for the World's Columbian Exposition in Chicago. 1893, is represented in the exhibition, "Women in American Architecture: A Historical and Contemporary Perspective," to be held in MIT's Hayden Gallery from May 6 through June 18. Sophia Hayden (1868-1953), MIT '90, was the first woman MIT

Technology Studies To Hear Tarr

Joel Tarr, professor of history, technology and urban affairs at Carnegie-Mellon University will be speaker for the Technology Studies Seminar on Wednesday, May 4.

"Waste-Water Technology and the Evolution of State Regulation: a Retrospective Analysis" will be a discussion of the results of a retrospective technology assessment of wastewater collection systems.

In his work, funded by the National Science Foundation, Professor Tarr focuses on the historical evolution of

sewage systems, examines the costbenefit forecasts made in the development of these systems, and evaluates the worth of these forecasts in the light of the ensuing real world impacts of this technology on urban society, values and state government. The Technology Studies Seminar

Series, offered each term by the Technology Studies Program is open to the public free of charge. Seminars are held in Rm 20D-205 at 4:00pm preceded by coffee served in the same room at 3:30pm.

4pm, Monday through Saturday. Alumnus Abducted

graduate of the four-year course in architecture.

Woman's Building, dedicated in 1892, won first prize

at the exposition and stood for six months. There will

be a public preview of the Hayden Gallery presenta-

tion from 8-10pm on May 6. The Gallery is open 10am-

Mauricio Borgonovo '61, the for-eign minister of El Salvador who was kidnapped Tuesday, April 19, by leftist terrorists, has not yet been released, the Salvadorean Embassy reports. According to a UPI report, Minister Borgonovo, who received the SB in mechanical engineering from MIT, is the second most important politician in El Salvador, after the President.

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Ads are limited to one per person per issue and may not be repeated in successive issues. All ads must be accompanied by full name and Institute extension. Only Institute extensions may be listed Members of the community who have no exten Members of the community who have no extensions may submit ads by coming in person to the Tech Talk office, Room 5-111, and presenting Institute Identification. Ads may be telephoned to Ext. 3-3270 or mailed to Room 5-111. Please submit all ads before noon, Friday, May 6. They will be printed on a first come first serve basis as space permits.

For Sale, Etc.

Sim qd 8-trk car stereo w/18 pre-rcrded tps, best.

Automatic Radio amfm cassette, update yr car radio w/this amfm stereo cassette unit. Thurmon Deloney, x5-9584 aft 6.

Girls 16" Schwinn bike, exc cond, \$35, Bob, x5892

cle 60, loc at MIT, \$100 or best, or wl swap for 115 volt ac. Arthur, x3-3747.

ser, dresser & mir, vanity w/mtchng chr, fl sz bd frame, bx spr & mtrss. x8-3591 Draper. Magnus 12 chrd organ & bnch, \$50; Mtrcycl saddle

Gitane 10 spd bike, 18" m frame, 24" whls, quality comp, exc cond, \$60 or best. Loren, x3-3213.

M 10 spd Mercier Jeunet, nw. best. Annette, x3-

Nikkor, \$130; all exc cond, prices nego. Lee, x5-

Minolta SRT 101 w/55mm lens, 35mm lens, 135mm lens, cases & UV fltrs, cost \$350. Christopher, x3-7133.

Pioneer SX 424 rcvr, 12/w/ch, Acousti-phase Microphase spkrs, vry efficient, \$140 or best. Andrew, x5-9440 Dorm

Hyliner Electrostart, 16', w/65hp Mercury outboard, nw seats, ovrhled eng & trailer, fbrgls btm, exc cond, ask \$950. Linda, x3-7881.

Moving sale: sofas, beds, plants, clothes, furn, etc,

quality items, sm antiques, orig Eames chr, 1 day only, Sat, May 7. Call 864-6379.

Zig Zag sewing mach, mdl 177, & case, unused, \$75 or best. x3-2649.

BR set w/dbl bed, bkcase headbrd, mattress, bx spr, 2 chests, gd cond, \$50; arm chr, \$15; Osterizer blender & 2 mini containers; toaster oven; dishes; bedspread; plants; toys, reasonable. Call 391-1086.

orig \$100, ask \$55; 2 pckt tape rcrders: Norelco 0095, sells \$195, ask \$55; Dejour Versitile III, \$65. Dale, x8-3337, Draper.

Colonial bed & spr, bed nds refinishing, \$15; Polaroid SX70 cmra, exc cond, \$50; 2 pr 16oz bos-ing glvs & head gear, \$35; Regina vacuum clnr, \$5. Joel, x8-2021 Draper.

Utility trailer, well balanced, best. x8-3739 Draper.

Remington Sperry Rand mech printing adding mach, perf operating cond, \$45. LSC x3-3791.

'73 Grady-White Weekender, 115 Merc outboard,

F 10sp bike; fake persian rug (exc cond); tbltop hairdryer; sz 7 Adidas f tennis shoes. Call 494-9044.

Sears Kenmore Hydro Action Dshwshr pwred by water pressure, \$20 or best. John x7636 Linc.

bike. Al, 267-3577

B&W TV, 19", Gd cond, w/indoor antenna, \$40. Helen, x3-6992, lve nmbr.

Telephoto lens, Vemar automatic, 200mm, f3.5, exc cond, Miranda Bayonet mount, \$70. Cooney,

Call 395-5106 aft 5.

Orange rugs, 3'x6', 2 avail, \$6/ea. x3-6025.

New, unused Simmons twin bx spr & mattress \$140/both is 40% discount, gd deal. Sue, x3-1702. Hasselblad 500 cm w/8mm Planar lens, lens bood

Lacrosse sticks, gasoline cans, Lady Shick hairsetter, all good cond, cheap. x3-7902.

Kitchenaid port top-load dshwshr, 21/2 yrs, wht, exc cond. \$100, 862-8658, pref evgs.

Sharp 12" color TV, $1\frac{1}{2}$ yrs, exc cond, TV tbl free, \$180 or best. Call 354-4763.

M 5 sp bike. Suntour derailleur. \$60. Mike. x3-

Pioneer SX525 stereo, Ark spkrs, gd cond, \$190. x5-

GE washer & dryer, 4 yrs, used, \$70 each; set of bunk beds w/out mattress or bx spr, \$50. Astrid,

Scientific American (1969-1976), 79 issues, \$39.

Set of Campagnolo derailleurs, front, rear, & shifters, \$55; Pr Campagnolo lg flange hubs; Universal 61 brks. Daniel, x5-6621 Dorm.

Carrier air cond, 8700 btu, nds sm elec wrk, \$50; 165-15 Delta Studded snows on Volvo rims, 2, used 2 seasons, \$40; Sunbeam elec snwblwr, \$25. Bill, x8-4422 Draper.

Grn canvas awnings, 3, for 10'x14' prch, wht frng & piping, all hrdwre, gd cond, \$20. Al, x7825 Linc. Custom md brn leather vest, m or f, wrn 3x, orig \$45, ask \$30. Susan, x3-4701.

Head tennis raquets, Arthur Ashe 2, \$40; Professional, \$30, 4½ med, tournament nylon. Knotts, x3-4211.

'74 Fiat X19 tan cnvrtbl, 4 nw Michelin tires, amfm w/spkrs, stored away since sum, \$2,900. Richard, x8-1595 Draper.

Norge 8,000btu air cond, \$125 or best; sofabed, \$90; misc furn. Lisa, x3-7102

Ovation Belladere, exc cond, \$270. Doug, 266-2968. Pr Jaymar jeans, \$8; pr Jaymar slacks, \$14; sz 36, br nw, nvr wrn. Scott Tobias, 262-5090, lve msg.

Hndwyn Turkish Kilim 5'x61/2', \$200; hndwyn wool saddlebags, \$60. Jared, x3-5954.

DR set, tbl w/leaf & 4 chrs, wlnt, exc cond, \$100. Irwin Hollander, x3-6702.

Boys 20" Schwinn bike w/banana seat & spdmtr

M sz 38 leather jckt & 2 nvy blu blazers, lw price

Sturdy pine chsts, hndsmly fnshed furn mdls, used shipping mdls, exc for toychests, firewd boxes, or blanket storage, \$10 & up. x5-6676 Dorm.

Air conditoners, Sears 5,000btu, \$100; tires, F78-14, ww, Sears Dynaglas, under 5K, \$40/pr; 4 drwr metal file, \$30. Jay, x3-6680.

Theatre tckts: Jose Ferrer in *Lng Dys Jrny into Nt*, May 12, Shubert, 1st rw, 1st balc, \$16/2 tckts. John, x8-3955 Draper.

Pinto rims 2 for '71-'73 Bob x7554 Line

Sears-Penske DC inductive timing light, br nw, nvr used, sells for \$50, ask \$30. Ken, x8-1425 Draper.

Camping equipment carrier designed for sta wgn rf, \$55. Richard, x3-2838.

Nw Opal rims, 2, 13", nvr used, 4 lugs, \$10. A. Fabrizio, x498 Linc, aft 3.

Rival Crock-pot, br nw, nvr used, \$15 or best. Call 354-0105 aft 6.

Suitcases, 26" & 30", w/locks, \$5/ea; Zenith radio, exc wrkng ordr, \$5. Call 354-2175 evgs.

Bridal gown w/long veil, Cathedral train, pearled, lk nw, wrn once, sz 5-7, \$100. Call 494-0411, 6-8pm. Red Sox '77 games, prt of seas tckt, 2 adj bx sts, Bx

159. sec 30, 13 Oates (nt gms) - all teams, \$143, additional Oates w/sm sts nego. x3-6906. Sony TA-1055 amp, 2 yrs old, orig \$200, ask \$90.

Jeff, x5-7642 Dorm

Dressers, 2, w/mir, exc cond, \$30; nw shlvs & hinges; cocktail tbl, \$15. Call 661-4959 evgs.

Clairol Kindness 3-way hairsetter, nvr usd, mint cond, must sell, \$20 or best. Kathy, 237-1724. Pirelli CN36 stl bltd radials, 5, 185/70 HR 13, mtd

on Mazda RX-4 rims, ask \$125. x3-4415 Pr Silvertown tires, lk nw, mtd, Ford whls, sz equiv to F78-15, \$30. x3-7067.

Burroughs port adding mach, exc cond, best. Call

Must sell Marantz 1200B integrated amp, 125

watts per channel, \$300; top of the line Lafayette tuner, \$50. Al, x5-6635 Dorm. Metal & formica K tbl w/4 chrs, \$15; day couch, too gd for dump, too old to sell, free. Mat, x3-5551.

Casita scrn hse, 10 panel, gd cond, \$125. Jim, x7-

Phase Linear 4000 preamp w/cbnt, best reas offer. Bill, 776-2735 BIC Formula 6 spkrs, lk nw, vry efficient, \$300/pr.

Dave Passmore, 247-8691. Apt sz Hoover wshr, \$100; Popular 606 high p

electronic flash, rechrgble, \$40; infant feeding tbl \$10. Call 628-2217 evgs.

Dk brn wide-wale crdry sofa-bed, can convert into double bed, lk nw, \$120 or best. Candy, x3-7558. Radials, 3, 1 mtd, less than 5K, FR78-14, \$100. x8-

AVID 103 Spkrs, exc cond, w/wrnty, \$225/pr. Mark, x5-8314 Dorm

Vehicles

'64 Buick spec cnvrtbl, gd cond, \$355. Joan, 899-

'65 Dodge Dart, gd rning cond, nw tires & br, nvr fails to start, must sell, \$200 or best. Call 489-3018 evgs.

'65 Ford Mustang fstbk, 6 cyl, gd mpg, bdy nds wrk, \$150. x3-5641.

'67 Volvo 122 sta wgn, 77K, runs vry wl, reas

priced, x3-3641.

'68 Cutlass 350, 4 spd, amfm, custom paint, nds exhaust, ask \$950. Joe Savino, 536-3931.

'68 Volvo, amfm nw transmission, nds sm wrk and TLC, \$500 or best. Dick, x3-5673.

'68 VW Fastback, vry gd cond, 2 nw tires, nw frnt & rear brks, avail end of May, \$850. Peg, 923-0979,

'69 VW bus, vry gd cond, \$900. Luis, 494-8323.

'70 Buick Skylark, nds bdy wrk, best. x3-3650. '70 VW Beetle, gd bdy & mech cond, 56K, 2 nw

'71 Cadillac Coup de Ville, 54K, gd cond, amfm w/tape, brn w/vinyl roof, make offer. x3-2772.

'71 Honda CB100 mtrcycl, rebuilt eng, gd cond, \$150. Lee, x3-1541, lve msg.

'72 Saab 95 wgn, 58K, exc cond, no rust, amfm, nw shocks, muffler, brks, tires, \$2,095 or best. x8-1457

'72 Toyota Corolla, gd mech cond, 38K, nds bdy wrk, \$900. Joan, x3-4050.

'72 Vega, 4 spd manual, 36K, nw tires, gd rning cond, \$700 or best. Viswam, x3-6712.

'73 Austin Marina, 4 dr, amfm, exc cond, 25-30mpg, 48K, ask \$1,550. Chris, x3-5550. '73 Dodge Dart Swinger, 2 dr, wht, vinyl roof, auto pwr brk, 51K, radio, snows, exc cond, \$1,600. Hiroshi, 354-7706.

'73 Fiat 124 sprts coup, exc cond, 32K, 5 sp, full instrumentation, amfm stereo w/cassette deck.

'73 leftover Honda CL350, K5 blu, exc cond, nw top end, tires, chain, battery & seat cvr, \$700 Sherm, x8-1489 Draper. '73 Yellow VW, 55K, radio/tape deck, bike rack,

\$2,000 Call 484-7982 '74 Datsun 260Z, mint cond, gold w/blk int, ac, amfm, nw disk brks & shocks, alarm, \$4,850 or best. Larry, x3-2930.

'74 Duster, metallic grm, ac, pwr st & brks, steel radials, 32K, exc cond, \$2,400 or best. Call 242-0600, ext 423.

'74 Fiat 128, 4 dr, 21K, amfm, radials, exc cond, \$2,000 or best. Call 471-6272.

'74 Ply Sebring Satellite, 2 dr, V8, auto, pwr st & brks, 27K, exc cond, \$2,500 firm. Linda, x3-7023.

'75 leftover Kawasaki F-11 250 enduro, 1,500 mi, exc cond, Bell hlmt & chain, \$850. Norm, x3-3619, lve msg.

Falcon 7012, 72K, ac, exc cond, \$850 or best. Call

Housing

Bos, Buswell St nr BU, late May-Aug sub, furn 3BR apt, LR, B, K, \$275 + gas. Call 266-2536.

Bos, Comm Ave, Back Bay, 11/2 BR, mod K & B, carpeted, off-st prkng, avail 6/1 sub w/opt, \$275. Call 267-4829.

Bos, South End, town-hse, wlkng dist to Prudential & Copley; furn or unfurn, 5 story hse, 2K, 7/1/77-8/1/78, \$550. Call 266-5277 evgs.

Bos, Back Bay, 4BR sum sub w/opt, hunge K & pantry, \$325 incl heat. x3-1667.

Bos, Beacon Hill, 2BR apt on Chestnut St to sub 6/1-9/1 w/opt clean, cmfrtble, conv, \$350. Call 723-Brighton, Oak Sq, 2BR apt in 2 fam hse, sub 6/1,

ww, mod K & B, prking, nr T, \$290 incl evrythng, must see. Barry, 787-5206. Brighton, 2BR, LR, K, B, htd, Brkline/Brghtn line,

st prkng, sub immed thru Sep w/opt, \$215. Andrew, x8-2873 Draper. Camb, Cntrl Sq, BR apt, to sub Jun thru Aug, furn, 5 min to T, 15 min walk to MIT. Call 547-

Camb, 3BR apt, Harv St, 5 min to Cntrl Sq, sum sub Jun-Aug, furn, ac, 2B, Call 492-5134.

Camb, off Mass Ave, young 4 rm ranch, fnshd bsmnt, lw heat bills, nice fncd yrd w/patio, paved drvwy, exc cond, \$35,900. Call 492-2806.

Camb, Harv Sq, Mass Ave, 5 min to sub, 6/1-9/1, spac studio apt, furn, convenient, from Harvard, 10 min by T to MIT, \$181. x3-6619.

Camb, Mass Ave nr Harv Sq, sum sub 6/1-9/1, 11/2BR, furn, MIT affiliated, \$200 incl ht. x3-5115.

Camb, sub for Jun & Jul (or part), 2BR apt on campus, compl furn, ac, color tv, stereo. Call x3-

Camb, Westgate, furn studio to sub, May 24-Jul 6,

incl util. Call 494-8428

Cam, sub until Sept 1, bsmnt apt, \$150/mo. Call 332-0767.

Cambport, 8rm hse w/yrd, \$450, no pets. Martin,

Dedham, exc loc, 4 BR, move-in cond, tri-level, DR, fam rm, playrm, ww, patio, privacy & mny xtras, ask \$59,900. Call 329-9725.

Orleans, MA, sngl hme in Cntr, w/in wlking dist of

Owner, 894-6267.

Watertown, 6rm dup, 3BR, nwly redecorated K & B, ww, panelled bsmnt, 2-3 car prkng, residential area, conv to T, no pets, 1 mo sec req, avail 6/1, \$310 unhtd. Call 924-7511, evgs.

Lake Winnepasaukee, NH, join our sum vac rental

open fields w/mgnfcnt vw. 6BR, 3B, detached, 3 car gar, fully equipped, \$100,000. Call

Vermont frmhse, 150 acr, pond, 3BR & outbldg, avail 2 wks June, \$150/wk. Norma, x3-5049.

Atkinson, NH, Mass border, exclusive area, 6 rm hse, 3BR, $1\frac{1}{2}$ B, fieldstone firepl, 2 car gar, 4+ acres. Fred Afrikian, x8-4346 Draper.

Popham Beach, ME, ocean front, 2BR cottage bordering state prk, avail 6/18-7/20, \$160/wk. Jeff, x8-4042 Draper.

Woodstock, VT, spend leisurely sum dys at Talbot Hse, grp rsrvtions now being tkn for Jun & Jul. For hno and rsrvtions contact Preprofessional Office (10-186), x3-4158.

Found, Kndl Sq. crnr of Main & Wadsworth, pr blk plastic framed glasses, turned into Camb Police Lost & Found.

Animals

Kittens sk loving home, fluffy tigr & blk bobtail, m, litter trained. Betty, x3-1872.

Home wanted for warm, friendly mature m neutered cat, vry affectionate, gray & wht, per companion for a retired person. Laurel, 868-1410 9

Cute baby gerbils born 4/15 looking for gd home. Larry, x3-4657.

Wanted

Tires, 12x600, gd cond. Frank, x3-6814.

Swan 500 or Atlas ham transceiver. Dick, x3-1601. Cheap Appalachian dulcimer. Leah Zonis, 864-

Goslings. Darryl, x7529 Linc.

French grad stu in physics dept lking for hie sitting for June and/or July, in Bos area. Jean-Pierre, 494-9164 evgs.

661-4959 evgs

Used tennis racket for m. Dianne, x3-5763

Co-op students seek sum rntl or hie sitting in So tive of rural environ, wl tk care of yr grdn & mals, refs avail. Mark, 494-0271 NH. native of rural enviro

Grad stu sks rm in vegetarian co-op hse or apt starting 6/1. Bill, x5-7403.

People going on Qurtr Cntry Clb trip to Romania in Jul to lve planned tourist path for fw dys to see cntry by pub trans, or rntd car - leisurely explora tion rather than official sgtseeing. Irene, x3-7166.

Sabbatical? Leave? 2 rspnsble adults & 2 chldrn seek 4BR hse or apt in Peabody (Camb) area. x3-

Used bike, 3 spd or more. Jim, x3-6460.

Quiet stu desires rm, apt or house-sitting arngmnt, Jun-Sep, in exc for duties. Call 628-2598.

6" or 7"x14" alloy rims, 414 bolt circle to fit Datsun sprt cars, name yr price. Bob, x3-7571.

Gd home for 4 consecutively nmbred 10-250 chairs. Free. John, x3-3697 Grad tckts, wl pay. Joan, x3-7787, lve msg.

Rm in hse/apt in Concord, pref nr W Concord trn sta, for sum. Jawaid, x5-6117 Dorm, evgs. Used gas clothes dryer, x3-3837.

Roommates

Bos, rm in lg Back Bay apt, Mass & Marlborough, thru end of Aug, m or f, pref stu, \$100 incl util. Ter-

ry, x3-1577. Camb, Tang Hall, 1 or 2 rms avail Jun-Aug, 3BR,

Camb, Cntrl Sq, sub avail beg of Jun, sgl rm in apt w/K, B, LR, 15 min to MIT. \$81. Steve, 868-8873.

Camb, nr Cntrl Sq, 10 min from MIT, sub w/opt, 1 huge BR in 3BR, 5 rm apt, lots of wndws \$110. Brian, x3-5220.

Camb, Tang, sum sub w/opt, 6/1-9/1, f for BR in 4BR apt, LR, B, K, furn, rent nego. Elizabeth, x3-4426

Camb, friendly resp m to share 5 rm apt w/porch, mi to MIT or Harv Sq, nice nghbrhd, avail 5/27 for sum & likely beyond, \$112.50 + heat & util. Call 354-0368. Camb, m wntd for sum sub, own BR, share K, LR, B, furn, off st prkng, conv to MIT, laundry, T, avail 6/21. Call 661-9064.

Camb, near City Hall, sub from end of May to beg Sept, walk to MIT, mdrn bldg, own BR, \$125. Sept, walk to MIT Michael, 492-7294.

Lrg furn BR, avail 5/24, 8 min wlk to MIT, conv for n, \$95 incl util. x3-6547

Miscellaneous

IFR)/instrumentation (experienced eng/atmospheric sci; nded pt-time, psbly full-time.
Dr. Markson, x3-2708.

Fast, accurate typing, papers, theses, dissertations, standard rates. Call 484-4979.

New pottery classes, start May 1, \$45 for 6 wks, Porter Sq. Call 354-8891.

Carpools

Riders wntd, St Paul St, Brklne, to MIT, arrive Sloan, 9am (8am Tues). x3-3405

Ride nded to Cedar City UT, or close as poss, early June. Mitch, 266-6281.

Surplus Property

MIT surplus property for transfer or sale for research or teaching programs only.

Computer, Super Nova, MFq Data General, 1970, Mdl 8001, Cost \$24,861; Std Duplicating Mach, Rocket Mdl ERAD-G, yr 1963, W.A. Derry, x3-2777.



This list includes all non-academic jobs currently available on the MIT campus. Duplicate lists are posted on the Women's Kiosk in Building 7, out-side the offices of the Special Assistants for Women and Work (10-215) and Minority Affairs (10-211), and in the Personnel Office (E19-239). Personnel Interviewers will refer any qualified applicants on all biweekly jobs as soon as possible after their

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

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

Virginia Bishop Mike Parr Ken Hewitt (Secretary — Paulette Chiles)	3-1591 3-4266 3-4267
Sally Hansen Lewis Redding Richard Cerrato	3-4275 3-2928 3-4269

ministration in the School of Architecture and ministration in the School of Architecture and Planning to provide administrative support to the School Council, fund raising activities, Visiting Committees, alumni relations, personnel and affirmative action related functions, School newsletter, reports, proposals. Will act as liaison between academic departments and Dean's Office and between administrative offices and the Dean's Office. Writing, speaking, organizational and supervision skills required. Professional experience in architecture and/or planning and/or academic administration preferred as is a graduate degree or ministration preferred as is a graduate degree or

equivalent in architecture/planning. C77-20 (5/4). Academic Staff, Tech. Asst., part-time, temporary in Nutrition and Food Science to administer psy-chological (including intelligence) tests to children 2 to 6 years of age. A Bachelor's degree, knowledge of the Stanford-Binet test and some background in statistics required. Fluency in English and Spanish preferred. 20 hrs./wk.; temporary for 6 months, but may be extended. C77-19 (5/4).

Sponsored Research Staff, Computer Specialist, in the Energy Lab to be responsible for operation, software maintenance and scheduling of hardware software maintenance and scheduling of hardware maintenance on a new data acquisition and processing system attached to several large research facilities in the area of energy conversion technology; develop software/hardware, and assist students, faculty and staff in the use of the system. Applicants must have thorough knowledge of DEC PDP-11 series of minicomputers (hardware and contrare). A degree or equivalent in electronic software). A degree, or equivalent, in electronics instrumentation engineering is preferred

Sponsored Research Staff, Administrative Officer, in the Sea Grant Program to develop and maintain budget and personnel records for the Program, particularly in the identification and certification of matching funds; manage all administrative functions of the Program: develop budget estimates; monitor expenditures against budgets; handle administrative converse of mechanics. ministrative aspects of workshops, seminars; schedule, assign work of clerical staff. A Bachelor's

Sponsored Research Staff, temporary, to do legal research and help analyze the effects of legal problems upon growth of the solar photovoltaic industry. At least one year of law school required. Familiarity with the law of regulated industries, environmental law or legal process and a

Admin. Staff, Systems Programmer, in the Systems Programming Group, Information Processing Services: design, implement and document changes to operating systems and subsystems. Duties also include system maintenance and crash analysis on IBM 370/168 running OS-MIT with ASP and TSO. Primary assignment is to aid in conversion to OS/VS2-MVS with JES2, TSO and RACE Applicants must have 35 years systems. RACF. Applicants must have 3-5 years systems programming experience, mainly in MVT, but including MVS. A knowledge of internals of these systems and a Bachelors degree, or equivalent experience, required. A77-21 (4/27).

Admin. Staff, Asst. Director, Planned Giving/Asst. Adviser Legal Affairs in the Office of the Vise President, Resource Development will have primary responsibility to secure gifts to the In-stitute through all types of giving arrangements titute through all types of giving arrangements (testamentary provision, planned programs, etc.). Will deal directly with donors and support activities of Institute officers and others involved in fund raising. Will also provide legal advice and counsel on matters related to gifts. Responsibility will not involve practice of law, but interaction with practitioners (i.e. donors' legal advisors). A J.D. degree, ability to apply sensitivity and discretion to donor relations required. Familiarity with MIT preferred. A77-22 (4/27).

Sponsored Research Staff, temporary, for the Laboratory for Nuclear Science to do postdoctoral research in experimental heavy ion physics. Position requires a Ph.D. in experimental physics, several years experience with heavy ion detection systems and with the use of accelerator facilities.
Work site is at Berkeley, California, and working knowledge of the Super HILAC and the 88'
Cyclotron at Berkeley is preferred. Temporary for 1 year. R77-80 (4/27).

Island, New York (the primary work site) and at the 88" Cyclotron, Berkeley, California. A Ph.D. in experimental physics is required. Demostrated competence in the use of complicated particle detection, signal processing and computer systems, as well as several years related experience preferred. Appointment is for 1 year but may be extended. R77-79 (4/27).

community and a community of network users

Academic Staff, Asst. Librarian for Public Services in the Rotch Library of Architecture and Planning to provide information and reference services to users; schedule personnel coverage; prepare bibliographies and library guides; supervise cir-culation section (reserve services, maintenance of cutation section (reserve services, maintenance of stacks and reading areas); assist in collection development. An M.L.S. from an accredited library school, a minimum of 2 years library ex-perience, knowledge of government documents, census and other statistical sources required. Ap-plicants must have good supervisory and organiza-tion skills. C77-17 (4/27).

in Medical Dept's. Environmental Medical Service will have primary responsibility for radiation protection service and teaching relative to use of radioisotopes in research; evaluate hazards and hazard control methods; interview and instruct radiation workers; conduct special radiation sur-veys; supervise radiation protection technicians. A Masters degree in Radiological Health or Health Masters degree in Radiological relatin or relatin Physics required, as well as at least 4 years prac-tical experience in radiation protection applied to the use of unsealed radioactive material in biological sciences research. Good communications skills also necessary. C77-18 (4/27).

in the Energy Laboratory to support New England Energy Management Information System. Duties will include the design of application systems in cluding data bases and programs; coding and debugging programs; prototype testing of systems; system user training. Applicants must be ex-perienced in working with users to design, develop. perienced in working with users to design, develop-implement and use applications programs. Ex-perience in designing, coding, debugging and operating with VM/370, CMS Operating System. APL Language PL/I Language and SEQUEL Data Management System. A Bachelor's degree in

Sponsored Research Staff, Applications Analyst,

order supplies; oversee maintenance of equipment.

A Bachelors or Masters degree in Biology or Chemistry plus several years experience in performing biochemical experiments required. R77-81 (4/27).

x3-5117

Air Cond, almost nw, 230-208 volts, 12,000btu, cy

Mtching Fr Provincial furn: 2 nitestnds, tall dres-

bags, \$40. Fran, x7715 Linc.

Nikomat ELW bdy w/Winder AW-1, \$350; Lenses: 55mm f3.5 Micro-Nikkor, \$165; 50mm f2.0 Nikkor, \$55; 43-86mm zoom f3.5 Nikkor, \$170; 28mm f3.5

Plants; Perennial: wht & blu flwring violets, also evrgrn myrtle, blue flwr, \$1 a gal milk crtn sz. Harry, x3-4819.

Br nw 35mm Konica Mdl C35EF w/blt in flash.

V-berth, sink, head, pwr trim, shore line trailer, xtras. Lew, x8-3584 Draper.

Mtrcycl helmets; Raleigh Supercoarse Mark II

Sofabed; bkcase/desk combo; firepl tools (5 pcs).

focusing ring, 12 load back, superb cond, hardly used, orig owner, \$700. Gisela, x3-7612.

Schwinn bikes: 20" Bantam, \$20; 24" f Breeze, \$35; 26" f Breeze, \$45. x8-1200 Draper.

Roy Buchanan tkt, Berklee, May 7, 3rd row seat, \$7.50. Ed, 5-7116 Dorm, lv msg.

ICP stereo amfm w/8 trk plyr/rcdr, 1 yr old, \$70.

Page 6, Tech Talk, May 4, 1977

7949.

Camb, Eastgate, crnr apt, sub 6/1-9/1, 1BR, \$223

East Camb, sub Jun-Aug w/opt, 8th St. LR, 2BR w/beds, K, B, mny wndws, \$212 nego. Call 661-

shops, restaurants, churches, shrt drive to 2 beaches, slps 4, adults only, avail Jul & Aug. Mary, 354-2334, aft 5:30.

Wellesley Hills, sub effective 9/1 or late Aug to approx Jul 15, '78, furn 14 rm hse, 6BR, 3B, wshr

co-op & enjoy unitd access to our lake-front 2BR dwelling, 2 car gar, comes w/16' mtrboat & sailboat, \$50/mo. Mark, 494-0271 aft 5. Ludlow, VT, beaut rebuilt old frmhse on 11 acres of

Lost and Found

Grad tcks, wl pay. Greg. x5-8224 Dorm.

Apt to rent or sub, furn or unfurn, for f in Sloan Fellows prgm, 6/77-5/78. A.H. Shapiro, x3-2009. Grad tck, wl pay. Pat, x3-2406. Porter Sq venty, bike storage arngmnt, overnite & wkends for B&M railway commuter. Jim, x8-4257.

Ride to Chicago lvng asap aft 6/6/77, wl pay. Call

Camb, Tang Hall, lrgst sngl rm in 4BR apts 15E4 or 20E4, avail 6/1 w/opt, riv vw, 7 day store, laundry. x3-5872. \$161. Call 494-8423 evgs.

4649.

Waltham, 2 fam hse, 5-5 plus fnshed attic rm, firepls & prchs, 1 block to shops and T, low 50's.

dryer, garb disp, 2 refrig, upright freezer, screened-in porch, open firepl, more, no long haired pets, rent nego. x3-4771.

Sum hse nr ocean, 6/24-7/22, organic garden. Call

San Diego, CA, hse for rent/lease, 3BR, 3B, beaut vw. firepl, carpets & drapes, avail from mid-sum, \$575, or will consid exch for MIT area housing. Ben Saltzer, x3-4935.

receipt in Personnel.

Pat Williams Carolyn Scheen (Secretary - Ann Perkins)

(Secretary - Jenni Leibman) Academic Staff, Assistant Dean for Academic Ad-

degree, or equivalent, supervisory experience as well as familiarity with university accounting required. R77-86 (5/4).

background in economics, engineering or manage ment desired. Position available 6/77 through 4/78 full-time during the summer, approx. 15 hrs./wk from Sept. through April. R77-83 (5/4).

Sponsored Research Staff, temporary, for the Laboratory for Nuclear Science to do postdoctoral research in experimental heavy ion physics. Will plan and direct experimental work using energetic heavy ion beams at the Tandem Van de Graaff facility at Brookhaven National Laboratory, Long

Admin. Staff, Programming Analyst, in the Admin. Staff, Programming Analyst, in the Academic and Research Computing Services section of Information Processing Services. Primary duties will be consultation, problem diagnosis, programming assistance, trouble shooting for a multi-faceted local academic and research user will also implement and maintain general purpose software; prepare and conduct seminars and courses; write user documentation and do contract programming. A Bachelors degree, preferably in computer science or a related field, a minimum of 2 years programming experience, or equivalent combination of education and experience required. Knowledge of time-sharing systems, system control languages and a variety of high-level programming languages also necessary. A77-19, A77-20 (4/27). A77-23 (5/4).

Academic Staff Asst Radiation Protection Offic

business/management plus a degree in computer science preferred. R77-82 (4/27). Sponsored Research Staff, in the Center for Cancer Research to prepare experimental materials; assist with tissue culture and/or biochemical experiments using the following techniques: nucleic acid hybridization, in vitro DNA synthesis, RNA purification, virus purification, gel electrophoresis of proteins and nucleic acids. Will also have responsibility for day to day laboratory operation

Academic Staff, Tech. Asst., in Biology to do laboratory research on blood coagulation systems: isolate and physically characterize key components of blood coagulation systems; study molecular mechanisms by which components interact in fulfilling physiological roles. A bachelors degree and good laboratory skill are required. A physical chemistry or biochemistry background is desirable. C77-10 (4/27). desirable. C77-10 (4/27).

Sponsored Research Staff, Scientific Applications Programmer, part-time in the Laboratory for Nuclear Science to assist physicists in numerical computations in a variety of frontier research problems in theoretical physics. A minimum of a Bachelor's degree in Physics, Mathematics, Computer Science or Electrical Engineering required. Through knowledge of IBM 360/65, IBM 370/168 and CDC 7600 computers including provided of the computer science. and CDC 7600 computers including knowledge of relevent job control languages and time sharing systems required. Position is half-time. D76-225

Exempt, Admin. Asst., Financial Aid Systems in the Student Financial Aid Office to handle all administrative aspects of various financial aid programs: devise and maintain procedures; counsel students on potential funding sources and maintain procedures. application procedures; coordinate overall Office work flow; act as liaison with other MIT departwork flow, act as liaison with other MIT depart-ments (i.e. Student Accounts); independently answer inquiries from students, parents, prospec-tive students. Manage case file, petty cash, purchasing, payroll, travel arrangements for the Office. Excellent communications skills as well as ability to interpret and apply regulations required. Typing skill is also necessary. E77-21 (5/4).

Exempt, Engineering Asst., in the Center for Space Research to assist in projects related to electronic instrumentation for medical diagnosis, basic physiology of inner ear and visual vestibular interaction. Duties include design and directing the construction and maintenance of a microprocess or based instrument for clinical certifular testing, write programs for extense construction. vestibular testing; write programs for systems hardware; oversee core of marine life used in studies, and oversee maintenance of a GAT-1 Link Trainer and its computer interface. Applicants should be experienced with electronic design employing integrated circuits, have knowledge of trained meshing short equipment and of received. typical machine shop equipment and of research involving fish and marine life. Applicants must also be experienced in programming of small com-puter systmes. E77-20 (4/27).

Exempt, Circulation Manager, in the Alumni Association will have responsibility for design execution for non-alumni circulation program for Technology Review: preparation of promotional materials; execute direct mail campaign and periodical advertising; prepare budgets. Administrative ability neutral Security and Company of the Compan ministrative ability required. Some experience in periodicals and circulation as well as college trainng preferred. E77-19 (4/27).

Exempt, Admin. Asst., in the Libraries Microreproduction Lab will have responsibility for office management: financial and statistical records, safety and security duties, personnel and purchasing functions. Duties include supervision of employer and processing of microfilming. of employes and processing of microfilming re quests: training of office personnel; management of accounts, billing, collection procedures; prepara-tion of financial reports; obtain security clearance; assure security of classified materials; interview, review performance of office staff; so cost evaluation for purchasing decisions. Experience in super vision, bookkeeping and accounting methods. Cost analysis and budget procedures required. Can-didates must also have written and spoken com-nunications skills, and a general knowledge of library reference materials and procedures. Typing and general clerical skills preferred. E77-16 (4/27).

Exempt, Inpatient Nurse, in the Medical Dept., MIT Infirmary to do primarily bedside nursing. May assist with first aid and emergency care when working on night shift. Applicants must be Mass. Registered Nurse. At least 1 year Medical/Surgical nursing experience preferred. Primarily 7am-3pm/3pm-11pm rotating shifts, but applicants must be able to work occasionall 11pm-7am shift. All shifts include every other weekend off. E77-17, [277.18] (197.18)

Admin. Asst. V in Urban Studies and Planning to perform various clerical and administrative duties to support the SPURS Program a special graduate program in urban planning. Will act as liaison with MIT departments (Foreign Students Office, Student Accounts, Medical); write and compile orientation materials to familiarize Program participants with MIT and the Boston area; act as liaison with agencies which support Program Fellows; as pants with MIT and the Boston area; act as liaison with agencies which support Program Fellows; assist in admissions process; maintain files; independently answer correspondence pertaining to Program; act as a resource person in securing services and other requirements of Fellows and their families (housing, doctors, schools, etc.). Excellent administrative skills, typing ability required. Applicants should have prior administrative secretarial experience. B77-58 (4/27).

Secretary V in the Treasurer's Office to handle a variety of duties related to legal, insurance and ac-counting matters: assist in budget preparation; research various subjects; type and edit reports; develop and maintain filing system; act as recep-tionist for office; organize and supervise work of part-time secretary; arrange meetings. Excellent secretarial skills and experience, preferably as a legal secretary, required. Ability to organize and carry out work independently also necessary. Shorthand helpful. B77-147 (4/27).

Secretary V in Aerospace Studies will handle a variety of duties to support Air Force ROTC program: provide policy information to prospective students; organize meeting agenda; follow up on various administrative matters related to program; independently compose correspondence; edit manuscripts, verifying content accuracy as necessary: maintain budget records: assist in budget sary; maintain budget records; assist in budget preparation; arrange luncheons and other social events. Excellent typing and general secretarial skills, the ability to learn military administrative practices required. Familiarity with MIT procedures desirable. B77-143 (4/27).

Sr. Secretary V to the Associate Director, Energy Lab will provide secretarial service to support several Laboratory research groups. In addition to general secretarial duties, position involves assisting in budget preparation; arranging for publication of research reports; maintain a project status log; assist in arranging office space for Lab members; supervision of another secretary; seminar and luncheon arrangments. Applicants must have excelent secretarial skills, and the ability to handle several projects simultaneously. Shorthand helpful. Either 5 years of progressively responsible secretarial experience, or college training and 3 years secretarial experience is necessary. B77-150 (4/27).

Secretary IV to Administrative Officer in Civil Engineering to handle a variety of duties in head-quarters office: answer questions of other departmental secretaries on administrative procedures and salaries; arrange appointments; prepare payroll reports; process student and staff appointments; maintain files; arrange luncheons and department social events. Good general secretarial skills, accuracy with figures, ability to deal with a wide variety of people required. MIT experience very helpful. B77-162 (5/4).

Secretary IV in Medical to provide secretarial support to OB/Gyn Clinic and reception support to Nutrition and Medical clinics: type correspondence; transcribe and type medical notes. Prepare various forms; coordinate surgery and other procedure schedules with area hospitals. Will also answer phones and handle patient appoint and related reception duties for Nutrition ment and related reception duties for Nutrition and Medical clinics. Excellent typing, the ability to transcribe medical terminology as well as previous secretarial experience required. 37½ hrs./wk. B77-157 (5/4).

Secretary IV to two Industrial Liaison Officers to type correspondence and reports; arrange meetings

between Program member company representatives and MIT faculty and staff; maintain client activity statistics and busy appointment calenders. Excellent typing and machine transcription skills required. Applicants should be able to work independently. B77-155 (5/4).

Secretary IV to three research staff members in the Energy Laboratory to type correspondence and technical reports; arrange appointments and travel; monitor research grant expenditures. May occasionally supervise temporary help. Applicants should have excellent typing skill plus ability to type technical material, good organizational skills and ability to handle several projects simultaneously. Three years secretarial experience or equivalent combination of training and work experience also necessary. B77-159 (5/4).

Secretary IV, Conference Secretary in the In-dustrial Liaison Program will be responsible for efregram unit be responsible for effective planning, organizing and running of all Program symposia and seminars; contact and coordinate activities with symposia participants; arrange rooms; type, edit and arrange for production of printed material; compile statistics; handle related accounting duties; arrange luncheon and other food service. Feedland othe rfood service. Excellent organization and secretarial skills required. Must be willing to help other dept. secretary when required. B77-152

Secretary IV, Travel Secretary, in the Industrial Liaison Program to arrange travel for Liaison Officers and faculty travelers: arrange cash advances; type itineraries, expense vouchers; maintain travel records and prepare related reports; handle clerical duties related to symposia and semianrs; maintain a small library; assist other dept. secretary as necessary. Excellent typing, accuracy with figures required. B77-153 (4/27).

Secretary IV to the Fluid Dynamics Research Group in the Department of Aeronautics and Astronautics: type reports, manuscripts, class material, correspondence; arrange travel, meetings; maintain files. Technical typing skill, ability to work under pressure required. B77-151

Secretary IV to an Institute Secretary/District Officer, Office of Research Development will assist in maintaining communication with alumni volunteers; answer general campaign related ques tions; coordinate the assembly of research data by affilated offices; do related research as necessary; amiated offices; do related research as necessary; perform all general secretarial duties: type; organize and maintain files; general office administration. Will also compose and edit correspondence. Excellent secretarial skills, the ability to deal with people in a professional manner required. Shorthand helpful. B77-149 (4/27).

Secretary IV in the Harvard-MIT Program in Health Sciences and Technology to perform general secretarial duties for faculty member: prepare class materials; arrange travel, meetings and seminars; maintain files and petty cash. May perform some duties under direction of senior secretary. Excellent secretarial skills including shorth and forced mixing and members that are serviced in the secretarial skills including shorthand/speedwriting and machine transcription abilities required. Applicants should have secretarial school training or at least 2 years secretarial experience and be able to work under pressure. Non-smoking office. B77-139 (4/27).

Secretary IV to two physicians in the Medical Department will handle a variety of duties including scheduling of appointments; coordination of required laboratory tests; transcription of case histories; and other secretarial duties as necessary. May chaperone routine physical examinations. Ex cellent typing, ability to transcribe medical terminology, sensitivity to patients' needs required. Secretarial experience, preferably in a comparable setting, also necessary. 37½ hrs./wk. B77-144 (4/27).

Secretary IV to Research Associate and professional staff in the Center for Policy Alternatives, a multi-disciplinary center which analyzes current national and international issues: type correspondence, reports from written draft and machine dictation arrange travel and meetings answer routine correspondence independently. Will be trained to use word processing equipment. Excellent typing, organization and machine transcription skills desirable. Shorthand or speedwriting desirable. B77-126 (4/27).

Secretary III-IV to two faculty members in Civil Engineering to type and edit course material, correspondence, reports; maintain files and supplies; monitor project accounts; arrange travel. Excellent typing skill required. Technical typing skill

Secretary III-IV in the MIT Associates Program to Secretary III-IV in the MIT Associates Program to handle general secretarial duties for two staff members who provide service to industrial firms participating in the Program. Will transcribe shorthand and machine dictation; arrange meetings and travel; perform related duties as necessary. Shorthand, English grammar skills, ability to organize work required. Some secretarial experience helpful. B77-138 (4/27).

Secreary III, part-time, to faculty and other members of a Mechanical Engineering research group will type letters, reports, occasionally in-cluding technical material; monitor accounts; order supplies. Excellent typing skill, knowledge of office procedures, ability to set priorities required Shorthand preferred. 25 hrs./wk. B77-161 (5/4).

Secretary III, part-time, in the Center for Advanced Engineering Study, Video Services area: answer phones; assist persons with video-related problems; order supplies; distribute and collect student time cards; type labels; maintain production schedule; handle a computerized billing process. Typing skill, ability to work with figures required. Experience in use of computer terminal helpful. B77-148 (4/27).

Secretary III in Physical Plant to handle general secretarial duties including typing of letters, budget reports; answer phones; sort, open and dispute the secretary with the contract of the secretary with the secretary with the contract of the secretary with the secretary win the secretary with the secretary with the secretary with the se budget reports; answer phones; sort, open and dis-tribute mail. May assist other secretary with typing. Excellent typing and general clerical skills as well as 1 year experience required. B77-141 (4/27).

Clerk-Typist III, part-time, in the Development Office to type; organize reports; file; xerox and occasionally run errands. Applicants must have ability to establish priorities; organize work load, maintain a flexible schedule; interact well with a variety of people and deal with confidential information. Typing skill required. Approx. 17½ hrs./wk. B77-156 (5/4).

Clerk III in Physical Plant to perform a variety of clerical duties including those required to replace departmental employees who are on vacation or absent: type; answer phones; handle accounts payable duties; issue keys. Will be trained to operate keypunch equipment. A high school graduate, or equivalent, with good typing and at least 1 year clerical experience required. B77-140 (4/27).

Hourly, Technician A (E-M) in the National Magnet Laboratory to assist in the construction, test and maintenance of complex electrical cryogenic and vacuum systems. Applicants should be graduates of 2 year day technical school, or equivalent, and have a minimum of 2 years applicable experience. Ability to use common machine tools and experience with vacuum systems also necessary. H77-70 (4/27).

Waiter/Waitress, hourly, in Faculty Club to set tables, take orders, serve food and beverages on banquet trays, clean and reset tables; dust chairs; wipe tables. Must be able to read and speak English. Experience helpful but not necessary. 11:00am-3:00pm, Mon.-Fri. H77-67; H77-68. 5:00pm-9:00pm on an on-call basis (approx. 12hrs./wk.) H77-69. All positions may include weekend and evening work. (4/27).

Cook at Endicott House, Dedham Mass., will cook Cook at Endicott House, Dedham Mass., will cook breakfast 6 days a week and assist in luncheon, dinner preparation; prepare dinner 1 night per week; assist in preparation and serving of large function; wash utensils used in cooking and cleaning kitchen. Expertise in preparing and presenting attractively a variety of breakfast foods and in baking, preparing desserts and hors d'oeuvres required. Must be punctual, reliable; will begin work at 6 am when preparing breakfast. Own transports. at 6am when preparing breakfast. Own transporta-tion required. 40 hrs./wk. irregular schedule. H77-71 (4/27).

The following positions were still available at Tech Talk deadline. The date following each position is the date of the most recent Tech Talk issue in which the position was described.

ADMINISTRATIVE STAFF:

A76-44, Applications Prog., Admin. Info. Syst. A76-52, Applications Prog., Admin. Info. Syst.

A77-3, Systems Prog., Info. Processing Serv.

A77-11, Asst. Dir., Admissions Off. (3/16) A77-13, Stud. Financial Aid Officer, Stud. Fin Aid (3/23)
A77-14, Consultant Trainer, Off. of Personnel
Devel. (4/13)

A77-15, Director, MIT Alumni Fund (4/13)

BIWEEKLY: B76-613, Sec. IV, Ctr. for Policy Alternatives

B77-25, Asst. Computer Oper. III, Off. of Admin. B77-25, Asst. Computer Oper. III, OII. of Admin. computer Serv. (2/2)
B77-50, Clerk III-IV, Sloan School (4/27)
B77-70, Sec. III-IV, Chemical Engineering (3/2)
B77-89, Clerk Typist III, Physical Plant (3/16)
B77-102, Sec. IV, MIT Sea Grant Prog. (3/23)
B77-114, Sec. IV, Medical Dept. (4/6)
B77-125, Sec. III-IV, Audit Division (4/13)

B77-123, Glerk III, Registrar's (4/27) B77-132, Sec. IV, Sloan School (4/27) B77-133, Sr. Clerk III, Registrar's (4/27) B77-136, Sr. Clerk IV, Libraries (4/27)

ACADEMIC STAFF: C77-4, Tech. Asst., Biology (4/6) C77-7, Asst. Librarian, Dewey Lib. (4/27) C77-8, Aero/Astro. Librarian, Aero/Astro Dept

C77-9, Humanities Librarian, Humanities (4/27)

SPONS. RES. STAFF:

D76-17, Biochemist, Res. Lab. of Elec. (2/25) D76-121, Res. Engineer, Energy Lab. (7/28) D76-123, Staff Biophysicist or Biochemist, National Magnet Lab. (7/28)

D76-126, Immunologist, Clinical Res. Ctr. (8/11) D76-182, Staff Engineer, Elec. Eng. & Comp D76-187, Postdoc. Scientist, Ctr. for Space Res

D76-188, Postdoc. Scientist, Ctr. for Space Res.

D76-232, High Energy Physics Res., Bates Linear Accelerator (1/5)
D76-233, High Energy Physics Res., Bates Linear Accelerator (1/5) D76-243, Metallurgist, National Magnet Lab.

(1/12) D76-244, Manager, Combustion Facility, Energy D76-246, High Magnetic Field Res., National

Magnet Lab. (2/9) R77-14, Staff Petrographer, Earth & Planetary Sci. (2/2)

R77-16, Prog. Mngr., Energy Lab. (2/9) R77-17, Systems Theory Res., Elec. Syst. Lab.

R77-22, Astro Physics Res., Ctr. for Space Res. R77-26, Planetary Radar Data Analysis, Earth &

Planetary Sci. (3/2) R77-33, postdoo R77-33, postdoc. res., Physics, Ctr. for Theoretical Physics (3/9)

R77-34, postdoc. res., Physics, Ctr. for Theoretical Physics (3/9) R77-35, postdoc. res., Physics, Ctr. for Theoretical Physics (3/9)

Theoretical Physics (3/9) R77-36, postdoc. res., Physics, Ctr. for Theoretical Physics (3/9) R77-37, High Energy Physics res., Bates Linear Accelerator (3/9) R77-39, Chemical Eng., Energy Lab. (3/9) R77-39, Sr. Flor For R77-43, Sr. Elec. Eng., Plasma Fusion Ctr.

R77-49, Res. Eng., Energy Lab. (3/23) R77-51, Sr. Res. Eng., Energy Lab. (3/23) R77-53, postdoc. res., Physics, Res. Lab. of Elec.

R77-54, Design Eng., National Magnet Lab. R77-67, Sr. Design Eng., National Magnet Lab.

R77-68, Tech. Writer, National Magnet Lab. R77-72, Instrumentation Physicist/Eng., Energy

ab. (4/27) R77-73, Plasma Physicist, National Magnet Lab. (4/27) R77-74, Plasma Physicist, National Magnet

Lab. (4/27) R77-75, Nuclear Magnetic Resonance Res., National Magnet Lab. (4/27)

EXEMPT:
E76-41, Principal Oper., Physical Plant (12/1)
E77-3, Mech. Shop Super., Physical Plant (1/26)
E77-5, Real Time Diganostic Syst., Prog.
Haystack Observatory (2/2)
E77-11, Resident House Mngr., Housing & Food
Sary (4/2)

E77-13, Eng. Asst., Energy Lab. (4/13) E77-14, Tech. Asst., Environmental Medical Serv. (4/13)

H77-29, 2nd. Class Engineer, Physical Plant

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

B77-108 Sec. IV R77-44 B76-636

Spons Res. Staff Sec. IV CANCEL Mechanist A Sr. Lib. Asst. IV H77-59 B77-88 R77-70 Spons. Res. Staff Sec. III CANCEL B77-80 Sr. Tech. Tech. Asst. Clerk III Sec. IV H77-44 Admin. Staff B77-145 Lib. Asst. III Acad. Staff Sec. IV CANCEL B77-59 H77-28 Firer Sec. III B77-142

The following positions are on HOLD pending final

E77-10 Metal Shop Super. Editor/Writer Admin. Asst. House Mngr. E77-10 Admin. Asst B77-135

Employment Q & A

By LEWIS A. REDDING & DONNA J. TAYLOR

Q. What services are available at the MIT Medical Department to employees? Is there a charge for these services and, if so, on what basis? A. The MIT Medical Department is a large group practice which provides a wide range of medical services, including many specialties, in medicine, surgery, psychiatry and dentistry. The goal of the Department is to offer easy access to high quality health care for everyone at the Institute.

One of the benefits MIT provides is that whether or not he/she has health insurance coverage, every employee is eligible for consultations with the Medical Department's internists, general surgeons, psychiatrists, social workers, nurse practitioners and physicians assistants at no charge. Employees are also eligible for admission to the MIT Infirmary in-patient facility while under the care of a Medical Department doctor; third-party insurance (such as Blue Cross) will cover that admission in the same way that it does a stay at any other licensed hospital.

Fees are charged for visits to specialty clinics in Ear, Nose & Throat; Dermatology; Gynecology; Orthopedics; Optometry and Opthalmology; Urology; Neurology; Nutrition; Dentistry. There is also a charge for some laboratory tests including x-rays, electrocardiograms, blood chemistries and others, although these are often covered by third-party insurance benefits, depending on the circumstances. If there is any question about charges or insurance coverage, it is best to ask the doctor or nurse at the time of your visit to the Medical Department.

The charges for visits to the specialty clinics and for laboratory tests are posted within the Department. They are generally about the same as or lower than those elsewhere. Employees who have the Master Medical Plan (Blue Cross-Blue Shield) receive the same coverage in the Medical Department as they would from another physician or medical facility. Further, by reason of the fact that they are employees of the Institute, as explained above, they may see doctors, nurse practitioners, physicians assistants and social workers at no charge.

Q. What is the advantage, then, of the MIT Health Plan?

A. The MIT Health Plan is a comprehensive pre-payment program which offers all of the services of the Medical Department (including specialty clinics, diagnostic tests, etc.), consultation with outside specialists when needed and hospitalization at either the MIT Infirmary or a general hospital for employees and their families, all without further charge (except for most Dental services). For those employees not enrolled in the Health Plan, the only service available for members of the family is the Pediatric Service on a fee-for-service basis (although the psychiatric and social work services are available for consultation).

Membership in the Plan costs only a small amount more than the Master Medical premium. For information, call Ms. Claire Recker at

Q. Is information about patients seen in the MIT Medical Department available to anyone else at the Institute?

When you go to the Medical Department, it is exactly the same as if you were going to your own private doctor. All medical information is confidential and will not be divulged to anyone at or outside the Institute without your permission. The Department must, of course, comply with legal court orders, but this is the case for any doctor or medical facility.

Mr. Redding is a personnel officer; Ms. Taylor is assistant benefits

60-Year Old Clip Recalls Campaign

A dollar doesn't go far today, or even \$8 million, for that matter, where an institution the size of MIT is involved.

Yet \$8 million was the goal of an MIT campaign fund in 1919, according to the Sunday rotogravure section of the Boston Herald on November 9, 1919.

A copy of the section, which contained a full-page picture spread on the growing Charles River campus, was brought to the News Office last week by an alumnus, Harry J. Kahn of Uxbridge, Mass., class of 1920.

Mr. Kahn, 78, who was a chemical engineering major, has had a long career in the ceramics field and thought he had retired in 1965.

US Savings Bond Program Offered

MIT is again offering employees a payroll deduction plan for the regular purchase of US Savings Bonds.

The payroll savings plan is an easy, safe and sure method of saving. Information fliers and payroll deduction authorization cards will be inserted in paycheck envelopes this month.

Persons who wish to start a bond savings program or those who wish to increase their present allotments should complete an authorization card and return it to the payroll officers listed below.

Series E bonds, purchased at 75 percent of face value, are available in denominations of \$25, \$50, \$75 and \$100. Interest on bonds held to maturity of five years is 6 percent and is not subject to Massachusetts income tax.

The MIT payroll office can accept authorizations to purchase savings, or to increase present allotments, at any time. On campus, contact David Burnet, x3-2723; at Lincoln Laboratory, contact Thomas Saxon, x665.

However, his son, Attorney John M. Kahn, submitted his father's name to the

International Executive Service Corps, an agency that sends "retired" executives overseas to lend their expertise to companies requesting such assistance.



Since then he has accepted assignments in Iran, the Philippines (four times), Thailand and Greece, serving as a consultant at tile factories. His last consultant assignment in 1974 was in Japan, Korea and the Philippines. The volunteer program was new

when he joined it-his first assignment was the agency's ninth. By the time he made his last trip three years ago, the agency had handled more than 9000 assignments.

Is he finally retired? Well, he said, he hadn't accepted any assignments recently..

Mr. Kahn visited MIT with his wife, Hannah, and grand-daughters, Meri-Jo and Susan Kahn.

Covert Elected

Dr. Eugene E. Covert, professor of aeronautics and astronautics at MIT, has been elected to the board of directors of ARO, Inc., which operates the Arnold Engineering Development Center in Tennessee under contract from the U.S. Air Force. ARO, Inc., is a subsidiary of Sverdrup Corp. Also elected was Dr. Raymond L. Bisplinghoff, former MIT dean of engineering, now vice president of Tyco Laboratories, Waltham, Mass.

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brks. 27K, exc cond, \$2,000 firm. Linda, x3

Breakthroughs and History Combine at Open House swimming pool will be open all

(Continued from page 1) Nature," and "The Ultimate Magic Show," two perennial favorites explaining aspects of physics and chemistry respectively will also be presented.

For those interested in memorabilia, MIT Historical Collections with MIT artifacts ranging from paintings to the radar instruments will be open at 265 Massachusetts Ave. Historical Collections also houses MIT's telephone collection, one of the most extensive anywhere.

The Safety Office and Campus Patrol will have exhibits and tours demonstrating techniques for protecting against dangers at work and in the home, and showing MIT's ambulance and rescue procedures.

A number of offices will be open, including the special assistants for minority affairs and for women and work, the Health Plan, and Admissions, to discuss their various activities and services.

For the sports minded, the lacrosse team will be playing Brandeis on Briggs Field at 2pm, and the crew will be racing against Dartmouth and Wisconsin on the River. Maggie Lettvin of television fame will demonstrate selfdesigned fitness from noon to 1pm in the Athletic Center and the

Briggs Field also will be the site

for a low-level rocket launch by the MIT Rocket Society from noon until 2pm, while on the other side of campus, the Tech Model Railroad will hold its own open house.

Culmination of the day will be a reception in the Sala de Puerto Rico, hosted by MIT President and Mrs. Jerome B. Wiesner and other members of the administration. Drawings for trips to Paris and the Alps and to Peru, as well as the Open House \$100 bond, will take place at the reception.



HELEN RAINE of MIT Graphic Arts will be demonstrating electronic typesetting during MIT's Employees' Open House Saturday, May 7.

Lectures End Bicentennial

(Continued from page 1)

This drop in worldwide birthrates is an historic change, he said, but "its pace is still far too slow." It would be possible, by accelerating the decline, to stabilize the world's population at 8 billion, instead of 11 billion, he said, adding that the difference of 3 billion is equal to 75 percent of the present world total of 4

Mr. McNamara said that governments must encourage couples "to desire small families" and then provide parents with "the means to implement that desire.'

In order to alter the social and economic environment that tends to promote fertility, he said, governments should try to:

- Reduce current infant and child mortality rates sharply.

Expand basic education and substantially increase the proportion of girls in school.

Increase the productivity of smallholders in rural areas, and expand opportunities for the poor in the

WGBH to Show Mime Videotape

"Illusions", a five minute videotape of a mime performance produced by MIT students during a 1976 IAP workshop on color video production, will be shown by WGBH-TV (Channel 2) at 11:30pm Sunday, May 8, as part of the "Artists' Showcase" program

The IAP course was funded by the MIT Council for the Arts. Although many of the students had some experience in video production, none had experience with the sophisticated equipment used for color produc-

The workshop was allotted studio space three times during January, 1976 and at each meeting completed a different video piece. "Illusions", the first work produced, was performed by Kenyon Martin and Drucilla Markle of the National Mime Theater. "Illusions" has been shown several times on the MIT Cable TV system and has been entered in a film festival in Sweden

MIT students involved in the workshop were:

Thomas M. Coate, sophomore in electrical engineering and computer science from Belmont, Mass.; Mark H. James, a junior in biology, Oneonta, N.Y.; Steven D. Krueger, sophomore in electrical engineering and computer science, New Braunfels, Tx; Paul A. Maki, junior in electrical engineering and computer science, Phoenix, Az; Douglas F. Pastorello, sophomore in electrical engineering and computer science, Belmont, Mass., and Brian L. Raila, senior in architecture, Baltimore, Md., who originated the project.

In addition, three undergraduates from other schools-Paul Andrews, Harvard, Dan Bloom, Boston University, and Jeremy D'Entremont, Colgate University, all at MIT in an IAP exchange program, participat-

Two MIT staff members also worked on the project. They were Thomas K. Norton, a research affiliate in the Laboratory of Architecture and Planning, and Harris D. Eigabroadt, supervisor of video facilities for the Center for Advanced Engineering Study.

- Put greater stress on more equitable distribution of income and services in the drive for greater economic growth.

And, "above all else," raise the status of women socially, economically and politically.

In the category of enabling parents to have smaller families, he said, the governments should:

sent contraceptive techniques and - Improve the delivery systems

Provide a broad choice of pre-

by which parents can get the services they wish.

- Expand present levels of research seeking better techniques and

In summary, Mr. McNamara said: "We know that eventually the world's population will have to stop growing. That is certain. What is uncertain is how. And when. At what level. And with what result. We who are alive today can determine the answers to those questions. By our action-or inaction-we will shape the world for all generations to

Senator Church, Chairman of the Senate Subcommittee on Energy Research and Development, in an address in the Compton Lecture Hall Monday evening (May 2) disagreed with President Carter's nuclear energy policy of foregoing development of the breeder reactor.

The policy, the Senator said, "will reduce, not enhance, U.S. influence in shaping worldwide nuclear poli-

"Instead of advancing the control of nuclear weapons proliferation,' he continued, "our self-imposed restraint runs the grave risk of leaving an international vacuum, which is an invitation to nuclear anarchy.'

He said the U.S. must take the lead in devising "an international framework which will enable all non-weapon states to meet their genuine energy needs with nuclear power, while minimizing the risk of nuclear weapons proliferation."

Earlier this year President Carter announced the United States would cease development of a broader demonstration project in Tennessee, cease reprocessing nuclear fuel for broader use, fund research and development in alternative nuclear programs which do not involve direct access to materials usable in nuclear weapons and increase substantially the number of conventional nuclear power plants fed by uranium rather than plutonium.

Noting that plutonium, the substance used in breeder reactors, is the material from which nuclear weapons are made, Senator Church agreed that the President's worry about proliferation of nuclear arms was legitimate.

He argued, however, that unilateral American renunciation of breeder technology will not stop foreign breeder development, nor contribute to the search for reliable energy resources.

"The Administration proposal is flawed for at least two reasons," he said

- "It does not take sufficient account of the energy vulnerability of countries lacking our resource

- "It fails to offer a satisfactory substitute for the world's diminishing supply of oil."

The breeder program is the only new energy technology, Senator Church said, "which holds out the promise of relieving Europe and Japan of an unremitting dependence

upon foreign-held fuel supplies." And, Senator Church added, not only will Europe and Japan proceed with breeder technology, they will seek to export it for commercial gain.

For these reasons, Senator Church said, the U.S. energy policy must feature reprocessing of spent fuel in the near future, "accompanied by the research and development necessary to enable us, by the early 1990's, to place on the market some form of breeder technology."

The MIT lecture series was started during the Bicentennial year as part of a program of studies to create better understanding of how to deal with changing world conditions the United States will face in its third cen-

The series opened with Roy Jenkins, the President of the Commission of European Communities. Other speakers, besides Mr. Mc-Namara and Senator Church, were Willy Brandt, former West German Chancellor and chairman of his nation's Social Democrat Party; Mc-George Bundy, President of the Ford Foundation; David A. Hamburg, President of the Institute of Medicine of the U.S. National Academy of Sciences; Sigvard Eklund, Director General of the International Atomic Energy Agency; Roberto de Oliveira Campos, Brazilian Ambassador to Great Britain; Canon Burgess Carr, General Secretary of the All Africa Conference of Churches; and Georgi A. Arbatov, director of U.S. and Canadian Studies of the Academy of Sciences of the Soviet Union.

The series was planned by a committee which included Manson Benedict, Jagdish N. Bhagwati, Lincoln P. Bloomfield, John M. Deutch, Bernard T. Feld, Ted R.I. Greenwood, Amelia C. Leiss, George W. Rathjens, Walter A. Rosenblith, Jack P. Ruina, Eugene B. Skolnikoff, Leon Trilling and Norman C. Dahl, chairman.

Sculpture

(Continued from page 1)

by Frank Lloyd Wright to whom he was apprenticed for two years. Two of his major concerns-scale and structure- mirror the play between sculptural and architectural interests. His involvement has remained grounded in the traditional sculptural issues engendered by the late 1950s work of Gabriel Kohn and David Smith's well-known "Cubi" series rather than in the technical and theoretical aspects of "systems aesthetic" of concern to some younger artists involved in the Primary Structures movement. Tony Smith's work is environmental, at once carving out its own spatial territory and declaring a new sense of surroundings through which the viewer is invited to enter.

Like the influential sculptures Marriage and Cigarette, For Marjorie was designed during the early '60s, a pivotal period in the history of a reductivist sculpture.

Smith came to MIT in 1975 to review possible sites and suggest an appropriate piece. The fire-hydrant red sculpture was purchased with the one percent art allotment for New House.

When the other housing unit designated for the Memorial Drive side of West Campus is completed, plans are to site the sculpture there. The work's large archway with symbolic portal connotations would serve as entrance to the complex.

This Week in Sports

Lacrosse Team Posts Victorious Season

by JILL A. GILPATRIC

Director of Sports Information The MIT lacrosse team (6-4) is in

the midst of its first winning season since 1969. In last week's action, the Tech team overpowered Colby College 16-2 on Wednesday. On Saturday, the Engineers brought home a big win over Springfield with a score of 13-5. The other four victories this spring were a 10-7 win over Kean College (N.J.), Babson 9-7, Holy Cross 9-2 and Merrimack 14-3.

Senior goalie Jeff Singer (Plainview, N.Y.) has been outstanding this season, having made 161 saves while only allowing 68 goals for a percentage of .703. In MIT's two wins last week, he made a total of 27 saves and only let in 6 goals. Jeff's performance this season tops off an impressive athletic career at MIT. He has been Tech's starting goalie for the past three years and has made All-New England Honorable Mention twice and All-Snively Division Honorable Mention in his freshman and sophomore years. Last year he was selected to the All-Snively Division First Team. Jeff has also been team MVP for the last two years and has a very good chance of receiving that honor again this year.

Senior Roger Renshaw (Havertown, Pa.), midfield, leads the team in points made, with 13 goals and 20 assists. He made 2 goals and 4 assists against Colby and 1 goal and 4 assists in the Springfield game. Sophomore Phil MacNeil (Pasadena, Cal.) is the team's second leading scorer with 24 goals and 3 assists. Sophomore Al O'Connor (Collinsville, Conn.), attack, made a total of 11 points last week with 4 goals against Colby and 6 goals and 1 assist versus Springfield. This brings his season total up to 16 goals and 9 assists. Senior Steve Hyland (Danvers, Mass.) has also been having a good season, scoring 13 goals and 9 assists.

The Engineers have only two games left this season. On Wednesday they travel to Westfield State at MIT in the last game of the year.

and on Saturday they meet Brandeis

Caradon to Speak

Lord Caradon, well-known British diplomat, will discuss "Three Present Dangers to International Peace" in a Center for International Studies seminar today (Wednesday, May 4) from noon to 2pm in the Millikan Room (E53-482).

Lord Caradon was Minister of State for Foreign and Commonwealth Affairs and United Kingdom Representative at the United Nations from 1964 to 1970. Since then he has performed assignments for the United Nations in Africa and else-

The MIT outdoor track team (3-1) placed fifth in the Annual Greater Boston Track and Field Championships at Boston College this past Sunday. But the big stories were the individual performances of senior Frank Richardson (Sac City, Iowa) and junior Reid Von Borstel (Edmonton, Alberta). Richardson, a three-time All-American, won the G.B.C. Three-Mile in a MIT school record of 13:50. In the high jump, von Borstel placed second on fewer misses, but leaped to another new MIT record of 6'8".

The Tech cross country, indoor and outdoor track teams posted an overall 18-3 record and produced several new varsity records. The team's next competition is the Annual Outdoor Eastern College Division Championships at Westfield State this Saturday, May 7.

Obituaries

T.A. St. Sauveur

Funeral services for Thomas A. St. Sauveur, 54, a heat and vent mechanic in Physical Plant who died Sunday, May 1, will be held today (Wednesday, May 4) at 10am at the Daniel O'Brien Funeral Home, 907 Massachusetts Avenue, Cambridge.

A former Cambridge resident, Mr. St. Sauveur lived in Melrose at the time of his death. He came to work at MIT in 1971

He is survived by his wife, Ruth E. (Dungan); four sons, David T. St. Sauveur, Michael R. St. Sauveur, Edward P. St. Sauveur and Phillip J. St. Sauveur; and a daughter, Stephanie J. St. Sauveur. He is also survived by four brothers and three

R.L. DiPietro

Romeo L. DiPietro of Medford, a night custodian in Physical Plant, died Wednesday, April 27, after a long illness.

Mr. DiPietro, 57, had been an MIT employee since 1961. One brother, Alfred DiPietro, is currently an MIT employee and another brother, William A. DiPietro, is retired from MIT. He is also survived by three sisters, Helen E. DiPietro, Josephine T. DiPietro and Margaret M. DiPietro. They all live in Medford.

H.A. Moore

Herbert A. Moore of Brookline, 76, a retired guard at Draper Laboratory, died Wednesday, April 27. Mr. Moore started working at MIT in 1943 and retired in 1965. He is survived by his wife, Theresa L. (Cole).