Massachusetts Institute of Technology



April 19, 1978 Volume 22 Number 31



With music and merriment the MIT Community Service Fund will open its tenth anniversary campaign today (Wednesday, April 19), with hopes of raising at least \$35,000 or more to support MIT volunteers in their community activities.

To help celebrate the anniversary, some of MIT's wellknown groups will be performing around the campus. The Chorallaries will sing in the Maclaurin Lobby; the Logarhythms in the Rogers Lobby where the Institute Jazz Combo will also perform. Members of the MIT Juggling Club and Unicycle Club will entertain throughout the lunch hour in the Maclaurin Lobby.

Meanwhile a continuous videotape on the cable will show passersby various activities supported by the Community Service Fund. Booths in the Rogers and Maclaurin Lobbies will be staffed by CSF trustees to explain the purposes and needs of the Fund. CSF coffee mugs and astronomical posters will also be sold at the booths.

During its 10-year history, CSF has raised and distributed nearly \$500,000 to activities benefitting those in need in Cambridge and Boston. More than half of the total amount was contributed by individual donors; the remainder came through special gifts from foundations, usually designated for a particular agency.

The Community Service Fund seeks projects in which grants for equipment, supervision, administration and service can give special leverage to efforts of MIT volunteers. It also offers seed money for innovative proposals by members of the MIT community needing financial aid. (See related story, page 2.) CSF is governed by a board of

CSF is governed by a board of trustees representing all areas of the Institute. The trustees meet monthly during the academic year to review requests for funding and plan other CSF activities such as The Trip lottery and poster sales. Major allocations to CSF-supported agencies are made each year in May.



The day is looking up for Gene Judge of Quincy, a roofer riding a bosun's chair while caulking windows on Building 9.

## MIT Wins Lion's Share Of NSF Fellowships

Thirty-two out of a total of 490 National Science Foundation (NSF) Graduate Fellowships have been awarded to MIT seniors and graduates this year, putting MIT ahead of Harvard University, Stanford University and the California Institute of Technology in number of students awarded the ellowships. More than dents across the nation competed for the fellowships. Seven among the 32 will continue at MIT for their graduate studies where they will be joined by 48 NSF fellows from other universities who have chosen to do their graduate work at MIT. The NSF Fellowships are awarded for three years of graduate study and carry a stipend of \$3,900 per year, plus an education allowance of \$3,400 provided in lieu of tuition and fees. The Fellowships may be used over a five year period so that students may elect to accept teaching or research fellowships, postponing use of the NSF funds. Of the 32 from MIT who won the fellowships, seven are seniors in the School of Engineering and 16 are seniors in the School of Science. Nine are first year graduate students at MIT and at other universities. They are:

Parker, Colo. Gary G. Cote, a senior in biology from Enfield, Conn. Harold W. Kamins, a senior in chemical en-

Harold W. Kamins, a senior in chemical en-(Continued on page 8)

Gyorgy Marx to Visit DSRE

## Electrophoresis Meeting Draws More than 200

More than 200 basic and applied scientists from throughout the world are at MIT today through Friday (April 19-21) for an international conference on new developments in electrophoresis—the physical analysis procedure of separating substances into their constituent parts by applying an electric force.

The conference was organized by the MIT Department of Nutrition and Food Science and by the MIT Industrial Liaison Program. General chairman is Dr. Nicholas Catsimpoolas, MIT associate professor in the Department of Nutrition and Food Science.

A series of 25 formal papers will be presented during the conference by speakers from throughout the US as well as Japan, Belgium, West Germany, Sweden and England. In addition, another 34 presentations will be made during simultaneous sessions Wednesday afternoon. Dean Robert A. Alberty, School of Science, MIT, will give welcoming remarks.

Electrophoresis has become a powerful tool for separating and identifying biological molecules (proteins, nucleic acids) and living cells in recent years. New techniques (isoelectric focusing, isotachophoresis and electrophoretic light scattering) have had important effects on enzymology, cancer research, immunology, bacteriology, hematology and clinical chemistry.

"In addition, the recent development of advanced electrophoretic instruments has opened up new areas for the application of the technique to demanding analytical problems in industry and in clinical laboratories," Dr. Catsimpoolas said. "In this conference, leading authorities will be describing different techniques from high resolution microtechniques to bench scale preparations of biological materials."

## David Botstein to Receive Lilly Microbiology Award

Dr. David Botstein, associate professor of genetics in the Department of Biology at MIT, has received the 1978 Eli Lilly & Company Award in Microbiology and Immunology.

This prestigious award, given each year to a scientist under 40 years of age for outstanding research in microbiology or immunology, will be presented to Professor Botstein at the 78th annual meeting of the American Society for Microbiology. Professor Botstein will receive a medallion, transportation expenses to the ASM meeting, and a gift of \$2,000.

Dr. Gene Brown, head of the MIT biology department, said, "In a relatively short period of time, Dr. Botstein has become a leader in the field of genetics, with an international reputation. He made his early reputation with elegant work on the method of packaging DNA during the infection of bacteria by bacterial viruses and on the regulation of gene expression in bacterial viruses. His more recent efforts on the study of gene regulation in yeast are also making a big impact in this field."

The American Society for Microbiology calls Professor Botstein's work "an outstanding example of the continuing value and importance of thorough, imaginative research with bacteria and their viruses and plasmids," and has said that it expects "many more significant discoveries" to issue from his laboratory.

Professor Botstein's research has dealt with the regulation, genetics, and DNA metabolism of a phage—a virus that grows on bacteria—called P22. He has successfully explained mechanisms by which activity of the phage's genes can be repressed, and illuminated the structure of P22 DNA and the assembly of its pro-

(Continued on page 8)

### Solow Lectures Address Inflation

Dr. Robert M. Solow, Institute Professor and professor of economics, will deliver the first of two Killian Award Lectures on the topic, "What We Know and Don't Know About Inflation," on Thursday (April 20) in Rm. 54-100 at 4pm. The second lecture will be given at the same time and place on Thursday, April 27.

### Faculty to Meet

A regular meeting of the faculty will be held today (Wednesday, April 19) at 3:15pm in Huntington Hall (Rm. 10-250). Agenda items include:

-Motion and report from the Committee on Nominations.

-Motion to clarify the wording of Regulation 2.41, concerning registration.

-Report on a new program in science communication.

-New PhD program in human and clinical nutrition.

-Progress report on the development of a program in Science, Technology and Society.

-Copyright of theses.

Discussion of the implications of the new federal law affecting retirement.

Frederick W. Huffer, a senior in mathematics from Scottsdale, Ariz.

William L. Kath, a senior in mathematics from

Academician Gyorgy Marx, head of the department of atomic physics at the Eotvos Lorand University, Hungary, will speak on "Quantum Mechanics in the High School," in the Division for Study and Research in Education (DSRE) on Wednesday, April 26, from noon to 2pm.

Professor Marx has been instrumental in creating new methods of teaching physics which have proved highly successful in Hungarian high schools. His lecture on these new teaching techniques is part of the regular DSRE seminar series, which is open to the MIT community.

Professor Marx is president of the Hungarian Physical Society, a member of the Hungarian Academy of Sciences and is head of the School Science Project for Hungary. His visit to MIT is part of a one-month inter-academy exchange program sponsored by the National Academy of Sciences. He will be on the east coast for four days only.



AN MIT CHAIR and a subscription to Tech Talk will go with Kenneth C. Browning, associate dean for student affairs, to Grinnell College, Grinnell, Iowa, where he will become vice provost, effective May 1. At a party last week at the Faculty Club Dean Carola Eisenberg, left, commended Mr. Browning for his calm, honest and open handling of housing and student problems during his tenure in the Dean's Office, with Jane Browning, right, looking on.

### Pre-Retirement Talks to Begin

The MIT Benefits Office has announced the seventh annual series of pre-retirement seminars for members of the community both on campus and at Lincoln Laboratory.

The seminars are open to all members of the community and are advised for those 55 years old and older. Persons planning to retire this year are particularly urged to attend.

Seminars on campus will be held 2:30-4:30pm; those at Lincoln will be 9:15-11:15am.

#### CAMDUG

	CAMPUS
Tuesday, April 25 Bush Room (10-105)	Social Security, Neil Winston, Social security consultant.
Tuesday, May 2 Rm 66-360	Institute benefits for faculty and staff, Richard P. Marvel, benefits officer, and Nancy R. Woodman Urquhart, associate benefits officer.
Tuesday, May 9 Bush Room (10-105)	Medicare and Medex, Kathy Zolner, Blue Cross-Blue Shield representative; Health, Edward S. Rendall, MD, MIT Medical Department.
Tuesday, May 16 Bush Room (10-105)	Financial Planning, John E. Fedele, Estate Planning Department, New Eng- land Life Insurance Co.
Tuesday, May 23 Bush Room (10-105)	Institute benefits for hourly, biweekly and exempt employees, Nancy R. Wood- man Urquhart, associate benefits offi- cer, and Richard P. Marvel, benefits officer.
LI	NCOLN LABORATORY
Thursday, April 27 Rm A-166	Social Security, Neil Winston, Social Security consultant.
Thursday May 4	Medicana and Meday Kathy Zalpon

Rm A-166	Security consultant.
Thursday, May 4 Rm A-166	Medicare and Medex, Kathy Zolner, Blue Cross-Blue Shield representative; Health, Charles S. Keevil, MD, MIT Medical Department.
Thursday, May 11 Rm A-166	Financial Planning, John C. Fedele, Estate Planning Department, New Eng- land Life Insurance Co.
Thursday, May 18 Rm A-166	Non-staff Institute benefits, Nancy R. Woodman Urquhart, associate benefits officer.
Rm A-254	Staff Institute benefits, Richard P. Mar- vel, benefits officer.

### **Student Projects** Win CSF Funds

The MIT Community Services Fund (CSF) has allocated funds to three selected student-initiated community projects in response to proposals submitted by Alpha Phi Omega national service fraternity (APO); by Kurt Silverman for Just-A-Start, and by MIT Ecology Action.

APO was awarded \$200 for cost of supplies (20 gallons of house paint) in connection with a fourday service project at Trinity Camp, associated with Trinity Neighborhood House in East Boston, and open to the MIT community. Dates for the project are April 15-18.

Kurt Silverman, a senior in economics, submitted a proposal for a slide projector and screen for Just-A-Start, a program dedicated to the employment and educational advancement of Cambridge youth, which has always had great MIT student involvement.

**MIT Ecology Action will receive** the \$175 requested for the Alternative Energy Slide Shows in which MIT students and staff will speak to community groups about alternative energy in connection with Sun Day, the international celebration of the use of renewable energy resources to be held May 3.

CSF, created in 1968 by faculty



#### Announcements

Framing Workshop\*\*-with Lista Duren, author of Frame It., Sat, Apr 29 & May 6, 1-5pm, Student Center, Rm 425. Bring art work to be framed. Registration, \$6.00

Sun Day Photography and Art Contest\*\*-En-tries will be accepted at Ecology Action office, Student Center basement during regular office hours and between 12noon and 5pm Friday-Sunday, Apr 21-23, and Monday, Apr 24, Sunday, Apr 21-23, and Monday, Apr 24, 8:30-10am. Info: call x3-7922, eves Bob Chen 628-4319.

Course VI Social Hour\*\*-for all EECS faculty, staff and students. Tues, Apr 25, 3:30-5pm, Rm 26-217. Refreshments

#### **Deadline** Extended

The deadline for nominations for the Goodwin Medal for conspicuously effective teaching by a graduate student has been extended. Nominations are now due in the Graduate School Office, Rm 3-136, by Friday, Apr 21.

Final Examinations-All students must obtain examination schedules at the Information Cen-

mics department\*\*-Open house for freshmen interested in finding out about a possible major in economics. People coming from Professor Solow's Killian Lecture welcome. Freeman Rm, E52-391, Thurs, Apr 20, 4-6pm, Refreshments

1979-80 Fulbright awards for university teaching and advanced research—applications are due June 1. Information and application forms available from the Council for International Exchange of Scholars, Eleven Dupont Circle, Washington, DC 20036

Basic Sailing Shore School\*\*-every Monday and Thursday, 5:15pm throughout spring season at the MIT Sailing Pavilion opposite Walker Memorial on Memorial Dr. Classes open to all members of the MIT community interested in learning to sail.

Spring Series Racing\*\*-beginning Monday, Apr 10, 5:30pm, continuing through spring. Racing skipper rating required for participa-

Conversation Exchange\*\*-The MIT Wives' Group has compiled a list of international women interested in exchanging foreign lan-guage conversation for English conversation Contact: Karen Devine, x3-2916.

Faculty members who are interested in serving as freshman advisors in '78'79 should contact the Office of Freshman Advising, Rm 7-103, x3-6771.

I. Austin Kelly III Competition\*\*-Deadline for submissions, Fri, Apr 28, 5pm. Two prizes, with an award of \$250 each, will go to the best scholarly/critical papers in Anthropology, Archaeology, History, Literary Studies and Musicology. Minimum length, 4,000 words. Further information from the Course XXI office, 14N-305, x4446.

Freshmen-be sure to send Course Selection card to the Registrar's office by April 24.

The Student Center Committee will start scheduling rooms in the Student Center for the summer on April 15, and for the fall term on May 1. Submit applications in W20-345.

#### **Club Notes**

Association for Women Students\*\*-Weekly meetings, Saturdays, 4pm, Rm 3-310. MIT community welcome

MIT Bridge Club<sup>4</sup>—ACBL duplicate open pairs game Thursdays, 7pm, Rm W20-473. Info: 494-8593. Admission .25.

MIT/DL Bridge Club\*\*-ACBL duplicate bridge Tuesdays, 6pm, Rm W20-473.

MIT Chess Club\*-Meetings, Saturdays 1-6pm, Rm W20-407. Speed chess, analysis and tournaments. Info: Brad, x5-8156.

MIT Ecology Action\*\*\*-General meeting, Wed, Apr 19, 5:15pm, Ecology Action office, Student Center basement. Work meetings, discussion of Sun Day logistics and Bike Week,

MIT Folk Dance Club\*\*-International: Sun-days, 7:30-11pm, Sala de Puerto Rico (Apr 23 only, Lobby 13). Balkan: Tuesdays, 7:30-11pm, Student Center Rm 491. Informal: Fridays, noon-2pm, Kresge. Israeli: Wednesdays, 7:30-11pm, Sala de Puerto Rico (Apr 19 only,

days, W20-473, Thursdays, East Lounge, 2nd Floor, Student Ctr, 8pm. Players of all ranks, play games, sometimes informal talks on strategy & tactics. Instruction available for

for community. Info: x3-4343.



Kundalini Yoga<sup>•</sup>—A rediscovered technology of consciousness; come join the MIT Kundalini Yoga Group with Gurucharan Singh Khalsa to exercise, meditate, and get high. Thurs, 5:30pm, Rm 4-145. Info: Dan Buchholz, 778-0445

MIT Motorcycle Club\*\*-Regular meetings first Tuesday each month beginning March 7, 7:30pm, Muddy Charles Pub (50-110). All old members and any interested newcomers welcome. Info: x3-6924.

T'ai Chi at MIT<sup>®</sup>-Meetings Thursdays, 4:15-6:15pm, Rm W20-407. Prof. E. Liu, direc-tor. All welcome.

#### Placement

The following companies will be interview ing during the time period covered by the cur-rent Institute Calendar. Those interested may sign up in the Career Planning and Placement Office, Mon-Fri, 9am-3pm, Rm 12-170, x3-4733. Wednesday, April 19-General Electric Co/ Bedford; Sonicraft, Inc.

Thursday, April 20-Westinghouse Electric Corp.

Friday, April 28-Automation Industries, Inc. Wednesday, May 3-Texas Instruments, Inc/ Semiconductor Group

#### New UROP Listings

For more detailed information on UROP opportunities listed, MIT undergraduates should call or visit the Undergraduate Research Opportunities Program Office, Room 20B-141, Ext. 3-5049 or 3-4849 unless otherwise specified in the listing. Undergraduates are also urged to check with the UROP bulletin board in the main corridor of the Institute. **Chemistry of Chromosomes** 

A position is available for a student who is in-terested in the chemistry of chromosomes. The aim of this project is to isolate functional units of chromatin, the genetic material of higher organisms, and carry out a variety of studies of its properties. This work would involve learning a number of different biochemical techniques concerning purification and isola-tion and the student would also learn a number of chemical and physical studies which will be used to characterize these materials. Contact Prof. A Rich, 16-735, x3-4715.

Beth Israel Hospital The opthalmologist examines the fine structures of the ey with a slit lamp. A microscope, attached to the slit lamp, provides magnifi-cation of the observed structures. Unhappily, the system is magnification limited because of the fine tremor of the eye. Thus, increased magnification enhances the tremor and confuses the imagery. In this project an attempt is being made to modify a slit lamp with a servo-device that will move the light source and optics of the slit lamp in synchrony with the ocular tremor to provide a steady view for the opthalmologist.

Macromolecular Structure This project involves determination of the three-dimensional structure of macrom lar proteins and nucleic acids through the use of x-ray diffraction techniques. The participating student will learn how to crystallize these molecules and will also learn a variety of x-ray diffraction methods and have the opport tunity to apply them, using both x-ray crystallographic and computing techniques. Contact Dr. A. Wang or Dr. G. Quigley, 16-741, x3-4710.

High Voltage Research Laboratory The determination of electric fields is often accomplished by numerical relaxation of Laplace's equation at a finite number of points over a region of interest. It is proposed to develop new techniques for electric field analysis including charge simulation methods and comparative studies of two-dimensional rsus three-dimensional configuration. Contact Chathan Cooke, N-10, x3-2591.

**BASEMENT VIDEO PRESENTS** FEEDING THE CABLE Produced by the MIT Film Section. Channel 12: 6.041-6.431, Professor Drake Re-view Tape D 4. "Transforms, Properties of Poisson Process" 6.041-6.431, Professor Drake Re-view Tape D 5. "Bernoulli and Poisson Processes, Random Incidence' Review Tape D 4 Review Tape D 5 Review Tape D 4 Review Tape D 5 Friday, April 21 Channel 8:

VIDEO CLUB PRESENTS: 11am-12noon

#### **Religious Activities**

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

Passover Services-Friday, April 21-Reform services: 6:00, Blue Room-Walker Memorial; Orthodox services: 6:00, Kosher Kitchen, 50-005 Walker Memorial; Saturday, April 22-Orthodox services, 8:30am, Bush Room 10-105; Orthodox services: 7:15pm, Kosher Kitchen, 50-005 Walker Memorial; Sunday, April 23—Orthodox services: 8:30am, Kosher Kitchen, 50-005 Walker Memorial; Thursday, April 27-Orthodox services: 6:15pm, Kosher Kitchen; Friday, April 28-Orthodox services: 8:30am, Kosher Kitchen; Orthodox services: 6:30pm, Kosher Kitchen; Reform services: 7:00pm, MIT Chapel; Saturday, April 29–Orthodox services, 8:30am, Kosher Kitchen; Conservative services: 10:00am, Basement of the Hillel office, 312 Memorial Dr.

MIT Baha'i Association-Prayers, every Friday, 7:30am, MIT Chapel. Info: Mahmoud,

Christian Service\*-Sundays, 10:45am Chapel. Singing, preaching, sometimes testi-monies, prayer following. All invited.

MIT Hillel Services\*—Daily Minyan: 8am, Rm 1-136. The Downstairs Minyan (Conservative Egalitarian): Saturdays, 10am, 312 Memorial Dr. Reform: Fridays, 6:30pm, Chapel. Or-thodox: Fridays, Sundown, Kosher Kitchen (50-005); Saturdays, 9am, Bush Rm (10-105).

Interdenominational-Worship and holy communion, Wednesdays, 5:05pm, Chapel, spon-sored by Lutheran-Episcopal Ministry. Get ac-quainted supper following. Info: Randy Clark, x3-6921.

MIT Islamic Society\*—Friday Prayers held in Kresge, Rehearsal Rm B, 1pm.

Prayer Time\*\*-Bible class, Fridays, 1-2pm Rm 20E-207, guest speakers, music, refresh-ments. Miriam R. Eccles, founder-director, Alpha and Omega Missionary Society.

MIT Vedanta Society\*-Meditation and dis-courses on the Gita by Swami Sarvagatananda, of the Ramakrishna Vedanta Society of Boston. Fridays, 5:15pm, Chapel.

## **Echoes**

#### April 16 - 22

#### 50 Years Ago

Tech Show '28, "Half a Man," played to a full house at Smith College in Northampton, Mass. A Smith reviewer expressed "admiration of the chorus' lower extremities and wonder at the weird costume combinations."

Jerome B. Geisman, '29, was elected the new general manager of VOO DOO for the coming year.

#### 40 Years Ago

The April issue of the Tech Engineering News will feature articles on Rocket Engineering, Television, The German Four Year Plan, and Weather Forecasting. Howard C. Lawrence, '38, investigated television for his thesis at the Institute and will point out what advancements have been made in this field and what we may expect from them.

#### 25 Years Ago

The MIT Glee Club, the Choral Society and the Boston Pops Orchestra will present "Tech Night at the Pops." Professor Liepmann of MIT will play in the Boston Pops Orchestra in the violin section as well as conduct the combined

# Fri-Mon, Apr 21-24. Lobby 13).

MIT Go Club\*\*-Regular meetings, Wednes

Hobby Shop\*\*-Mon-Fri, 10am-6pm, Rm W30-031. Fees: \$10/term for students, \$15/term

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vote to raise and allocate funds to help MIT people interested in contributing their time and talent to the Greater Boston/Cambridge communities, will celebrate its 10th anniversary with the kick-off of its Spring Campaign April 19.

### Sangam Plans Lecture Series

Sangam, the Indian student's organization, will sponsor a series of lectures on the Bhagavad Gita and Atma Bodh by the vedantic scholar, Swami Chinmayananda beginning Friday, April 21.

Ten lectures on the Bhagavad Gita will be given at 7:30pm in Rm. 407, the Student Center, beginning on April 21. A morning series of lectures on Atma Bodh will be held at 6:30am in the Student Center Mezzanine Lounge, beginning Sunday, April 23.

Page 2, Tech Talk, April 19, 1978

ter, Rm 7-121. Examinations not listed or a conflict in examinations must be reported to the Schedules Office, E19-338, by Friday, Apr

Pennsylvania Residents\*\*-Filing deadline for renewal applicants for the Pennsylvania State Grant is May 1. All MIT students eligible for this grant must apply. Only unsuccessful applicants will be provided the missing funds from MIT scholarship sources. Contact the Regional Director at (717) 787-1490 if you have questions about the program.

Medical School Applicants for 1979\*\*-Discussion of application process Thurs, Apr 20, 4pm, Rm 4-149

Registration material for the 1978 Summer Session will be available Monday, Apr 24, at the Registrar's Office. Registration forms must be filled in and returned to the Registrar's Office by Wednesday, May 10.

1978 Summer College Work Study Program on and off campus<sup>99</sup>—All students interested in participating should obtain Request for Participating Form from the Student Employment Office, Rm 5-119, as soon as possible. Forms must be returned to the office no later than April 25.

R/O '78 Activities-Scheduling will begin on April 17. Applications are available in the R/O office, 7-105. For more information call Dave Plotnick, d17213, or leave message at R/O office, x3-6771

April 19 - 25, 1978

Wednesday, April 19

Channel 8 11am-12noon

12-2:30pm

2:30-3:30pm

3:45-5pm

BASEMENT VIDEO PRESENTS COMMUNITY SERVICE FUND Program describes some of the Program describes some of the many community-oriented pro-jects funded by the MIT Com-munity Service Fund. FEEDING THE CABLE Produced by the MIT Film Section. CAMBRIDGE FORUM Seminar recorded March 29, 1978, as part of the Forum's "America in the Year the Forum's "America in the Year 2000" series. Cablecast from Har-

4:30pm 2000 series. Cablecast from har-vard University. LIVE FROM HARVARD UNI-VERSITY: Dr. Max D. Cooper, University of Alabama. Title to be announced. Presented by the Com-mittee on Immunology, HMS. Channel 12: 3-8pm

LIVE FROM 54-100; MATHIS MEMORIAL LECTURE: "Foun-dation Engineering for Offshore Gravity Platforms" by Dr. Kaare Hoeg, Director of the Norwegian Geotechnical Institute.

Thursday, April 20

Channel 8 11am-12noon

Channel 12:

4pm

lery." COMMUNITY SERVICE FUND 12-2:30pm (See 4/19, 12noon, for details.) RHETORIC & JOURNALISM (21.940) with Ed Diamond. Re-corded 4/7/78. 3-4pm

'Richard Smith in Hayden Galmusical clubs lery." COMMUNITY SERVICE FUND

VIDEO CLUB PRESENTS: "An-thropological Funnies" A grab bag of scenes shot in Madurai, India,

by Bill Crawford in 1977.

HMS

hour

by Bill Crawford in 1977. COMMUNITY SERVICE FUND (See 4/19, 12noon, for details.) RHETORIC & JOURNALISM (21.940) with Ed Diamond. Re-corded 4/1/78. LIVE FROM HARVARD UNI-VERSITY: "A Comparison of Mono and Dipeptidyl Carboxypep-tidases" by Dr. James Riordan, HMS.

6.041-6.431, Professor Drake Re-view Tape D 7. Review of first 5 chapters of Probability text. Tape will be repeated every hour on the

VIDEO CLUB PRESENTS "Richard Smith in Hayden Gal-

lery." COMMUNITY SERVICE FUND

(See 4/19, 12noon, for details.) BASEMENT VIDEO PRESENTS

LIVE FROM THE FILM SEC-TION: "Feeding the Cable." Film and videotape from everyday and not-so-everyday life.

(See 4/19, 12noon, for details.) RHETORIC & JOURNALISM (21.940) with Ed Diamond. Re-corded 4/7/78.

Prepared by Marcia Conroy, MIT Historical Collections, x4444.

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VIDEO CLUB PRESENTS: "Richard Smith in Hayden Gal-12-2:30pm 3:30-4:30pm 4:30pm

12-2:30pm

3-4pm

Channel 8:

12-2:30pm

3-4pm

10am-12noon

7-8pm 8-9pm

-4pm

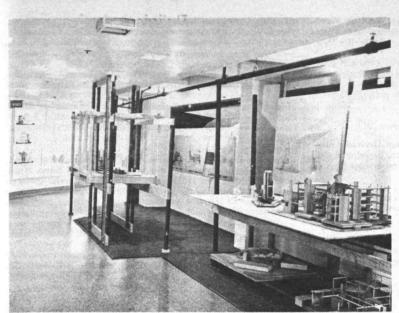
4-5pm

5-6pm

6-7pm 7-8pm 8-9pm

Monday, April 24

Tuesday, April 25 Channel 8: 11am-12noon



Fourth-floor corridor above the Building 7 lobby is now a display area for

### architectural work. Architects Transform Halls Into Exhibition Corridor

The drab corridors of the fourth floor of Buildings 7 and 5-circling the dome over the Building 7 lobby-used to be a burying ground for old bicycles, junk furniture and questionable wooden structures. Now, however, as the result of the initiative of Sophia Sieczkowski, assistant to Professor N. John Habraken, head of the Department of Architecture, the area has been transformed into an exhibition corridor.

During spring vacation, archi-

#### **DUSP** to Hold **Open House**

The Department of Urban Studies and Planning (DUSP) will hold an open house for undergraduates today (Wednesday, April 19) from 3-6pm in Rms. 7-331 and 7-335.

Visitors will be able to meet **DUSP** faculty and students over refreshments and view displays of work conducted in the department. Among the displays will be departmental work on solar energy, transportation planning, urban design and farming in the city.

### Garrison Named **Sloan Fellow**

Patricia A. Garrison, assistant equal opportunity employment officer at MIT for the past five years, has been selected as one of some 50 Alfred P. Sloan Fellows for 1978-79.

The Sloan Fellows Program is a year-long intensive program leading to the SM degree in management from the Sloan School. In addition to regular course work, the program offers students close contact with business and government leaders in this country and abroad.

Ms. Garrison received the BA degree in psychology and sociology from Western Kentucky University and the MS degree in urban planning from the University of Louisville. Before coming to MIT, she was an assistant in the office of the Massachusetts Secretary of Education, working on special projects and in the development of educational programs. At MIT Ms. Garrison has had major responsibility for the continued development and implementation of MIT's Affirmative Action Programs with particular attention being paid to the concerns of minorities and women. She also was a principal participant in the self evaluation required under Title IX Federal Education Amendments of 1972 as well as in development of programs for the employment of the handicapped and improving access to programs for handicapped students. Ms. Garrison will be the third MIT staff member to enroll in the Sloan Fellows Program. Richard A. Sorenson, executive assistant to the vice president for operations was a Sloan Fellow in 1973-74 and William J. Hecht, director of the Educational Council, attended in 1975-76. Both have since left the Institute.

tecture students under the direction of Robert Hughes, a graduate student from Plainfield, Vt., along with Physical Plant personnel, transformed the corridors into a clean, uncluttered, informal exhibition space that provides a pleasant gathering place for people to view architectural work.

The first exhibition of recent student work opened on April 7. The exhibition was coordinated by Shelly L. Burton, a graduate student from Somerville, and Visiting Assistant Professor Carolyn Dry. Works from the three studio levels, the visual studies department, the Visible Language Workshop and the Architecture Machine are on display until mid-May. For the opening, the traditional sherry hour, sponsored by the dean of the School of Architecture and Planning, was relocated to the new exhibition area.

A continuing exhibition program is being developed jointly by the faculty, students and the administration of the department.

Necessity, says Institute Pro-

fessor, Emeritus, Cyril Stanley

Smith of MIT, who will deliver the

annual John Wulff Lecture in Rm.

54-100 at 4pm on May 4, is not the

mother of invention, it's only "the

His lecture, titled "The Struc-ture of All Things," will deal with

matter and history. "Almost all

the materials used in engineering

before the present century were

known in the decorative arts before 2000 B.C.," Professor Smith

was quoted recently in a Washing-

ton Post article about his exhibi-

tion, "Aspects of Art and Science,"

which will remain on display until

August at the Smithsonian Institu-

tion's Museum of History and

Technology. The reason: "Discov-

ery comes from aesthetic curi-

osity, not preconsidered purpose."

mother of improvement."

Cyril Stanley Smith to Give

Annual John Wulff Lecture

# Student Budget Statement Issued

(Editor's Note: The following statement on the standard undergraduate student budget for 1978-79 was prepared by the Student Financial Aid Office.)

The standard undergraduate student budget has been established by the Institute at \$8,350 for the academic year 1978-79, an increase of \$350 over this year's level. The budget is the sum of a \$4,887 allowance for fixed costs (tuition and medical fee), and a \$3,463 allowance for variable educational costs (including room and board, books, materials, and personal expenses).

The Student Financial Aid Office has been granted \$400,000 of additional supplementary scholarship funds for next year to offset this \$350 increase, when combined with anticipated changes in average parental contributions resulting from changes in family resources. Therefore, no increase in the current general equity level of \$2,500 will occur next year. The new budget is comprised of the following al-

lowances: \$4 700

Medical Fees	187	\$4,887 3,463
Room and Board Books & Personal Expenses	\$2,548 915	
	- 51	¢0 250

The \$350 increase results from the following combination of considerations:

1. An increase in the costs of tuition and medical fees of \$350 and \$15, respectively.

2. A decrease of \$185 in the allowance for food costs-to reflect more realistically the eating patterns of the majority of students. Very few undergraduates (less than three per cent) now use the 19-meal commons plan, the cost of which (plus the Massachusetts meal tax) was the basis for the board allowance the last several years. This adjustment will not affect the food expenditure levels of most students, based on data and analyses developed by the offices of the Dean for Student Affairs and Housing and Food Services.

If this adjustment in the food cost allowance had not been made, the equity level would have of necessity been raised at least an equivalent amount. Hence, although the calculated standard student budget would then have been higher, the incremental amount of self-help necessary to meet it, whether by loan or term-time earnings, would have increased proportionately.

3. An increase of about \$85 in the weighted average of dormitory rental costs, according to new rates announced by the Housing and Food Services.

4. An increase of \$85 in the allowance for books, materials, and personal expenses, which helps adjust for recent inflationary trends. The total allowance of \$915 for this category of expenses next year is higher than for any other known college or university.

Given the span of options available in housing and dining arrangements, the range of student costs is broad, and most undergraduates will spend between \$7,700 and \$8,700 (excluding travel expenses) during the coming year, depending upon specific choices. The budget of \$8,350, which is used as the standard for awarding financial aid, has been established because it is the more realistic reflection of the typical education costs of attending MIT.

Students on financial aid whose budget projections indicate that the overall allowance of \$8,350, after accounting for parental contributions expected next year by the Student Financial Aid Office and the coming summer's earnings, will result in significant hardship are urged to discuss their particular situation with a Financial Aid Officer.

### **AES Publishes Third Annual Catalog** Videotapes, Films and Study

The MIT Center for Advanced Engineering Study (CAES) has published its third annual catalog of videotapes, films and study guides for continuing education.

John T. Fitch, director of technology-based educational development and marketing, said the 1978-79 catalog lists 12 new subjects.

There is a new MIT-produced course on Decision Analysis. In addition, CAES is distributing three more Colorado State University courses: Quality Planning; Active Filters; and Probability, Statistics and Decisions. Integrated Optics, a state-of-the-art course from the University of Delaware, also is included in the new catalog.

From the Open University of the United Kingdom, MIT is now distributing a new four-part course on Systems, as well as three introductory courses on Materials, Instrumentation and Mechanics. The videotapes and films from the Open University were produced by the BBC.

The 1978-79 MIT Catalog of

Guides now contains some 700 individual programs in more than 40 courses. The courses are used worldwide by engineers, scientists and technical managers in programs of continuing education. University graduate engineering schools are active clients. Copies of the catalog may be ob-

tained by writing or calling Katherine Potter, Rm. 9-234, x3-7444

### Intergroup Relationships **Discussion Series Planned**

Dr. Paul B. Zuber, director of urban-environmental studies and associate professor of law and urban affairs at Rensselaer Polytechnic Institute, will be the featured speaker in a weekend discussion of intergroup relationships Friday and Saturday, April 21 and

Dr. Zuber, whose topic will be "Realities of Interracial Relations at Technological Universities,"

Zuber has a tion. At present he is a consultant on school desegregation

cases to the US Department of

vironment and chairman of the **Educational Opportunity Advisory** Committee of Schenectady County Community College. He also is moderator for a regular Urban League television program in Al-

The discussion will continue Saturday at 9:45am in Rm. 9-150 under the title "Human Relations-A Focus on Majority/Minority Relationships in a Technological Environment." Discussants will include Professors Everett Hoagland and John Bush of Southeastern Massachusetts University, Adrian Butler, manager of equal opportunity programs for General Electric, Dr. Archie Lacey of Herbert H. Lehman College, New York City, and Sylvester Gates of Harvard University.

Both programs are open to all members of the MIT community.

The discussions are the first in a series sponsored by the Office of the Dean for Student Affairs.

desirable properties." The public is invited to the lecture which honors John Wulff, professor of metallurgy, emeritus, at MIT, for his many contributions to materials

science and engineering education. Dr. Smith has been concerned with industrial materials, pure science and history. He is professor, emeritus, of metallurgy and of the history of technology and science at MIT. He founded the first interdisciplinary academic research institute for materials in the United States at the University of Chicago. Earlier he was head of metallurgy in the wartime effort at Los Alamos Laboratory.

### **Donations** Asked For Coming Sale

Donations of just about anything except clothing are being sought by the Cambridge Business and



Dr. Zuber

Justice Community Relations Division, a member of the New York State Advisory Council on the En-

# Solar Building Expected

will speak Friday at 3:30pm in the Mezzanine Lounge. Dr. distinguished background in race relations and desegrega-



gineering, Professor Smith says, unites many streams of knowledge and practice that were separate in the past. "It is pri-

The new field

of materials

science and en-

marily an ex-

marily an ex- Dr. Smith ploitation of understanding how, on the one hand, the structure of a material at all levels is affected by the way in which it is processed and, on the other hand, how the details of structure influence

### Weisskopf to Speak on Fission

Dr. Victor F. Weisskopf, Insti-tute Professor, Emeritus, and professor of physics, emeritus, is one of four speakers who will take part in a special program in Washington, D.C., next Monday (April 24) marking the 40th anniversary of the discovery of nuclear fission.

The program is part of the 1978 Spring meeting of the American Physical Society opening Monday

Professional Women's Club for their annual White Elephant Sale to be held in the Bush Room (10-105) on Monday, May l.

Proceeds from the sale are used to support the Olive Libitz Scholarship Fund, a memorial to the late staff member in the Comptroller's Office. The scholarship is awarded each year to a Cambridge high school senior who plans to further her education.

Persons with items to contribute for the sale may give them to Alice Seelinger, Rm 7-133, or Norma Loomis, Rm 12-134.

at Washington's Sheraton-Park Hotel. Dr. Weisskopf will speak on "Fission-A Peril and a Hope." Other speakers on the Monday afternoon program will include John A. Wheeler of Princeton, Lawrence Wilets of the University of Washington, and Sven Bjornholm of the Bohr Institute, Copenhagen, Denmark.

## To Be Open House Star

MIT's new solar house-its fifth over the past 40 years-is expected to be a starring attraction at the biennial student-run Open House on Saturday, April 29, from noon-5pm.

But there will be plenty of competition from exhibits and demonstrations elsewhere on the campus. The physics department, for example, is planning a series of do-ityourself experiments while the Francis Bitter National Magnet Laboratory will present exhibits of its fusion projects.

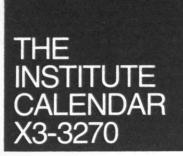
For music lovers, there will be a demonstration of proper placement of stereo speakers. Weather buffs will enjoy exhibits on operational meteorology and craftspersons can learn the ancient Japanese ceramic glaze technique called raku firing.

Sponsored by Alpha Phi Omega service fraternity, Open House offers the entire greater Boston community an opportunity to come to the Institute and discover the wide variety of activities that take place here. Visitors will be greeted in the lobby with programs and balloons. There will also be a Big Board Message Display there for last-minute program changes, lost children, etc.

More than 150 students will be on hand to welcome guests, staff information and refreshment booths and conduct tours. There will also be a number of self-guided tours included in the program together with a map showing where exhibits are.

Open House also is an opportunity for MIT employees to bring their families and visit parts of the Institute they seldom see during their working time.

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April 19 through April 30

### **Events of Special Interest**

Cause and Chance: Queries at the Foundation of Physics\* – Prof Philip Morrison. Undergraduate Physics Colloquium, Wed. Apr. 19, 4:15pm, Rm 4-339. Social hour fellows.

What We Know and Don't Know About Inflation\* — Prof Robert M. Solow, Institute Professor, Economics. James R. Killian, Jr., Achievement Award Lecture Series. Lecture 1: Thurs, Apr 20 and Lecture 2: Thurs, Apr 27, 4pm, Rm 54-100.

MIT Womens League\*\* — Will honor Margaret H. Compton at a reception on Fri, Apr 28, 4-6pm, Rm 10-105, wine and cheese served. A preview of an exhibition of works of Gyorgy Kepes will be in the Compton Gallery.

**Open House\*** — Sponsored by Alpha Phi Omega. A student-sponsored occasion for the public to see what goes on at MIT. Campus-wide exhibits, demonstrations and displays. Sat, Apr 29, Noon-5pm.

### Seminars and Lectures

#### Wednesday, April 19

**Brazillian Nuclear Program and Its International Implications\*** — **Roberto Hukai**, head, Reactor Physics, Institute of Atomic Energy, Brazil. Center for International Studies Seminar, Noon-2pm, Rm E53-482.

Energy Spectra Predicted by Semi-Geotrophic Theories of Frontogenesis\* — Dr. David Andrews, meteorology. Oceanography Sack Lunch Seminar, Noon, Rm 54-915. Bring own lunch, coffee served.

High Power Pulsed for IR Lasers\* — Dr. Fielding Brown, Williams College & MIT, EECS Optics Seminar, 2-3pm, Rm 36-428.

Neodymium Pentaphosate Lasers\* — Dr. Steve Chinn, staff member Lincoln Laboratory. EECS Optics Seminar, 2-3pm, Rm 36-428.

Functionality and Safety Evaluation of New Polymeric Food Additives\* — Dr. Thomas Parkinson, Vice-President for Research, Director of Biological Sciences, Dynapol, Palo Alto, California. Arranged by the International Nutrition Policy and Planning Program, 3pm, Rm 66-168.

To Be or Not To Be-Professional\* — Lenine M. Gonsalves, Professor of Electrical Engineering, Southeastern Massachusetts University. Aero and Astro Department, Special Series Seminar, "Engineering Policy and Society," 3pm, Rm 37-212. Coffee served preceding Rm 33-222.

Developments in Commercial Satellite Communications Part III: Networking and Regulatory Issues\* — Dr. John Harrington, Vice President of Research & Engineering, Communications Satellite Corporation, Washington, DC. Systems, Communication and Control Seminar, 4pm, Rm 39-500.

Foundation Engineering for Off Shore Gravity Platforms\* – Dr. Kaare Hoeg, director, Norwegian Geotechnical Institute, Oslo, Norway. Fourth Mathis Memorial Lecture, 4pm, Rm 54-100.

Further Discussion of Device for Power Generation by Rectification of Thermal Noise\* — Prof Richard B. Adler, electrical engineering. Thermodynamics Seminar, 4pm, Rm 1-114. Coffee served 3:45pm.

A Minimum Energy Solution of the Problem of Muscle Force Control During Walking\*\* — David Hardt, health science fund fellow, mechanical engineering. Design and Controls Division Seminar, 4pm, Rm 3-133.

Seminar for Energy on LDC's\* - Russell DeLucia, President of Meta Systems, 5pm, Rm 24-117.

MIT Architecture Lecture Series\* — Joseph Rykwert, architecture professor, Princeton, editor of Lotus International. MIT Architecture Lecture Series slide Talk, 5:30pm, Rm New X, 7-431. Wine served.

Political Prisoners In Iran\* — Madame Madeleive Lague-Veron, member of the Bon Association of Paris. Sponsored by ISA, 7pm, Rm 10-250.

#### Thursday, April 20

Molecular Spectroscopy Inside a Laser Cavity\* - Takeshi Oka, National Research Council, Ottawa, Modern Optics and Spectroscopy Eclecticism; 19th Century and Post Modern\* — William Jordy, professor of Art, Brown University, author of American Buildings and Their Architects. MIT Architecture Lecture Series Slide Talk, 5:30pm, Rm New X, 7-431.

Noise, Stress and Helplessness\* – Jerome Singer, Maryland. Architecture Design/Behavior Seminar Series, 7-9pm, Rm New X.

#### Friday, April 21

Regulation of Bone Resorption in vitro by a Cartilage Derived Anti-Collagenase Factor\* — Dr. John E. Horton, chairman, periodontology, Harvard School of Dental Medicine. Arranged by the Oral Science Group, 8:30am, Rm E18-601.

Response to Mr. Singer's Seminar\*\*\* — Ed Allen, architecture; Robert Newman, Harvard/MIT architecture will direct the discussion, 11-1pm, Rm 10-280.

Midwest Railroad: Is a Collapse Inevitable?\* — Dr. Paul H. Banner, Executive Vice President, Rock Island Railroad. Center for Transportation Studies Luncheon/Seminar, 12:45pm, Mezzanine Lounge, Student Center. Buffet lunch Noon, \$1.

Soviet Policy in the Horn of Africa\* — Jonathan Aurthan. International Studies Seminar, Noon-2pm, Rm 14E-304.

Subcellular Events in Arterial Disease\* — Stanley Fowler, Ph.D., The Rockefeller University, New York, NY. Arterioscelerosis Center Seminar, 12:30-2pm, Rm E17-421.

The International Politics of the Nigerian Civil War\* — John Stremlau, Program Officer, Rockefeller Foundation. African Lucheon Seminar, 1-2:30pm, Rm E52-548.

Background Correlates of Spatial Ability\* — Prof Ruth Guttman, psychology, Herbrew University, Jerusalem. Psychology Colloquium, 3pm, Rm E10-013.

Dispersed Photovoltaics and Utility Planning\* — Susan Finger, Energy Laboratory. EPSEL Seminar, 3pm, Rm 4-149.

Chemical Engineering Seminars\* — Behrooz Satvat, Restricted Transport of Macromolecules cross Capillaries in the Kindey, 2pm. Martin M. Suenson, Approximate Dynamics of Distributed Parameter Systems, 2:50pm. Behzad Jazayeri, Cryogenic Flameless Vapor Explosion, 3:25pm, Rm 66-110.

Hydrogen Pellet Work at ORNL\* — Dr. Stan Milora, Oak Ridge National Laboratory. Plasma Dynamics Seminar, 3:30pm, refreshments 3:15pm, Rm 36-261.

CW Modelocking of Semiconductor Lasers\* — Prof Hermann Haus, electrical engineering and computer science. Center for Material Science and Engineering Colloquium, 4pm, Rm 9-150. Refreshments 3:30pm.

Realities of Interracial Relations at Technological Universities\* — Paul B. Zuber, associate professor, law and urban studies, director of urbanenvironmental studies, Rensselaer Polytechnic Institute. Sponsored by the Dean for Student Affairs. Intergroup relationships in the academic community lecture Series, 3:30-5pm, Mezzanine Lounge, Student Center.

#### Saturday, April 22

Human Relations — A Focus on Majority/Minority Relationships in a Technological Environment\* — Prof Everett Hoagland, Southeastern Massachusetts University; Adrian Butler, manager of Equal Opportunity Programs, GE; Prof John Bush, Southeastern Massachusetts University, and Dr. Archie Lacey, Herbert H. Lehman College, New York City. Spon sored by Office of the Dean for Student Affairs. Intergroup relationships in the Academic Community Lecture Series, 9:45pm-Noon, Rm 9-150.

The Natural Resources and Economic Propects of China\* — Sponsored by the Chinese Students Club. A lecture by Ping-ti Ho, James Westgall, Thompson, professor of history, University of Chicago, 4pm-5:30pm, Rm 10-250.

#### Monday, April 24

Appropriate Technology: A Role for MIT?\* — Frank Manley, staff, National Center for Appropriate Technology, Montana. Seminar in conjunction with Episcopal Chapel, Noon-2pm, International Students Lounge, 2nd floor Walker.

Segmented Labor Markets: A French Example\* — Prof Robert Berrier, Political science, University of Pennsylvania. MIT Migration and Development Seminar, Noon-2pm, Rm E53-482.

Chemical Engineering Seminar\* - Gary L. Leal, California Institute of Technology, to be announced, 3pm, Rm 66-110.

Bifurcation of Capillary-Gravity Waves on Deep Water\* — Prof P.G. Saffman, applied math, California Institute of Technology, Pasadena, California. Applied Mathematics Colloquium, 4pm, Rm 2-338. Refreshments 3:30pm, Rm 2-349.

Culture and Nutrition\* — Martin Diskin, associate professor, humanities. Arranged by the International Nutrition Policy and Planning Program, 4-5:30pm, Rm 66-168.

Functional Deformation of Bone and Its Role in Maintaining Skeletal Competence\* — Dr. Lance E. Lanyon, Children's Hospital Medical Center. Harvard-MIT Rehabilitation Engineering Center Seminar, 4pm, Rm 37-252. Coffee served.

Nonlinear Resonances in a Wave Guide Near Cut-Off Frequency\* -

Sampling and Survey Design in Marine Environment\* — Dr. Wooll<sub>coll</sub> Smith, Woods Hole Oceanographic Institute. Statistics Seminar, 4pm, Rm 2-338. Coffee and tea 3:30pm, Rm 2-349. Anyone wishing to join the speaker for dinner after the seminar is welcome.

The Dynamics of Globular Clusters\* — Prof James E. Gunn, California Tech. Astrophysics Colloquium, 4:15pm, Rm 37-252. Refreshments 3:45pm,

Murine Lymphocytes: Differentiation and Signaling\* — Dr. Harvey Cantor, associate professor, medicine, Harvard Medical School/Farber Cancer Center. Biology Colloquium, 4:30pm, Rm 6-120. Coffee 4pm, 5th Fl Bldg 56.

Responsive Housing: Perceptions of the Relationship Between Culture and Built Environment; A Case Study: Lajos and Kano, Nigeria – Linda J. Brown and Muhammed Abdus-Sabur, architecture graduate students. Sponsored by the MIT Black Student Association, 4:30-6:30pm, Rm 10-105.

#### Wednesday, April 26

Constitutional Crisis in the United Kindom<sup>\*</sup> — Kenneth Lindsya, President, Oxford Union. Center for International Studies Seminar, Noon. 2pm, Rm E53-482.

**Observations of Small-Scale Shear and Density Structure in the North Atlantic\* — Prof Dave Evans**, Graduate School of Oceanography, University of Rhode Island. Oceanography Sack Lunch Seminar, Noon, Rm 54-925 Coffee served, bring your lunch.

Quantum Mechanics in the High School\*\* – Gyorgy Marx, head of the department of atomic physics, Eotvos Lorand University of Hungary. Division for Study and Research in Education Seminar, Noon-2pm.

Generation of Coherent X-UV Radiation by 5th and 7th-Order Frequency Mixing\* — John Reintjes, NRL, Washington, DC. EECS Optics Seminar, 2-3pm, Rm 36-428.

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Development of Quasi-Static Synthesis Method\* - G. Greenman, Nuclear Engineering Seminar, 3-4pm, Rm NW12-222.

Engineers in Society\* — Joseph F. Vittek, professor of law, director of research, law and technology, Franklin Pierce Center, Concord, NH, 3pm, Rm 37-252.

The Case Against Technology\* — John Passmore, professor of philosophy, The Australian National University. Sponsored by the School of Humanities and Social Science, 3:30-5:30pm, Rm 9-150.

Approximate Analysis and Synthesis of Non-Linear Systems\*\* – Joseph Beaman, graduate instructor, mechanical engineering. Design and Controls Division Seminar, 4pm, Rm 3-133.

The Carbon Dioxide Question\* — Dr. George M. Woodwell, director Ecosystems Center, Marine Biological Laboratory, Woods Hole, MA Energy Technology Lecture Series, 4pm, Rm 10-105.

The Information Theory Basis for Thermostatics and Themodynamics<sup>4</sup> — Prof Myron Tribus, School of Engineering, Director, Center for Advanced Engineering Study. Thermodynamics Seminar, 4pm, Rm 1-114. Coffee at 3:45pm.

#### Thursday, April 27

A Laser Scanner for Isolated Cardiac Muscle: Length Clamping and Analysis of Muscle Stiffness\* — Allen W. Wiegner, graduate student. Biomedical Engineering Seminar. 1pm, Rm 36-428.

Aristoscience\* — John Passmore, professor of philosophy, The Aurstalian D National University. Sponsored by the School of Humanities and Social Science, 3:30-5:30pm, Rm 9-150.

Global Use of the Instruments of Scholarship for the Conquest of Hunger<sup>\*</sup> — Dr. Nevin S. Scrimshaw, Institute Professor and Head, nutrition and food science. Arranged by the International Nutrition Policy and Planning Program, 4pm, Rm 66-110.

Mexician Peasant Revolt: Morelos and Yucatian<sup>\*</sup> — Dr. Arturd Warman, visiting professor; John Hopkins, anthropology. Humanities and Anthropology/Archeology Seminar, 4-6pm, Rm 66-168.

Symmetries and Supersymmetries\* — Prof Richard L. Arnowitt e ( Northeastern University. Physics Colloquium, 4:15pm, Rm 26-100. Tes r 2 served 3:45pm, Rm 26-110.

#### Friday, April 28

Botswana in the Cauldron of Southern Africa<sup>\*</sup> — Dr. Thomas Tlou, UN Ambassador for Botswana. MIT African Luncheon Seminar, 1-2:30pm, R E53-482.

Chemical Engineering Seminar<sup>\*</sup> – Jose J. Monge, to be announced 2pm. James E. Garmirian, An Investigation of the Reactions of Carbon Dioxide, Carbon Monoxide, Methane, Hydrogen, and Water Over Nicke and Cobalt, 2:50pm. David Bass, to be announced, 3:25pm, Rm 66-110.

Negative Ion Sources for Neutral Beam Injectors\* — Dr. Krsto Prelec Brookhaven National Laboratory. Plasma Dynamics Seminar, 3:30pm, Rm 36-261. Refreshments 3:15pm.

Paper: Art and Truth\* — Prof John Passmore, professor of philosophy The Australian National University. Sponsored by Linguistics and Philosophy Department. Philosophy Colloquium, 4pm, Rm 37-212.

Ouebec Labor, Nationalism and The Parti Quebecois\* - Andre

Seminar, 11-Noon, Rm 66-110. Coffee at 10:30am.

Maritime Collision Avoidance as a Differential Game<sup>\*</sup> — Som Sharma, Institute Fur Schiffbau, Hamburg. Ocean Engineering Seminar, 3pm, Rm 5-134.

Self-Texturing Bicomponent Fibers\* - Dr. D.H. Martin, Monsanto Textiles Company, 3-4pm, Rm 3-446.

The Volume of the Four Dimensional Ball\* — Doublas Pape, student, Math. Seminar, 3:30-4pm, Rm 2-142.

The Application of Some Probability Mixture Models in Analyzing Social Science Data\* — Prof Donald G. Morrison, graduate School of Business, Cloumbia University. Operations Research Center Seminar, 4pm, Rm 24-121.

Comparative Physiology of Sugar Transport in Microorganisms\* – Dr. Antonio H. Romano, microbiology section, University of Connecticut, Storrs, Connecticut. Arranged by the Industrial Microbiology and Biochemical Engineering Group, 4pm, Rm 16-310.

George Eastman Cohen: Themes in Technology and Creativity\* — Reece Jenkins, associate professor, history of science and technology, Case Western Reserve University. Technology Study Seminar, 4pm, Rm 20D-205. Coffee 3:30pm.

Interactions of Elementary Particles with Nuclei at High Energies\* — Prof Thomas Ferbel, University of Rochester. Physics Colloquium, 4:15pm, Rm 26-100. Tea served 3:45pm, Rm 26-110.

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Jose Aranha, civil engineering. Water Resources and Environmental Engineering Seminar, 4-5pm, Rm 48-316. Coffee at 3:45pm, Rm 48-410.

MX and the Future of the Land Based Missile Force\* - Collin Gray, Hudson Institute. CIS Seminar on Technology and International Securty Seminar, 4pm, Rm E53-482.

The Search for Extraterrestrial Intelligence\* — Professor Philip Morrison. Lecture Series Committee Seminar, Mon, Apr 24, 8pm, Rm 10-250. Free Admission.

#### Tuesday, April 25

Nutrition and Organ Transplants\* — Dr. Joseph J. Vitale, professor, Boston University School of Medicine. Arranged by the Oral Science Group, 8:30am, Rm E18-601.

A Generalized Color Video Display Processor\* — Pete La Master, CIPG Seminar, 1-2pm, Rm 38-466.

Reactor Fueling Study: Z-Pinch Plasma Characteristics\* — Mark McKinstry, Doctoral Seminars in Nuclear Engineering, 3:30pm, Rm 38-136.

Combustion Instabilities\* — George Abouseif, research assistant. Fluid Mechanics Seminar, 4pm, Rm 5-234.

**Optically Pumped Iodine Laser\*** — John Brooke Koffend, chemistry. Physical Chemistry Seminar, 4pm, Rm 4-370. Coffee 3:45pm, Rm 6-321.

Fatigue Crack Growth in Plane Strain<sup>•</sup> – Dr. Bernard Budiansky, professor of applied mechanics, Harvard University. Applied Mechanics Seminar, 3-4pm, Rm 3-133. Coffee 4-5pm, Rm 1-144. dinal, Montreal Municipal Employees Union Official. SACC Lecture, 8pm Rm 9-150.

#### Saturday, April 29

**Development Issues Open House: Food and Water in the Third World** – Special all day seminar, a slide show series and speakers focusing on food and water need in community development needs, watch for detailed an nouncements: 10am-4pm, Rm 1-124.

### **Community Meetings**

Wive's Group\*\* — Wed, Apr 19: Meet at Eastgate Roof Lounge to go to ad American Indian Exhibition, School Children welcome. 9:15-Noon. Claire Kramsch, lecturer in the humanities department, will give a talk on, The Folk Tale Today: Alive and Well?, 3-5pm, Rm 407, Student Center Babysitting provided.

The Tech Lodge<sup>\*\*</sup> — Regular Communication of Richard C. Maclauri Lodge AF & AM. Wed, Apr 19, 7:15pm, Masonic Temple, 1950 Mass Avi Camb, MA. Master Masons Welcomed.

Spring Craft Sale\* — Technology Wives Organization. Many hand crafte works for sale. Thurs. & Fri, Apr 20 & 21, 9am-3:30pm, Lobby 10.

Research at MIT: How Much is Too Much?\*\* — MIT President Jeron B. Wiesner, Sponsored by Alumni Council. Monthly meeting of the Alum Council, Mon, Apr 24, 6:15pm, MIT Faculty Club. Social hour 5:30pm ing in with Your New Baby\*\* - Jacqueline Buck, chief social er, Myra Rodrigues, social worker, Medial Department. Prenatal and Education Group Meeting, Tues, Apr 25, Noon, 3rd Fl, Conference, Infirmary. Info: 253-1316.

Pre-Retirement Seminar\* - Neil Winston, Social Security Consulwill disscuss your social security benefits. Tues, Apr 25, 2:30-4:30pm, 0.110. Info: Mrs. Nancy R. (Woodman) Urquhart's office x3-5411. Brhefit Booklets, they will be helpful.

ng to Grow Older\* — Dr. Judity Wurtman, research associate, Nutri-and Food Science. Monthly meeting of the MIT-Cambridge chapter of American Association of Retired Persons, Tues, Apr 25, 5pm, Mezzanine Student Center. Refreshments at 4:30pm

Group\*\* - Wed, Apr 26: Bread Making Demonstration! Meet at gate Roof Lounge to go to 355 Mass Ave, WILG Kitchen, 9-Noon, sitting provided. Lawrence Bacow, assistant professor of Law and Enental Policy, department of urban studies & planning will speak on iging the Energy & Environmental Problem in the US", 3-5pm, West e, Student Center. Babysitting provided.

Pre-Retirement Seminar\* - Neil Winston, Social Security Consul-Thurs, Apr 27, 9:15-11:15am, Rm A-166. Info: Benefits Office, x658 Coffee served.

Wives Weekly Excercise Class\*\* - Technology Wives Organization. our of exercise led by professional Marilyn de Kleer. Every Monday gh May 1, 8pm, Exercise Room, 2nd floor, Dupont Gym. Info: Call a Morecroft 494-8434.

ng in Response to Stress\*\* - Don't let pressure control your eating. control it. Nutrition and Food Science discussion, every Thursday, Rm 37-272.

### Vellesley

ry of Visual Style\* - George Kubler, professor history of art, Yale rsity. Sponsored by The Arts of Wellesley. Tues, Apr 25, 8pm, Jewett enter, Wellesley College. Free.

### ocial Events

's **Rat\*** — Sponsored by SCC. Dancing and drinking; live DJ; beer and 35¢/glass, 3/\$1; wine available by bottle. Fri, Apr 21, 8:30pm-1am, Lob 2nd floor, Student Center. Free admission, munchies, soda available, ID required.

Coffeehouse\*\* - Sponsored by SCC. Coffeehouse performers in a d atmosphere, free refreshments available. Fri, Apr 28, 9pmight, Mezzanine Lounge, 3rd fl, Student Center. Coffee, donuts, cider

### lovies

rat Sade\*\* — Sponsored by the Humanities Department. Wed, Apr 19, Rm 66-110. Free.

's Holocaust Program\* - Sponsored by MIT Hillel. The final segof Holocaust will be viewed together followed by a discussion on reac-Wed, Apr 19, 8:15pm, Basement, 312 Memorial Drive. Info: 253-2982.

ach Film Classic\*\* — Saus le toils de Paris (Rene Clair), Thurs, Apr 20, & 7pm, Rm 9-150. Sponsored by Humanities Department Foreign guages and Literature Section and French Library, Boston.

is les Toits de Paris\*\* - Sponsored by the Humanities Department. s, Apr 20, 4:30 & 7:30pm, Rm 66-110. Free.

e Bela\* - Sponsored by Film Section. By British director Thomas n, Thurs, Apr 20, 7:30pm, Rm 10-250. First showing in this country, ng with Executive Producer Peter Willats, to discuss the film.

LSC movie, Fri, Apr 21, 7 & 9:30pm, Rm 26-100. Admission 75¢ IT or Wellesley ID.

Coral Reef\* — A drama about life in a fishing village in Taiwan. Fri 21, 7:30pm, Rm 4-370. Sponsored by Chinese Students Club.

Jean-Luc Godard (France). Sponsored by Film Society. Fri, 21, 8pm, Rm 6-120, Donation \$1.25.

Towering Inferno\* — LSC movie. Sat, Apr 22, 6:30 & 10pm, Rm 26-Admission 75¢ w/MIT or Wellesley ID.

Midnight Movie: Road to Morocco\*\* - Sponsored by SCC. Sat, Apr 22, Midnight, Sala De Puerto Rico, Student Center, Bring your blanks and sit on the floor. Free.

Chinese Students Club\* - Sun, Apr 23: The National Games, Third National Games held in Peking, 1975, 1pm. The Other Side on the Sky, Shirley MaClain's trip to the People's Republic of China, 1973, 3pm. The Chinese Connection, Bruce Lee Kung-fu drama, 1908, 4:15pm, Kresge Auditorium

Charly\*\* - LSC movie. Sun, Apr 23, 6:30 & 10pm, Rm 26-100. Admission 75¢ w/MIT or Wellesley ID.

Orphee\*\* - Sponsored by the Humanities Department. Mon, Apr 24, 4:30 & 7:30pm, Rm 66-110. Free.

Little Big Man\*\* - LSC movie. Fri, Apr 28, 6:30 & 10pm, Rm 26-100. Admission 75¢ w/MIT or Wellesley ID.

Pierrot Le Fou\* - By Jean-Luc Godard (France/Italy, '65). Sponsored by the Film Society. Fri, Apr 28, 8pm, Rm 6-120. Donation \$1.25.

Wizards\*\* - LSC movie. Sat, Apr 29, 7 & 9:30pm, Kresge Auditorium. Admission 75¢ w/MIT or Wellesley ID.

Midnight Movie: It's A Mad, Mad, Mad, Mad World\*\* - Sponsored by SCC. Sat, Apr 29, Midnight, Sala de Puerto Rico, Student Center. Bring your blankets and sit on the floor. Free.

- LSC movie. Sun, Apr 30, 6:30 & 9:30pm, Rm 26-100. Admis-Rebecca\*\* sion 75¢ w/MIT or Wellesley ID.

### Music

Noon Hour Concert\* - Live Oak, Medieval and renaissance music. Sponsored by the Department of Humanities. Chapel, Noon, Free. Thurs, Apr 20.

Faculty Rectial\* - John Buttrick, piano, his program is Schubert: a Impromptus; Ravel; Miroirs; Beethoven; Sonata, Opus 101; Chopin: Polonaise in c-minor, Prelude in c-sharp minor, 2 Mazurkas, and Sonata in b-minor. Fri, Apr 21, 8pm, Kresge Auditorium. Free.

Gospel Choir Extravaganza\* - Several guest choirs from the New England area will join the Gospel Choir in its sixth annual benefit concert. Sun, Apr 23, 7:30pm, Kresge Auditorium. Donation, \$2 at the door, \$1 advance in Lobby 10, \$1 students.

Noon Hour Concert\* - Beverly Scheibert, organ and harpsichord. Thurs, Apr 27, 12:10pm, Chapel. Free.

Concert\* - Beverly Scheibert in an organ and harpsichord recital. Thurs, Apr 27, Chapel, Noon. Free.

Guest Artist Series Liederkreis\* — A vocal quartet performing a chamber repertoire of the masters Susan Larson, D'Anna Fortunato, Ray DeVoll, and James Maddalena; Craig Smith, pianist. Program: Lieder of Schubert and Brahms, Rossini songs, and Spanisches Liderspiel. Op. 74 of Schumann. Sun, Apr 30, 3pm, Kresge Auditorium. Free.

### Exhibitions

In Search of Photography\* - By Charles Harbutt, The Post War Period: William Klein, Robert Frank, Thurs, Apr 20, 7:30pm, Creative Photography gallery, 120 Mass Ave, Camb.

Publishing and the photographic Book\* - Creative Photography Lecture Series given by Addison Berkey. Wed, Apr 26, 4:30pm, Creative Photography Laboratory, 120 Mass Ave, Camb, MA. Coffee served. Free.

Raku Firing\* - Student Art Association. Demonstration of an acient Japanese glazing process. Sat, Apr 29, All Day, Kresge Plaza. Info: x3-7019.

Gyorgy Kepes, The MIT Years: '45-'77\* - Organized and sponsored by the Committee on the Visual Arts. Opens Sun, Apr 30 through Fri, June 9. Public preview, Fri, Apr 28, 8pm-10pm. Hayden Gallery, 160 Memorial Drive, Camb, MA. Slide lecture by artist, Thurs, May 4, 8pm, Rm 9-150. Info: 253-4400.

People of Sansebastian\* - Photographs of various aspects of peasant life, taken by Martin Diskin of the Humanities Department, Anthropology/Archaeology Program during two years of field work in Oaxaca, Mexico, 1975-77, and printed by Eric Andersen, Arch '80. Through May, Humanities Library, Rm 14S-200.

MIT Historical Collections\* - Permanent exhibition Mon-Fri, 9am-5pm, Bldg N52, 2nd floor. t03Katharine Dexter McCormick, '04; Vannevar Bush, '16; and The New Technology Exhibit 2nd floor balcony of Lobby 7. Energy Exhibit Bldg E40, 1st floor. Center for Space Research. Astrophysics Exhibit main 'corridor, Bldg 4. Bldg 6 Dedication Exhibit.

Exhibition of Color Photographs\* - Open through Thurs, Apr 27, Mon-Fri, 9am-10pm, Sat, 10am-6pm and Sun, Noon-8pm, Creative Photography Laboratory. Info: Ava Cohn 253-4424.

Richard Smith, Recent work '72-'77\* - Organized and sponsored by the MIT Committee on the Visual Arts with grants from the British Council and Prudential. Informal gallery talk by the artist, 7-8pm, A BBC filmed inter-view daily, 12:45 & 2pm. Open through Apr 19, Hayden Gallery, 160 Memorial Drive, Camb, MA. Gallery hours: Sun-Fri, 10am-4pm.

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.

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

Musical Caricatures\* - Music Library, Rm 14E-109. Numerous cartoons of various aspects of music, especially pictures of famous composers and conductors.

### **Athletics**

Home Schedule\* - Wed, Apr 19: W Tennis, URI, 3pm; V Baseball, 3pm Thurs, Apr 20: W Softball, U Mass Boston, 3:30pm. Fri, Apr 21: MV Tennis, Vermont, 3pm. W Tennis, URI, 3pm. Sat, Apr 22: LTWT Crew, Biglin Cup, Dartmouth & Harvard, 11:45am Var; W Crew, Eisenbery Cup, Princeton & Yale, Noon; JV & V Lacrosse, Trinity, 2pm. Sun, Apr 23: MF Sailing, Freshman Invitational, 9:30am. Mon, Apr 24: MV Tennis, 3pm.
Tues, Apr 25: V Baseball, Suffolk, 3pm; W Softball, BU, 4pm. Wed, Apr 26: V Lacrosse, Nichols, 3pm; M V Tennis, Clark, 3pm; W JV Tennis, Phillips Exeter, 3pm. **Thurs, Apr 27: W Tennis,** BC, 3:30pm. **Sat, Apr 29: V Baseball,** Bates, 2pm. **V Lacrosse,** Springfield, 2pm. HVYWT Crew, Compton Cup, (Harvard & Princeton, 12:15pm, Var. **W Crew,** BU & Northeastern, 11:30pm. M JV Tennis, Harvard, 2pm. Sun, Apr 30: V Track, CBC, 9:30am.

'78 Spring Graduate Soccer Home Schedule\* - Sat, Apr 29, 2pm, SESA, Soccer Field A.

### **Theater and Shows**

Romeo and Juliet\* - The Shakespeare Ensemble, Tues through Sun, Apr 23, 8pm, Sals De Puerto Rico, Student Center. Admission \$3 & \$3.50, with \$1 off for students. Info: 253-2903.

### Dance

Advanced Swing Workshop\* - Sponsored by MIT-Wellesley Ballroom Dance Club. Another swing lesson featuring steps we haven't taught before. No partner necessary. Come on over and have a swinging time. Sun, Apr 23, 2pm, Burton Dining Hall. Admission 50¢. Info: Scott Brundage x5-8347.

Easy International Dancing for the Open House\* - MIT Folk Dance Club. Sat, Apr 29, 2-4pm, Kresge Oval.

Advanced Tango/Miscellaneous Latin Workshop\* - MIT-Wellesley Ballroom Dance Club. A lesson in the tango and latin dances featuring steps we've never taught before, no partner necessary. Sun, Apr 30, 2pm, Sala de Puerto Rico. Admission 50¢. Info: Scott Brundage x5-8347.

MIT Dance Workshop\* - Classes taught by Beth Soll. Modern Technique, Wed, 6pm-7:30pm, Rm W31-125. Mon, 5:15pm-6:45pm, Rm W31-225. Improvisation/Composition, Mon, 7pm-8:30pm, Rm W31-225. Independent Student Work, Wed, 7:30pm-8:30pm, Rm W31-125. Info: 266-1202 or x3-5286

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

\*Open to the public \*\*Open to the MIT community only

\*\*\*Open to members only Send notices for Apr 26 through May 7 to Calendar Editor, Rm 7-102, x3-3270, before noon, Friday Apr 21.

# Mass Housing Needs New Approach, Habraken Says

The mass housing approach used for nearly a century by governments has failed to meet the need for shelter in the world, says Professor N. John Habraken, head of MIT's Department of Architecture.

Professor Habraken, an internationally recognized expert on housing, told a seminar at Cairo Richard S. Eckaus of the Department of Economics and Professor Moavenzadeh. The program is concerned with issues involved in the transfer of technology and its adaptation to the conditions prevailing in other countries. The US Agency for International Development has provided an initial \$3.5

million grant for the project. In his keynote address in Janu ary to the Seminar on Development of New Approaches to Housing Policy and Production in Egypt, Professor Habraken said "housing cultivation," the new approach toward solving the problem of shelter in the world, is based on "a better understanding of the complexities of dynamics of the process of human settlement." "We can adopt this new approach because more sophisticated professional technologies and methods are now available,' he said. "The key to this emerging new way of thinking and working is the recognition of the user as an indispensable agent in the housing process.' In his opening address to the seminar, Mohamed Hassaballah El Kafrawi, Minister of Housing and Reconstruction, said housing is the biggest problem facing all countries in the world, including the developed ones. However, he said that most countries have not been able to cover the housing

needs of the lowest income groups, whose members represent the majority of the population and who "bear the burden of social and economic development."

"The minimum concern that we could expect from a government is to provide them with the minimum requirements of life and at its forefront, adequate shelter.

was the change in the per spective of governments in focusing on concern for housing the lowest income groups that opened the door for scientific institutions to set down the technical basis that translates hopes and thoughts to practical facts that will overcome the housing problems," he said. Nine MIT faculty members and researchers from a variety of disciplines were involved in the Cairo housing seminar. They were Professor Moavenzadeh; Professor Habraken; Dr. Arthur P. Solomon, associate professor of urban studies and director of the MIT-Harvard Joint Center for Urban Studies; Professor William C. Wheaton of the Department of Economics; Dr. Eric Dluhosch, research associate in the Depart ment of Architecture; Dr. Janet Rossow, research associate in the Department of Civil Engineering; Professor Waclaw P. Zalewski of the Department of Architecture; Dr. Albert G. H. Deitz, professor emeritus and senior lecturer in the Department of Architecture; and Reinhard Goethert, instructor in the Department of Architecture.

interactive communication link be-

tween interested alumni and the

Institute by providing a repre-

sentative forum of committed

alumni from which the faculty and

administration can obtain feed-

back on matters of current con-

cern. The Council meets six times

a year to hear and discuss topics of

interest to both the alumni and the

Institute. Presentations are aimed

at stimulating open, active and

candid dialogue.

Housing is one of the 10 projects in the four broad categories of public works, energy, industrialization and socio-economic development that have been organized during the first year of the Cairo University/MIT project, according to Professor Moavenzadeh.

"In the public works sector, for example, we have two projects in one in

University in Egypt that a new ar proach-he called it "housing cultivation"-is emerging.

The seminar, sponsored by Egypt's Ministry of Housing and Reconstruction, Cairo University, and MIT, marked the first anniversary of a collaborative effort between the two major universities aimed at achieving Egypt's development goals.

One of these goals is to find a solution to Egypt's housing prob-lem. The nation, whose 40 million population is expected to double by 2000, is currently short 1.5 million housing units.

The cooperative effort, called the Cairo University/MIT Technological Planning Program, operates under the auspices of MIT's Technology Adaptation Program, headed by Professor Fred Moavenzadeh of the Department of Civil Engineering. The program in Egypt is administered by an executive committee composed of Professor Nazli Choucri of the Department of Political Science.

### Wiesner to Speak At Alumni Council

6:15pm.

MIT President Jerome B. Wiesner will be the speaker at the final monthly dinner meeting for 1977-78 of the MIT Alumni Council Monday, April 24, at the Faculty Club. Under the title "Research at MIT: How Much Is Too Much?" Dr. Wiesner will explore various aspects of the recent report of the Committee on MIT Research Structure (the Press Committee) in the context of MIT's goals and opportunities.

Dr. Wiesner's remarks will follow the regular monthly meeting of the Alumni Council which begins at

gram of research and training aimed at strengthening the technological planning capabilities of government agencies," Professor Moavenzadeh said. A planning institute will expand The Alumni Council serves as an

educational opportunities at both MIT and Cairo, he said.

"Opportunities for learning will be made available for both faculty and students interested in general or specific problems . . . . The projects could provide opportunities for future decision-makers to serve an apprenticeship under experts in particular areas of technological planning," he said.

Tech Talk, April 19, 1978, Page 5

transportation, wat sources and one in housing."

TAP has suggested that Cairo University establish an Institute for Technological Planning. "Cairo University, with exten-

sive formal and informal relations

with government agencies, is in an

excellent position to support a pro-

Amtrak one-way ticket from Bost to Rye, NY, selling at 1/2 prc of org. Call x5-8619.

W 3 spd bike, Raleigh sprite, yr old, top cond, high qual, nw \$125, \$80 or best. Ernie x3-6923. Raleigh Grand Prix Bike, 25" frame w/brooks champ seat, Zefal hp pump, pletscher carrier, \$70; ladder 6<sup>1</sup>-z' Sears med duty combo exten-step, \$35.

Brian x3-6977 B&W 16" Hitachi TV, exc, \$50; Fuji S-10S 25" bike, exc, \$140; ski, 190cm KZ, Soloman 502, Nor-dica sz 10, scott poles, gd cond, \$75. Rick x3-3911. M 10 spd Grant's bike, gd cond, \$50. Come see Rm

Smith Corona elect typerwtr, Coronet super 12, 4 mo old, \$190. Janet x3-4637.

Efficient spkrs: lg Heathkit guitar spkr, 90w, 2-12' & a horn w/casters & 20' cable, \$125 exc cond; sm braun L-200 supr bkshelf/car spkr, 40w, brand nw \$75. Gerald x3-4726.

Raleigh Colt 18" frame, grt bike for B, hand & ft 3 spd, kickstnd, \$65; exc bike in top cond, brks, \$45. Larry x3-7810.

Emerson stereo console: AM/FM/csst/phono, pr spkrs, \$150 or best. Call 266-8724. Place avail on MIT charterflight to Venice Apr 23-

May 1, prc nego. Contact Eileen x3-1782 Westinghse. refrig, gd cond, DR tbl, beaut mahog,

leaf, Kset, maple, must sell, best. Call Mark x5 9208 Dorm

Fridgdare, 17cf refrid/frees, w/auto ice makr in Boxford, \$135. Vera x3-1480. Pr ADS 500 spkrs, \$174. Mike 661-8857 lv msg

Bike 20" w/train whls, \$15; Hamilton beach mxr w/bowls & stand, \$15. Call 862-3953 aft 6pm.

#### Vehicles

**CLASSIFIED** 

ADS

X3-3270

For Sale, Etc.

brand nw, \$50. Henry 522-5486.

6657 Dorm.

\$8/pr. Jim x3-7287

3346 Draper, days.

x3-2809

Al 862-5904 eve.

x7654 Lincl

x3-6740.

Draper

x3-5810.

x8-1401 Draper

Lincl

R

Ads are limited to one per person per issue

may not be repeated in successive issues. All ads

must be accompanied by full name and Institute

extension. Persons who have no extensions or who

extension. Persons who have no extensions of who wish to list only home telephones may submit ads by coming in person to the *Tech Talk* office, Rm 7-102, and presenting Institute identification. Ads may be telephoned to x3-3270 or mailed to Rm 7-102. **Deadline is noon Friday before publication**.

Stereo tape recrdr, \$50, Ampex w/2 spkrs. Call x5-

Advent 100A noise reductn unit; calibration tape; fl instruct, Maxell UD R-to-R tape 7" 1800 unusd, unopend, 10<sup>1,4</sup>" 3600 ft. Call Zaeem, x3-2843.

Martin D.18 guitar, \$400, AM/FM csstt car unit,

Bavarian Symphony Fri, Apr 28, 8pm, tickets, \$5. Contact Bill Lobar info x183-246.

Refrig: 15cf Frost free, king sz bed + sheet &

Pr rims to fit '76 Dodge Aspen drum brks, 14",

Slide trays, Bell & Howell, master 40 type w/indv-dul slide carrier micro mounts, value, \$2.60, sell \$2/ea, \$5/3 etc to \$18/doz, whole lot approx 3 doz, nego; giant desk 31,28°, \$75 or best. Dennis x8-

Raleigh 3 spd, G bike, w/basket, lk nw. Call x5400

Biege drapes, fibrglas, 40x82, exc cond, 4 prs, \$10.

Integrated stereo sys, AM/FM stereo recvr w/8 track, BSR auto trntbl, nw cartrdg, ported sprks, must sell, \$75 or best. Call Bob x5-9342 Dorm.

(2) 700x13 tires, (1) C78-13, fair cond, \$15 all.

of heavy duty steel storg shvls, 6x3x15', \$8; B&W TV, \$10. Call x5778 Lincl.

Pr Sears Allstate, tubels C78-13 w/rims, gd cond,

\$10 ea; lovly 78 yr old bath tub, vry gd cond, best. Call x3-4162 Virginia.

Pr Firestone white walls, steel belt, sz LR 78x15, lk nw on Ford rims, ask \$80 pr. Call Charlie, x5497 Lincl.

Brand nw, in bx, Polaroid SX70 Alph I, \$85; 5 pcks SX70 film, fresh \$4/ea. Don x8-3337.

Tech Aero Club membershp, 140 plan, \$37.50. Call

Motorcycle acc: trail riding boots, Full Bore, sz 9<sup>1</sup>2 perfect cond, \$30; oil cooler, Isocycle, for 5 series BMW only, lk nw \$10; home bit motorcycle trailer,

\$75; Craftsman lawn mower, \$50; Scotts silent

lawn mower in nw cond w/grass catcher, \$40. Call

Scand teak desk, org \$200, now \$75; antique mahog

Duncan Pfyle, sm dine rm tbl, \$70; walnut gate leg

tbl. \$45; sm ladies desk. \$30; apt sz gas stove, old

but exc cond, W bike, \$20; other small items. Call x3-2291 or 969-8412 eve.

Wurlitzer piano, exc cond, \$500 or best. Call Irene

Pace CB base station, nvr usd, payed \$150, wl sell for \$100. Call Anne x8-3961 Draper.

Tele answering/recording machine, Crown CTA 4400 U, recently overhauld, org \$199, now \$47.50. Wilson x3-5121.

B24" 3 spd Raleigh, gd cond, \$70 Frank x8-1193

Pr of 14" Olds rims w/1 gd 14-H tire, \$15. Call Chen

Hollywood dbl bed matt & bx sprg, \$50. Call Michael x3-7379.

trans SAE 80, undercoat spray, Prestone antifrz, washr fluid, solid OX 5000 welding kit. Gary x3-7006. 4 gts Sears 10W-40, 2 gts Quaker 10W-30, 1 gt

Dbl matt, \$10; 2 pillow \$2/ea; bunk bed w/matt, \$20; playpen, \$20. Call 494-8373.

2 Jalousie windows, 9' wide x 4.5' high, complt w/screens & storm sash, \$300. Call 862-3657

US postage stamps 1940-50, mint, best over face value,  $^{1}{}_{2}$  sheets. Alan x3-4935.

Trees, scotch pine, white spruce, 3'-8', \$1.50 ft. Call Mario x8-2588 Draper.

2 usd tires & rims, 4 bolt pattrn, 6.78-14, \$8 ea;

Dbl door wardrobe, \$15. Evelyn 227-2428.

crib; 2 lg bookshvls; lg desk & chair. Call x5-

'65 Volvo, 122F, 4 dr sedan, rns great, exc inter, rusty fendrs, \$450 or best. Mike x7311 Lincl or 924-3656.

'67 Scamper tent trailer, slps 8, stove, sink, ice bx tble, extras, exc cond, \$1,995. George x7708 Lincl. '67 Volvo stat wg, nw stl bltd radial, nw bttry, nds work, offer. Call x3-3662.

'67 VW Bug, runs wl, nw front shock, nw brks, 70K, \$300. Call x6180.

'68 Pontiac LeMans, V8, exc cond, nw tires & bat-try, 86K, \$350. Call x3-2748 or 625-0432.

'68 VW Squareback parts car w/eng, can be towed, \$50. Bob x3-1557.

'69 Ford Fairlane 500, auto, 82K, gd shape, nw direction, reblt strter & carb, radio, \$500 or best. direction, rebit strter & ca Call x3-3105 or 926-1530.

'70 Ford Fairlane 500, 302V-8 eng, 4 dr, red w/2 mntd snows, vry gd cond, \$900. Call Lil x7189 Lincl.

'70 Honda CB-350 many nw parts, wl run w/a little works, \$250; '66 305 Superhawk, fine cond, overall, \$325, prc nego. Call x5-7263 Dorm.

'71 Toyota Corolla, best. Call Barbara x3-7604. '71 Toyota Corona, 62K, 4 dr, AM, w/snows, nw ex haust, nw bitry, exc cond, \$1,500 or best. Judith x3-5686 or 492-7027.

'71 Vega, sedan, gd run cond, rust & dents, snows, \$300. Call x3-3538.

'71 VW Superbeetle, semi auto, 60K, nw brks, trans & valves, \$950 or best. Call Eric 354-7928 eve. '72 Ford Gran Torino stat wg, PS, PB & A/C, 58K, vry gd, inside & eng, \$1,400. Andy x8-1419 Draper. '72 Pinto, 2 dr saden, 47K, bdy damage but gd run nd, AM radio snows, \$300. Call x3-1815

'72 Toyota Corolla, vry gd eng, 50K, fair bdy, radial, snows, AM/FM, \$750 or best. Call 492-2515. '72 Volvo 4 dr sedan, auto, radio, \$1,700 or best

Tom x3-3229. '73 Ply Satellite, 4 dr sedan, air cond, PS & PB, exc bdy & mech cond, \$1,350. Call 784-5327 eve aft 6pm.

'73 Inter Travelall mod 1010, AC, PS, PB, auto, tow pckage, positraction deluxe & ext luggage rack, 2 gas tanks, AM/FM, 43K, \$2,600. Frank x8-3330 Draper.

74 Fiat 124 sedan, 40K, 1 owner, gd cond, best. Terri x3-4279

'74 Fiat X19, 21K, 1 owner, wl cared for, tan w/black interior, AM/FM, \$2,250 or best. Call x3-7153.

'75 Ford Grandada, 4 dr, 6 cyl, 42K, PS & PB, radio, air cond, exc cond, black, avail July 10. Peter x3-7097 or 646-0183.

'75 Honda CB200T, exc cond, ideal for begin or anyone. Pls call Kay x3-2362. '75, 15' Sorro Scotty Trailer, slp 6, 3 burnr stove

w/oven, sink, water tank, toilet, 3 way refrig, heatr, 2 gas bottle, elec brakes, has to be seen, \$2,000. Call x3-3771 or 581-0475 aft 6pm.

751 VW Rabbit, 4 dr, AM/FM, exc cond, \$2,950. Call x3-6809 or (1) 358-4698 '75 VW Scirocco, red, 4 spd, AM/FM stereo, 34K, \$3,200. Yvonne x3-4860.

'75 VW, Scirocco, 15K, AM/FM stero, csst, exc cond, \$3,650. Call x5-4494.

'77 Chevy Chevette, 10.5K, 4 spd, radial, stereo, dixe interior, economical, 30-mpg, requir little maint, stored in heatd gar, stl under factory wr-rnty, \$2,950 or best. Ken 277-6048 anytime. Bos, Boylston St, nice 1 BR unfurn or furn apt, air nd, frig, land/dryer, shop facilities, gar, disp, r sec, nr T, \$240/mo, sublet tl Aug poss w/op ent. Call x3-5550 day or 482-3383 eve. 24

Camb sublet now avail, till end May, betwn Harv & Centr Sq. lux, 1 BR apt on top high rise bldg. Call x3-6978.

Mass Ave, 5 min from Harv Sq, 6/1 to 8/31; enor-mous LR \$110/mo + util, 4th fl w/elevator. Call 547-4412 aft 6, anytime on wkends.

Nrth Camb 2BR, sunny, quiet, clean mature P perfrd, no pets. Call 547-3679.

Chelmsfrd, 3 BR ranch, 2 baths, fireplc, ww. dis hwash, 1 acre, 2 car gar, porch, cls to Rte 2 & 495, exc cond, ask \$56,900. Call 256-0788 aft 6pm.

Comm & Brighton Ave, 1 BR, \$227, avail June 1, 78, mod K & bath, 1 min from T, bay windows sunny. Call 523-2020 anytime

Conway Eidleweis chalet, 3 BR, slp 10, all elect, swim, boating, hiking, fish, tennis, avail May-Aug, \$150 wk or \$450/mo. Call 734-2221 or x3-6824 Frankle

Lakeville, Ma cottage on 312 ml long lake, 8,949 sq ft of land, aluminum side, nw wall paper all 4 rms, sanded & finished fls, \$13,500. George x8-3531 Draper

Menemsha, Martha's Vineyard, sm cottate in tranquil, pictuesque sttng pond nr beach & harbor, June 1-14, \$175 per wk. Call Africe x3-4897.

Newton Ctr, avil late Aug-Dec, 4 BR Victorian h fur. Riversd line, famly perfrd, \$500/mo & until. Call x3-6883 or 527-6521.

Revere, ex loc. 2 BR, vry lg DR/K, w/14' cust cabs, htd attd gar, unfin bsmt for apt or playrm, un-obstructed view of ocean to 15 mi, upper 40's. Call for details, x3-6104.

Somervl, off Broadwy, 1 BR apt, avail May 1, \$120/mo, no util. Call Ann Marie x3-2131 or 776-\$120/mo, no ut 4883 aft 5pm.

Somervl, sunny 6 rm, 2 bath, unfurm, garage, avail May 1, nr Tufts, gd T, referencs, sec pets, \$360/mo incl heat. Call 868-9835 dep

Somervl, 2 BR, nw brick bldg, convt to MIT, ww, disposal, air cond, sublet 7/1, \$300, lease 9/1, \$325, no fee. Call x3-8022 or 628-7966. disposal

Summer camps, Stoddord, NH, lake front cottages, screen porch, furn, all conv, freez, fireplc, row boat, pier, seasonal rental. Call x8-1130 Draper

Nr Union Sq, somervl, cls T, sublet May 1 to Aug 3 rm apt, rent \$195/mo in a quiet safe neighbor Call 628-9472.

Northeat Kingdom, Vermont, Summer rental, 4 BR hse, mid June-mid Aug. Call x3-6627 or 566 5089 eve.

Westgate, 2 BR apt, furn, June, July, Aug, \$245/mo. Call Helena 494-0181.

Seasonal rent, seclusion on lg lake in Washington NH, 2 hr from Bos, 1000 frontag, coverd dock, mod chalet, \$4,000/season. Call 443-3285 wknights aft 7pm or (603) 495-3437 wkends.

Wolfeboro, NH, long term resort lease, 1 wk per yr start 7/22/78, nw yacht club, waterfrnt apt, incl dock, tennis, extras, exchng for other US resort. Bob x3-2748 or 272-4267 eve.

Beaut, spacious, furn, 3BR apt, ovrlking trees & sm park, avail for sublet July & Aug, wash, bath, in bsmnt, hanydman & mgr lve-in, \$475/mo dry Call 536-9338 eve.

Summer sublet w/option to renew, 3 BR apt, per rm, ww in BR, waste disp, 3 min walk to MIT. Call 547-3847

Tenant to 6 rm, 2 BR hse in Arl, June 25-Aug feed cat, cut lawn, etc, rent nominal. Call 643 0911

#### Animals

Lvly tiger M cat nds care; 18 mos old, toilet traind. Call 494-8377 eve.

#### Lost and Found

Lost: Callico cat, Burton & MacGregor, no collar Liz or Jim, x3-3213

#### Wanted

Nd Eastgate apt, for sublet May 1 or 15 to Aug 31. Call Brad x3-3688 Woodworking lathe. Call Andy 729-6427 eve

Nd a hse sitter? Former W stud wl be working in Bos area, Apr 15 to June 15 takes gd care of plans, lv name, address, phone #, w/D. Bowe x3-4971.

Responsible couple w/2 teenage daughters, to exchange hse & car in windward Oahu, 20 min from Honolulu & 5 min from beach, for hse or lg apt & car in Bos area, for period around July 23 to Sept 2. Write to: Dr. Frank J. Radovsky, Bishop Museum, Honolulu, Hawaii 96818.

Eastgate sublet wntd, June 1 to early Sept. Call x3-6631

Respons student/couple wntd to care for 5 child, ags 15-4 mos, 3 wks in June, exc references reuired. Call 969-5961

Riders world to Brkline. Call Hellen x3-2710 or Bert x8-1255 Draper

#### Miscellaneous

Free haircuts at Diego at the Loft, on Newbury St. For apptmnts call Maggie 492-6350 aft 7pm.

Heating, air cond, ventilation, insulation work to be done, Authur Dubois, 891-7499 aft 4:30pm. Drafting & tech Ill, charts, graphs, etc. Marie x3-

Exc typist, IBM Select, papers, theses. Call 484-4979

Type to your spec. Sheila x3-5705.

Wl type these, manus, tech, fast & accur, IBM Correct Select. Debbie x3-1848.

Wl type, anythng, tech, etc, IBM Correct Select, reas rates. Virginia x3-6885 or x3-3229.

Wl type, theses & thesis props, all subj, IBM Cor-rect Select. Call x3-3929, Ginny.

WI type theses, reports, MS, fast & accur, IBM Select, Call x3-4528.

Surplus Property: MIT surplus property for transfer of sale for research or teaching programs only. PDP-7A-109 Central Processor w/tape readr, tape punch, tape drives, CRT Display. Call W.A. Derry x<sup>3</sup>/2777 Derry x3-2777

#### Surplus Property

MIT surplus property for transfer of sale for research or teaching programs only. PDP-7A-109 Central Processor withap readr. tape punch, tape drives, CRT Display. Call W.A. Derry x3-2777.



This list includes all non-academic jobs currently This list includes all non-acauente pos curves available on the MIT campus. Duplicate lists are posted on the Women's Kiosk in Building 7, outside the offices of the Special Assistant for Women and Work (10-215) and Minority Affairs (10-211), and in the Personnel Office (E19-239)

Personnel Interviewers will refer any qualified ap-plications on all biweekly jobs as soon as possible after their receipt in Personnel.

Persons who are NOT MIT employees should call nnel Office on exten ion 3-4251 the Pers

Information on openings at Lincoln Laboratory (Lexington, Ma.) is available in the Personnel Office.

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

Dick Higham Pat Williams Carolyn Scheer (Secretary — Tertia Perkins)	3-4278 3-1594 3-1595
Virginia Bishop Richard Cerrato Ken Hewitt (Secretary — Paulette Chiles)	3-1591 3-4266 3-4267
Sally Hansen Lewis Redding Kathleen Rick (Secretary — Jenni Leibman)	3-4275 3-2928 3-4269

Admin. Staff, Systems Analyst/Area Coordinator, Author. Stall, Systems Analysich recommunity, in Information Processing Services Office to analyze client/user systems problems to determine needs; develop external specifications for new com-puter program; modify and/or enhance present systems; ensure testing of programs and release documentation according to standards, present documentation according to standards; prepare scheduling and time loading estimates; direct scheduling and time loading estimates; directive development on updating of all manuals; interpret systems to client/users. A Bachelor's degree, or equivalent, required. Reasonable experience in systems analysis or computer related activities also required. A78-16, A78-17, A78-18 (4/19).

Academic Staff. Technical Assistant, to work on returne Stay, returns a Hology Dept. perform experiments in genetics, development and neurobiology of a microscopic multicellular eukaryote. A B.A. or B.S. in Biology, general microbiolgical and sterile techniques required. Professional lab research experience also required. Experience in Microscopy, biochemistry and photography helpful. Non-smoking lab. C78-4 (4/19).

Admin. Staff, Associate Director, for the Council for the Arts to assist in arts promotion in various aspects of fund-raising, including research, cultivation and planning; manage regional events

Sponsored Research Staff, Technical Assistant, in the Nutrition and Food Science Dept. to perform routine quantitative mutation assays; participate in development of automated assay procedures and experiments probing mechanisms of mutation in bacteria. At least a Bachelor's in microbiology and general lab experience required. R78-85 (4/19).

Sponsored Research Staff, Systems Programme in the Lab for Nuclear Science 360/65 Computer Facility to maintain and update IBM operating systems; plan and execute modifications to the system; write special software; assist in planning rating for future hardware, in proposal writing, in implementing future systems and in user sulting. Bachelor's degree in computer science math or physics, or equivalent required, as well as 2 years programming experience. Good com-munication skills, ability to work well with others also required. Familiarity with IBM operating well as operating OS-HASP systems, error diagnostic systems and OS and PL/1 systems desirable. R78-87 (4/19).

Sponsored Research Staff in Mechanical Engineer-ing to study lasers and their application in four research areas: optoacoustic spectroscopy; non-linear optical mixing; laser induced chemistry; development of new types of gas lasers. A theoretical background in atomic and molecular physics, several years of practical experience in at least 2 of the indicated research areas required. Demonstrated ability to master other research areas and to conduct independent research required. R78-79 (4/12).

Sponsored Research Staff, temporary, in the Lab for Nuclear Science to collaborate in research program of group doing experiments in hadron in-teractions. Ph.D. in high energy physics and 2 years experience in the field required. R78-81, R78-82 (4/12).

Sponsored Research Staff in the Electric Power Systems Engineering Lab to contribute to the mechanical, thermal and cryogenic aspects of the design, construction and testing of experimental design, construction and testing of experimental superconducting generator; develop assembly methods; supervise, coordinate and trouble shoot during construction; participate in test program. At least 10 years experience in the design, con-struction and testing of large, complex mechanical and cryogenic equipment and a good working knowledge of cryogenics and commerical supercon-ductors required. R78-80 (4/12).

Sponsored Research Staff, Staff Enginee Research Lab of Electronics to maintain RSX-11M software system; develop, maintain and document data processing software; maintain PDP 11/55 CPU: supervise new equipment construction, testing and installation; assist and advise students who are involved with hardward and/or software. Bachelor's degree in computer science and serious interest in learning DEC software and hardware re-quired. Some background on signal processing an-d/or on DEC software/hardware desirable. R78-78 (4/12).

Secretary VA to Executive Vice President, Alumn Association: Organization skills are important. Must be able to exercise judgment and work in-dependently; extensive coordination of meetings; preparation of travel itinerary and expense reports; compose correspondence; excellent typing, shorthand skills and good telephone manner re-quired; minimum of 5 years secretarial training. B78-145 (4/12).

Admin. Asst. V in the Technology Adaptation Admin. Asst. V in the Technology Adaptation Program (Provost's Office) to assist a faculty member. Will schedule appointments and meetings; compose correspondence; answer phones; devise and implement administrative procedures and policies; edit correspondence and publications; monitor accounts; arrange itineraries for foreign officials; assist in organization of conferences and seminars. Excellent administrative and secretarial skills, ability to work well with others, to establish priorities and assume respon-sibilities required. At least 5 years secretarial experience, as well as account monitoring experience and supervisory experience also required. 40 hrs./wk. B78-171 (4/19).

Secretary V in the Lab for Nuclear Science to han dle secretarial responsibilities for the Director o the Bates Linear Accelerator: schedule appoint-ments; type correspondence and reports (some technical); file; arrange meetings. Excellent typing and shorthand skill required, as well as ability to work under pressure, communicate effectively and exercise good judgment. At least 5 years secretarial experience and willingness to travel regularly to Middleton, Mass. also required. Secretarial school or college background preferred. B78-154 (4/12).

Secretary V to the Head of the Chemical Engineering Department to coordinate graduate student seminars; schedule meetings, luncheons and recep-tions; compose and type routine correspondence; maintain files and research accounts; answer a variety of requests for information and department publications; open and sort mail; type technical material: maintain office sumplies; act as recenmaterial; maintain office supplies; act as recep tionist to the Reference Center; assist with special tionist to the reference center, assist with special projects as required. Excellent secretarial skills, in-cluding shorthand, ability to work with minimum supervision and to use tact and discretion in deal-ing with confidential matters required. Willingness to work additional or irregular hours when the need arises also necessary. Familiarity with MIT prefer red. B78-161 (4/12).

Sr. Secretary IV-V, part-time, will handle

of secretarial and administrative details at the

President's house in Watertown. Schedule ap-pointments for Mrs. Weisner and for the

pointments for Mrs. Weisner and for the Presidnet's House at 111 Memorial Drive; arrange travel; transcribe correspondence; maintain exten-sive files. Work closely with Dr. Weisner's secretary; act as liaison for Dr. Weisner with other

MIT offices, community agencies and businesses. Keep payroll and other records; attend meetings when required; write and address invitations for Institute events. Excellent typing skills required. Knowledge of the Institute desirable. Descretion, humanity and text constitute desirable.

honesty and tact essential to deal with confidential

matters and to work in a private home. Position will normally be 12 hrs./wk., but will be for 22 hrs./wk. in summer months. B78-155 (4/12).

Prince tennis racket sz 414 grip strng w/tourna-ment nylon (70 lb), \$55; W Raleigh 5 spd bike, exc cond, \$70. Call 494-8220.

Nikkor lens w/case, 300mm, f 4.5, \$150; Germanmd bass recrdr, mint, \$110; Old Mendez prof trumpet w/case, mutes, \$225; music stand, \$7; pet w/case, mutes, \$225; music stand, \$7; eot 10 spd \$90; Hoover vacuum, mint, \$40; tent, \$25; other camping equip cheap. Call Peugeot 8x10 tent 354-2703.

Baby changng tble, \$8; 2 baby walkers, \$5 ea. Mike x3-6275

Bose 901 equalizer, exc cond, \$40. Call Rich x3-6886

B&W 23" diag TV-Magnovox console, \$50; 6' couch, \$45, both gd cond. Call Michell 661-2051.

Cannon AEl, brand nw, aberture perfered, auto sys camera, list \$295, ask \$199; also 28mm brand nw Braun lens, \$66. Call x5827 Lincl.

Tape deck TEAC A-1230 nw \$400, ask \$200, vry gd tunr Kenwood KT-4007, \$150; Koss Pro-adphones, \$20, all above nego. Call Barry 965-5273.

scilloscope, 10MHz, dual-trace triggrd sweep, od 1470 by B&K, perf cond, \$350. Call 926-5784 Oscilloscope

Pr 600-16 tires, (1) 700-16, all 6 ply, 3/\$40. Call 957-0219.

Sansui AU-2200, \$100; Sony TC-131 SD csst deck, \$100; Dinico pat 3 pre-amp, Dinico stereo sys 80 amp nds work, \$50ea; pr Dinico A-10, \$10; Garrard 42C trntbl, \$30. Call Rocky x3-4882.

Honda CB 550F cycle 1.5F, siss crash hars \$1,650. George x8-4217 Draper, after Apr 23.

Custom blt fiberglass Dune Buggy, exc cond, many, many extras. Call Ted x8-4611 Draper.

Pop-up camper, exc cond, \$1,100. Call x3-6245.

#### Housing

Acton: split entrance home, 3/4 acr landscap settng, 3 BR, LR w/fireplc, DR, famly rm, util rm, enclsd porch, 2 car gar, sale by ow Sushanta x5878 Linc or 263-8190 owner, low 60, Call

Jason Hts, spac 7 rm Colonial, exc cond & loc 3 BR, 3 fl bath, stat LR w/fireplc, formal DR w/china cab, vry fine wd work, mod K, breakfst rm, laund 2nd fl, famly rm w/fireplc, nxt to park, T, school, \$39.9. Call 646-6021.

Atkinson, NH, charming Older Cape hse on 4 4 acres on prest g Maple Ave, county lving, 6 rm, 3 BR, glass encl DR, LR, w/lg field stone fireplc 1<sup>+</sup>2 bath, 2 car gar, 3 mi to MA line, 45 min to Bos. Call owner 924-6970.

Back Bay townhse, summer sublet w/Sept option, lg 2 BR apt, beaut furn, vry conv to MIT, sunny w/river view, \$450 nego. Call 536-5661.

Belmnt, lg hse, sng, beam ceiling, LR, formal panel DR, K, sun rm, screen patio, 4 BR,  $2^{1}z$  bath, nr schools, T, oak fls, 2 car gar on lg lot, mid \$90. Show for appointmnt only, 275-7428.

Belmnt, MIT ownr hse, Sept occ, 4<sup>1</sup>2 BR, 2<sup>1</sup>2 bath custom w/view, greehse, kiln, 3 blcks elementary shcl, 3 blcks high sch, 1 blck T, \$119,500 firm. Call 484-1335.

Subjects for 45 min, react time psychology experiment, right-handed w/no left-handed siblings/ parents/child, native speakers of English, normal correctd-to-normal vision, und 30 yrs, pay \$2.50. Call Dianne x3-1960.

2 family hise in Belmnt. Call 258-1294 or 648-4860.

Belmnt 5-6 rm, 1st fl, apt up to \$350 unheat. Call

2 Pro W seek summer sit, hse sit or rental w/lake or pond, commut to Bos, ref. Call 491-0127 or 776-0136

Bike for 6 yr old B, 2 wheelr. Call x3-7019 1-5pm.

Couple w/1 child lookng for hse/apt or part hse to rent, mid-May to July 1. Pls contact x3-3969.

#### Roommates

2 MIT stud sk summer sublet in Camb or Back Bay, rent up to \$150/mo. Call Bill x3-7130 day or 354-6526 eve

Nr Coolidge Crn, rmmate wntd for summer sublet, Brkline, nr T, \$150 + util, non-smokr. Pls ask for Hillarie x3-2916.

#### Carpools

1 or 2 P carpl to Braintr-MIT Lincl Lab. x5404 Lincl

nd carry out special projects as necessary. A Bachelor's degree, or equivalent, and strong organizational, fund-raising and writing skills re-quired. Arts administration experience and knowledge of at least one art form desirable. A78-15 (4/12).

Academic Staff, Assistant Science Librarian, for chemistry and chemical engineering to select material for acquisition, retention and withdrawal; consult with faculty on research and instructional developments; advise on materials budget; develop advise on materials budget; develop and maintain written collection policy statements; participate in collection evaluation activities. Will also serve at the Reference Desk; manage chemistry reading room, perform other duties as necessary. Master's degree from accredited library school, chemistry background, organizational fills required. At least 2 years experience, referably in a large system, also required. C78-9 skills

Admin. Staff. Editor/Writer, in Information Processing Services Operations to be responsible for preparation and publication of computer-user documentation: edit, write, collect information and obtain document approval; communicate with printer. May also teach and consult on word printer. May also teach and consult on word processing. A Bachelor's degree, or equivalent, and at least 1 year's technical editing/writing ex-perience required. Experience with computers and data analysis (especially econometrics) and familiarity with computer-based word processing desirable. A78-12 (4/12).

Sponsored Research Staff, temporary, in the Lab for Nuclear Science to do postdoctoral research in experimental high energy physics. Requires some knowledge of theoretical physics and working knowledge of a foreign language, preferably French or German. Physical insight in data analysis, ability to travel on short notice for long periods of time to foreign sites also required. 1-3 year ap-pointments. R78-84, R78-83 (4/19).

Secretary IV to 2 faculty members in the Civi Engineering Dept. to type correspondence and technical materials; answer phones; maintain files and supplies; arrange travel; may perform some accounting. Excellent typing skill required. Technical typing skill or willingness to learn preferred. B78-184 (4/19).

Secretary IV, part-time, to two faculty members in the Nutrition and Food Science Dept, to perform general secretarial duties: type correspondence. class notes and statistical material; answer travel, file, accurate typing skill and ability to work from rough drafts and hand written copies, as well as ability to operate dictaphone required. One to two years secretarial experience preferred. 20 hrs./wk. B78-114.

Secretary IV to Executive Officer in the Chemica Engineering Dept. to type; take shorthand; file answer phones; maintain petty cash; schedule ap-pointments; arrange travel; handle routine corespondence. Office experience, business or ecretarial school training and familiarity with AIT preferred. Organizational ability, shorthand and/or dictating equipment experience, good typ-ing skill and ability to exercise discretion re: confidential material required. Must be willing to work irregular hours occasionally. B78-168 (4/19).

Secretary IV in the Provost's Office, MIT/Wel lesley Upward Bound Program to type letters and reports and other materials; perform accounting services; coordinate preparations for meetings, orientations or other events; answer phones; organize and maintain files. Excellent typing skill. Mass. driver's license and ability to get along well with others are required. Willingness to commute daily to Wellesley College and work there during 7 on also required. B78-178 (4/19)

Secretary IV to four faculty members in the Chemistry Dept. to type correspondence, technical

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manuscripts, grant proposals, and course materials; audit accounts; schedule appointments and meetings; arrange travel. Good typing, machine transcription and organizational skills reired, as well as ability to set priorities. At least 2 ars of secretarial experience preferred. B78-182

Secretary IV, in the Biology Dept. to answer phones; type letters, recommendations, manuscripts and grant proposals mostly from dic-taphone; order office supplies; handle petty cash, process requisitions; monitor research accounts. Excellent typing skill and aptitude for figurents. Page 158 (4/2) 78-158 (4/12).

ecretary IV, part-time, in the Mathematics Dept. type correspondence, course work and technical ports; arrange seminars; file; answer telephones; range travel. Good typing skill and 3 years type experience required cretarial rechnical/statistical typing experience, good rganizational skills preferred, B78-157 (4/12).

Secretary IV to the Wage and Salary Ad-ministrator and the Assistant Wage and Salary Ministrator and the Assistant wage and Salary Administrator in the Personnel Department to provide excellent secretarial and statistical sup-port. Will collect and compile data for salary sur-veys, statistical summaries, develop graphs and charts. Responsible for the maintenance of In-stitute Unemployment Compensation, including coording and processing claims engeneering the struct Unempioyment Compensation, including recording and processing claims, representing the Institute at D.E.S. hearings. Must have ability to work with figures, well developed sense of respon-sibility and initiative and excellent typing and communications skills are necessary. B78-164 (4/12).

Secretary IV to academic staff member and research staff in the Center for Policy Alternatives on a variety of projects including environmen-tal/occupational health, teaching in technology and law, etc. Will handle general secretarial duties; organize proposals; coordinate projects; comitor accounts; arange traval; prenare ourse monitor accounts; arrange travel; prepare course material. Excellent typing shorthand/speedwriting, good organizational skills required, as well as the ability to set priorities and work independently. Interest in research subject matter important. 37.5 hrs./wk. B78-160 (4/12).

*iecretary IV* to several faculty members in the center for Theoretical Physics to type, some echnical material; answer phones; handle mail; chedule meetings and appointments; arrange oc-asional luncheons. Typing skill required. 'echnical typing skill and shorthand helpful. B78-51.44(19) 51 (4/12)

ecretary IV in Resource Development to an officer or Capital Campaign (a 5 year, \$225 million fund aisisng program). Responsibilities will include ontact with Institute staff, potential donors and thers; carrying out research to support Campaign fforts; arranging travel and other duties as re-juired. Excellent typing skill, ability to handle cise work with accuracy and to handle a variety duties simultaneously required. B78-159 (4/12).

Secretary III-IV, to several faculty members in the Mechanical Engineering Dept. to type cor-Mechanical Engineering Dept. to type cor-respondence; schedule appointments; arrange travel. Excellent typing skill, including technical typing, shorthand/machine transcription ability and knowledge of basic bookkeeping required. High school graduation with formal secretarial training or equivalent education and experience re-quired. B78-135, B78-167 (4/19).

Secretary IV in the Medical Dept. to provide recep-tion and secretarial support to physician and Ear, Nose and Throat Clinic: answer phones; schedule uppointments; transcribe medical reports; handle appointments, transcribe metical reports, name mail; arrange travel; type correspondence; main-tain files. Will share in receptionist/secretarial support for supplementary medical staff. Previous secretarial experience required. Excellent typing skill and ability to deal effectively with patients and staff also required. 37.5 hrs./wk. B78-84 (3/1) ½

Secretary III-IV in the Nutrition and Food Science Dept. to type reports, correspondence and nanuscipts; act as receptionist in Headquarters; inswer phones; distribute correspondence; provide general information services. Good typing and general secretarial skills required. Some knowledge of medical, biological and/or chemical terminology helpful, as well as shorthand skills and ability to operate dictaphone equipment. One or two years secretarial school training preferred. B78-179 (/10) 4/19).

Secretary III-IV in the Student Financial Aid Of-fice to type correspondence and reports; maintain files; handle mail; compile and compare statistics; process forms and records; assume receptionist's duties in absence of regular receptionist. Excellent yping skills required. B78-166 (4/12).

Library Asst. III, part-time, in the Physics Library to process reprints, journals, these and reports; prepare book orders; prepare books for shelves; maintain public catalogue and shelf list; perform various clerical duties as necessary. High school graduation, typing and filing skills and ability to used with little gramming scheme used work with little supervision required. Some work experience desirable. Mon.-Fri. hours flexible, but st be able to work every Saturday 8:30-4:30. 20 hrs./wk. B78-183 (4/19).

Account Rep. V, Project Development Librarian Account Rep. V, Project Development Librarian, in Administrative Computing Services to provide documentation support to new business project development teams in the design development and implementation of computer systems: gather, organize, maintain and development documenta-tion; assist in testing and compiling program code flow charts and data element listing via batch or remote terminal facilities. Will also assist in developing end-use programmer, operations and user manuals. Experience with EDP operation or programming, (COBOL and/or PL 1) required. Familiarity with MIT preferred. B78-185 (4/19).

Editorial Asst. V in the MIT Press, will edit technical manuals. Position requires Bachelor's degree and training in science and mathematics. Editorial experience desirable. B78-163 (4/12).

Payroll Clerk III-IV in the Comptroller's Payroll Office to prepare control totals prior to keypunching of account changes; log adjustments; handle vacation cards and process vacation credits. Ability to communicate effectively over the phone and accuracy required. B78-180 (4/19).

Clerk III in the Medical Dept. to coordinate clerical functions related to Tuberculosis Test Program; type cards and reports; file; answer phones; schedule special tests; perform receptionit duties for the office. Will be trained to administer diagnostic tests as a back-up to technicians. Good typing and organizational-skills, attention to details and some experience required. 37.5 hrs./wk, B78-172 (4/19).

Data Entry Operator III in the Information Proces-sing Services Office to enter a variety of routine sing Services Office to enter a variety of routine data; punch cards from previously coded data or data requiring the application of routine codes; operate a verifier. High school graduation, or equivalent, and basic training in data entry equip-ment operation required, B78-177 (4/19).

Clerk III in the Physical Plant to issue keys; maintain files; coordinate production and distribution of keys; handle mail; perform receptionist duties. Good typing and general office skills required. B78-152 (4) Good typin 153 (4/12).

Accounting Clerk III in Graphic Arts to handle general clerical duties. Good typing skills, interest in working with figures and knowledge of the use of caluculators required. B78-152 (4/12)

Hourly, Sr. Audio-Visual Specialist, in Graphic Arts to set up, test, repair, operate and maintain audio visual equipment (television, cameras, pro-jectors, sound systems, etc.); keep repair records. May make noise or distortion measurements and technical drawings of audio visual systems. Will do related tasks as assigned. Graduation from a 2 year technical day school, or its equivalent, plus a minimum of 5 years applicable experience re-quired. Applicants should be experienced in all phases of electronic repairs, have ability to trouble-thost and ensuit all times of ensulting shoot and repair all types of amplifiers, pre-amps, tuners tuners, power supplies and electronic test equip-ment. H78-51 (4/19).

Hourly, Technician A (Electronic) in the Laboratory for Nuclear Science to assist in Laboratory for Nuclear Science to assist in research projects through operation of experimen-tal and other electronic apparatus. Initial assign-ment will involve testing large drift chambers (ap-ply high voltage; energize amplifier circuits and make standardized tests). Position requires graduation from a 2 year technical school, or its environment of the 2 years of amplicable avecting and graduation rous a 2 year technical school, or no equivalent, plus 2 years of applicable experience. A general background in electronics testing, in-cluding familiarity with modern oscilloscopes and pulse generators is required, as well as familiarity with a wide variety of electronics components. H78-43 (4/12).

Hourly, Waiter/Waitress, part-time, in the Faculty Club to take members order; pick up and serve food using banquet trays; clean and reset tables; perform other duties pertaining to dining room ser-vice. Must be able to speak and read English. Ex-perience helpful. 11AM-3PM, M-F. May include conspirence unscher U78 50 (4020) occasional weekend work. H78-50 (4/12).

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:
- 7-3, Systems Programmer, Info. Processing . (2/16) A77-3, Serv. A77-62, Industrial Liaison Officer, Ind. Liaison
- (4/5)A77-86, Systems Prog., Info. Proc. Serv. (1/11) A77-87, Systems Prog., Info. Proc. Serv. (1/11)

A78-8, Admin. Staff, Dean for Student Affairs (3/8)

A78-10, Asst. Director, Council for the Arts

- A78-13, Staff Accountant, Compt. Acctg. Off. (4/12)
- A78-14, Asst. Director, MIT Associates Prog. (4/12)
- BIWEEKLY: B77-611, Sec. IV, Elec. Systems Lab. (11/12) B77-647, Sec. IV, Treasurer's Office (3/1) B77-665, Sec. IV, Chemical Eng. (11/16) B77-679, Sec. IV, Nuclear Sci. (12/7) B77-696, Sec. IV, Personnel Office (12/7) B77-753, Sec. IV, Earth & Planetary Sci. (1/11) B77-755, Sec. IV, Tech. Adaptation Prog. (1/11) B77-755, Sec. IV, Earth & Planetary Sci. (1/11) B78-7, Clk./Sec. III-IV, Ctr. for Cancer Res. (1/25)
- B78-4, Sec. IV, Civil Eng. (1/18) B78-8, Sec. IV, Admissions (1/18) B78-13, Acctg. Asst. V, Comptroller's Benefit
- Off. (1/25) B78-16, Sr. Clk. III, Div. of Lab. Animal Medicine (1/25)
- B78-25, Sec. III-IV, Urban Studies & Planning (1/25)
- B78-27, Admin. Asst. V, Civil Eng. (1/25)
- B78-56, Sr. Cik. III, Sloan School (2/22)
  B78-56, Sr. Cik. III, Sloan School (2/22)
  B78-71, Sr. Cikrk, IV, Lab. for Comp. Sci. (3/1)
  B78-76, Sec. IV, Dean for Student Affairs (3/1)
  B78-76, Sec. IV, Nutrition & Food Sci. (3/8)
  B78-80, Sec. V, Mech. Eng. (3/8)
  B78-82, Sec. III-IV, Resource Planning (3/8)
  B78-84, Sec. IV, Medical Dept. (3/8)
  B78-87, Computer Oper. IV, Admin. Comp. Serv 3/8)

- B78-93, Communications Console Oper. III, Physical Plant (4/5) B78-97, Sr. Keypunch Oper. III, Alumni Assoc. (3/22)
- B78-98, Sr. Keypunch Oper. III, Alumni Assoc. (3/22)
- B78-100, Sec. IV, National Magnet Lab. (3/22)
   B78-104, Sec. IV, Neurosciences Res. Prog. (3/2-2)
- B78-107, Sec. IV, M.I.T. Press (4/5) B78-108, Sr. Clk. IV, Resource Planning (4/5) B78-110, Sec. III/IV, Elec. Eng. & Comp. Sci.

### Hanham Receives J.H. Jenkins Prize For Bibliography

Dean Harold J. Hanham of the School of Humanities and Social Science has been awarded the 1978 John H. Jenkins Prize for Bibliography for his book, Bibliography of British History: 1851-1914.

The award, which has been made by Union College in Schenectady, N.Y., annually since 1973, will be presented to Dean Hanham June 10 at the college.

The \$500 prize is made possible by a gift from John H. Jenkins, a bookseller of Austin, Tex., who in 1970 recovered for Union College a rare volume that had been stolen from the college. He returned the reward money offered by the college, making possible the award.

The award is made to a bibliography bearing an imprint date two years before the year of the award.

Dean Hanham, who came to MIT in 1973, is a former professor of history at Harvard. A New Zealander educated in that country and in England, he formerly was a faculty member at the University of Manchester in England and at the University of Edinburgh in Scotland before joining Harvard in 1968.

He is the author of numerous scholarly articles dealing with politics, government and history as well as several books.

### Preston Joins Associates Program

John T. Preston, former general manager of EDL Instruments, Inc. Chicago, Ill., has been appointed

assistant director of the **MIT Assoiates** Program, it was announced Cynthia by Bloomquist, director of the Program. The Associates Program was established in 1961 to pro-



vide professional interaction between MIT and small and mediumsize industrial organizations.

- E78-11, House Manager, Housing Office (4/5) E78-12, Nurse Practitioner or Physician Asst.,

- E/8-12, Nurse Practitioner of Physician Asst., Medical (4/5) E78-13, Tech. Asst., Medical (4/5) E78-16, Editor, M.I.T. Press (4/12) E78-18, Supervisor, Off. of Lab. Supplies (4/12) E78-19, Eng. Asst., Earth & Planetary Sci (4/12) E78-20, Chef, Endicott House (4/12)
- HOURLY
- H77-89, HVAC Designer/Draftperson, Physical Plant (10/5)
- Waiter/Waitress, Endicott House, H77-170, Dedham (2/15) (2/10) G77-206, Elec. Tech. A, Energy Lab. (3/1) H78-23, Mach. A, Nutrition & Food Sci. (3/8) H78-27, Second Class Firer, Physical Plant (3/2-
- 2) H78-35, Tech. A, Energy Lab. (4/5) H78-40, Waiter/Waitress, Faculty Club (4/12) H78-41, Waiter/Waitress, Faculty Club (4/12)
- SPONS. RES. STAFF: R77-37, Spons. Res. Staff, Lab. for Nuclear Sci. (3/16)R77-51, Sr. Research Engineer, Energy Lab.
- (3/22) R77-53, Spons. Res. Staff, Res. Lab. of Elec. (4/12)
- R77-73, Plasma Physicist, National Magnet Lab. (4/27)
- R77-74, Plasma Physicist, National Magnet Lab. (4/27) R77-79, postdoc, res., Physics, Lab. for Nuclear Sci. (5/4)
- R77-80, postdoc. res., Physics, Lab. for Nuclear Sci. (5/4) Sr Accelerator Physicist Lab

**Dedication Set April 30** 

#### **By JILL A. GILPATRIC** Staff Writer

This Week in Sports

Steinbrenner Stadium

MIT will host the 1978 Outdoor Track and Field Championships of the Greater Boston College Athletic Association on Sunday, April 30. Dedication ceremonies for Tech's new Steinbrenner Stadium are scheduled for 1:30pm prior to the start of the afternoon's events.

The seven member schools of the GBCAA will participate in the oneday event, competing on the new 400 meter, all-weather surface, the first of its kind in North America. Participating colleges and universities include Boston University, Boston College, Brandeis, Har-vard, host MIT, Northeastern and Tufts.

The day's activities will commence at 10:45am with trials in the 110 meter hurdles and field competition on the hammer. Trials in the running events will continue throughout the morning, followed by the dedication ceremony at 1:30pm. The afternoon's activities will begin at 2:00pm and will consist of finals in the track events and continued competition in the field portion of the championships. The close of the all-day event will come

"Mr. Preston brings a solid

background in the electronics in-

dustry to the Associates Program," Ms. Bloomquist said. "His

experience ranges from design

modification and testing through

financial management to complete

charge of a manufacturing plant

at 4:05pm with the 1600 meter relay. Admission for the champion-

ships is \$2.00 for the general public, \$1.00 for college and high school students with identification.

#### Batterman Honored

MIT's diving coach Charles Batterman was recently informed of his selection by the American Divers and Coaches Association to receive the Fred A. Cady Memorial Diving Coaches Achievement Award, one of the renowned awards of America.

Mr. Batterman became the thirteenth recipient of this award on the basis of his more than 25 years of dedicated coaching and on his coaching success in developing outstanding talent in the National AAU and Collegiate competitive diving programs. Coach Batterman's book, "The Techniques of Springboard Diving," was an added acknowledged factor as a great contributor to the sport of diving.

Charles Batterman's name will be engraved on gold plates and placed on the pedestals of the award enshrined in the International Swimming Hall of Fame in Ft. Lauderdale, and the Citizens Savings Athletic Foundation Hall of Fame in Los Angeles. Batterman will also receive a replica of the original concept of the sculpture in relief or contour form, cast in bronze.

#### **Crews Successful**

The Tech men's lightweight and women's crews had a productive day on the Charles last Saturday. The varsity lights beat Yale by a length and a half, finishing over six seconds ahead of the competition. MIT took the lead easily and led by a length at the 500 meter mark and continued strong to take the regatta. Tech's second varsity lights also turned in a win with a time of 7:25.2 to Yale's 7:40.3.

The women's varsity had a very close race, beating out Brown by just two-tenths of a second. Tech's winning time was 6:01.6 to Brown's 6:01.8 and Mt. Holyoke's 6:06.4.

### Obituaries George C. Halstead

Memorial services were held Saturday, April 15, at Christ Episcopal Church of Manhasset, L.I., for George Chappell Halstead, President of Alcoa Steamship Co., and a member of the MIT Department of Ocean Engineering Visiting Committee, who died April 11. Mr. Halstead received the SB degree in ocean engineering from MIT in 1940.

He survived by his wife, is Maude; five sons, Peter Chappell, Timothy Hooper, Christopher Van Duzer, John Prescott and Alexander Brooks; and a grandson, Christopher Chappell. The family has asked that donations be made in his memory to Columbia Presbyterian Medical Center Fund, Inc., 100 Haven Ave., New York, N.Y., 10032.

and production." Mr. Preston received the BS degree in physics from the University of Wisconsin in 1972 and the MBA degree from Northwestern University in 1976. Mr. Preston

He is married to Sean Otis Preston and they have one child, Patrick. The Prestons live in Hingham, Mass.

- Sci. (2. 22) R78-30, Program Counselor, MIT/Wellesley Upward Bound Prog. (2/22) R78-36, Programmer, Lab. for Computer Sci.
- (3/1) R78-37, Tech. Asst., Ctr. for Cancer Research
- R78-42, Computer Analyst, Sloan School (3/1)
- R78-43, Energy Analyst, Energy Lab. (3/8) R78-44, Engineer, Earth & Planetary Sci. (3/8) R78-45, Tech. Officer, Tech. Adaptation Prog. R78-46, Computer Systems Eng., Meteorology
- Dept. (3/15) R78-55, Staff Scientist, Arteriosclerosis Ctr. (4/5)
- (7) R78-56, Combustion Eng., Energy Lab. (4/5) R78-58, Spons. Res. Staff, National Magnet Lab. (4/12) R78-59, Research Metallurgist, National Magnet

Lab. (4/12) R78-60, Combustion Engineer, Energy Lab.

(4/12)

(4/12)

L.ab. (4/12)

R78-61, Staff Engineer, Res. Lab. of Elec. (4/12) R78-62, Spons. Res. Staff, Center for Space Res.

R78-64, Spons. Res. Staff, Earth & Planetary

R78-67, Res. Asst., Psychology (4/12) R78-68, International Energy Economist, Energy

R78-69, Temporary Systems Prog., Energy Lab.

R78-70, Energy Analyst, Energy Lab. (4/12)

Sci. (4/12) R78-66, Spons. Res. Staff, Nut. & Food Sci.

Accounting Clerk IV in the Nutrition and Food ence Dept. to process purchase orders, packing lips and invoices; maintain records and files; neck monthly statements; interact with vendors and staff. Good typing skill and good command of English language required. High school graduation and 2 years accounting experience or 2 years col-lege level courses also required. B78-174 (4/19).

Technical Asst. IV (Histology) in the Nutrition ind Food Science Dept. to prepare microscope sildes, which requires tissue trimming, embedding issue specimens in paraffin, cutting sections on microtome, and staining and mounting slides; repare stains and solutions and record procedures I lab notebook; prepare frozen specimens using istochemistry techniques. College degree in iology or life science preferred. Manual dexterity and ability to work with small details required. At east 2 years college science courses or 1-2 years ex perience with histological techniques also required 40 hrs /wk B78-173 (4/19).

Sr. Clerk IV in the Humanities Dept.'s Music Sec ion to schedule rehearsals and performances; han de correspondence concerning concerts and per-formers; supply ticket information; handle publicity; supervise arrangements for performers; act as liaison between Music Section and Arts Council; type; transcribe some dictation. Typing. shorthand/speedwriting skills, and attendance at all concerts required. Ten month position, Sept.-June, B78-170 (4/19).

Accounting Clerk IV in the Sloan School, System Dynamics Group to verify accounting statements; file; perform follow-up work; compute monthly billings; distribute cost statements; issue petty cash; type budgets, financial and general in-formation; index and distribute publications; assist in routine administrative/accounting and miscelaneous matters. Excellent typing and nizational skills and ability to as required. Experience at MIT helpful. B78-65 (4/12).

B78-112, Sec. V, Energy Lab. (4/5) B78-113, Sec. IV, Vice Pres. Res. (4/5) B78-120, Sec. III-IV, Chemical Eng. (4/5) B78-121, Sec. IV, Tech. Adaptation Prog. (4/5) B78-127, Sr. Clk. IV, Center for Space Res. (4/12)4/12)
B78-129, Sec. IV, Biology (4/12)
B78-130, Admin. Asst. V, Sloan School (4/12)
B78-132, Sec. IV, Res. Lab. of Elec. (4/12)
B78-133, Sec. IV, Rat. Magnet Lab. (4/12)
B78-134, Sec. IV, Nat. Magnet Lab. (4/12)
B78-134, Sec. IV, Mech. Eng. (4/12)
B78-136, Sec. IV, Physics (4/12)
B78-139, Sec. IV, Physics (4/12)
B78-139, Sec. IV, Physics (4/12) B78-143, Clk./Typist IV, Resource Planning Off. (4/12) B78-144, Sec. IV, Nut. & Food Sci. (4/12) B78-147, Sr. Clk./Receptionist III-IV, Off. of Pers. Serv. (4/12) B78-148, Sec. V, Humanities Dept. (4/12) B78-149, Sr. Clk. IV, Civil Eng. Acad. Prog. Off. (4/12)ACADEMIC STAFF: CADEMIC STAFF: C77-36, Social Worker, Medical (10/5) C78-1, Tech. Inst., Mech. Eng. (1/18) C78-5, Asst. Eng. Librarian, Eng. Lib. (4/5) C78-6, Asst. Eng. Librarian, Eng. Lib. (4/5) C78-7, Facilities Officer, Elec. Eng. & Comp. Sci. Dept. (4/5) C78-8, Res. Associate, Div. for Study & Res. in Ed. (4/5 C78-10, Tech. Instructor, Chemistry (4/12)

EXEMPT

E77-47, Engineering Asst., Aero/Astro. (10/12) E77-54, Eng. Asst., Ctr. for Mat. Sci. (12/14) E77-56, Estimator/Scheduler, Physical Plant E71-20, Latternov, Medical (1/25)
 E78-1, Unit Coordinator, Medical (1/25)
 E78-2, Audiologist, Medical (1/25)
 E78-8, Machine Shop Super., Lab. for Nuclear

Sci. (3/8)

Nuclear Sci. (5/18) R77-93, Design Engineer, National Magnet Lab. (11/9) R77-95, Biophysicist, National Magnet Lab. (4/12) (5/25)(5/25) R77-97, Chemical Eng., Energy Lab. (6/1) R77-105, Managing Dir., Energy Lab. (6/22) R77-112, Magnetic field coil design, National Magnet Lab. (6/22) R77-172, Exercised Directory Directory Construction Directory Construction Directory Directory Construction (Construction) (Construc (4/12)R77-137, Experimental Physicist, Bates Linear (4/12)Accelerator (8/31) R77-161, Elec. Engineer, Mech. Eng. (9/7) R77-192, Computer Language Devel., Lab. for Computer Sci. (10/26) R77-201, Prog./Data Analyst, Earth & Planetary B78-109 Sci. (11/9) B78-150 R77-209, Res. Scientist, Energy Lab. (11/30) B78-123 R77-211, Computer Syst. Design, Lab. for Com-puter Sci. (12/7) B78-86 H77-137 R77-212, Prog. Language Design, Lab. for Com-puter Sci. (12/7) B78-105 B78-142 R77-213. Computer Software Design. Lab. for B78-518 omputer Sci. (12/7) R77-221, Neurochemist Res., Nutrition & Food Co B78-111 H78-42 B78-101 Sci. (12/14) R77-228, Plasma Physicist, Res. Lab. of Elec. B78-28 (1/4)H78-37 R77-230, Computer Syst. Designer, Lab. for R78-36 Comp. Sci. (1/11)
 R78-2, Chief Oper., Lab. for Nuclear Sci. (1/18)
 R78-8, Computer Usage Res., Sloan School (2/1)
 R78-18, Theoretical Physicist, Lab. for Nuclear B78-124 B78-83 B78-137 R78-4 Sci. (2/22) B78-138 B78-122 R78-19, Theoretical Physicist, Lab. for Nuclear (2/22) Sci R78-20, Theoretical Physicist, Lab. for Nuclear Sci. (2/22) R78-21, Theoretical Physicist, Lab. for Nuclear ion: A78-9 R78-22, Theoretical Physicist, Lab. for Nuclear
 Sci. (2/22)
 R78-28, Theoretical Physicist, Lab. for Nuclear H78-44

R78-72, Computer Programmer, Energy Lab. R78-73, Computer Programmer, Energy Lab. (4/12) R78-74, Spons. Res. Staff, Nut. & Food Sci. R78-75, Spons. Res. Staff, Nut. & Food Sci. R78-76, Spons. Res. Staff, Clinical Res. Center (4/12) R78-77, Spons. Res. Staff, Res. Lab. of Elec. The following positions have been FILLED since

the last issue of Tech Talk. Tech. Asst. IV Sec. IV Sec. IV Sec. IV Tech. A Lib. Asst. IV Lib. Asst. II Sec. III/IV Tech. Asst. V Hourly Sec. V Sec. IV Hourly Spons. Res. Staff Sec. IV Sec. III Sec. IV Spons. Res. Staff Clerk III Acct. Rep. V

The following position are on HOLD pending final Admin. Staff Admin. Staff Sr. Clk. III

Hourly

#### Arthur V. McKenna

A funeral Mass was held Saturday, April 15, for Arthur V. Mc-Kenna, 72, of Watertown, who died April 12.

Mr. McKenna was head custodian in Kresge Auditorium from 1952 until his retirement in 1972. He is survived by a daughter, Louise M. Terrio; two sons, Arthur V., Jr., and Francis J.; a sister, Alice Kelly; a brother, Edward; and four grandchildren.

Tech Talk, April 19, 1978, Page 7

## **Sloan School** Appointments Announced

Three appointments have been announced at the Sloan School of Management.

Pamela W. Turner, director of recruitment and placement and manager of the Accelerated Master's Program, has been given the additional appointment of lecturer. She received her bachelor's degree in economics from Wellesley College in 1965 and the SM in management from the Sloan School in 1971, concentrating in management information systems, and planning and control.

The other two appointments involve assistant professors at the Boston University School of Management who are spending the spring term at Sloan as visiting assistant professors. They are Zvi Bodie and Allen J. Michel.

Bodie received the BA in philosophy from Brooklyn College in 1965; the MA in economics from Hebrew University in Jerusalem, Israel, in 1970; and the PhD from MIT in economics in 1975. He was an instructor of economics and finance at the BU School of Management in 1972-75, and assistant professor of finance at the Sloan School in 1976-77. He became an assistant professor at BU in 1976.

BS in Michel received the physics from Carnegie-Mellon University in 1967; the MA in operations research from Yale University in 1969; and the PhD in finance from Cornell University in 1972. He was an assistant professor in the BU overseas program in 1973-74, and became an assistant professor at the BU School of Management in

### **Design Services'** Work Honored

Nine pieces of graphic design prepared by the MIT Design Services received awards in the 24th annual Art Directors Club of Boston design competition completed recently.

The pieces included posters, letterheads, report covers and brochures prepared by Design Services for such MIT clients as the Sloan School, Sea Grant Program, the Committee on the Visual Arts, the Visible Language Workshop and the Music section. One of the pieces-a poster for the Borodin Quartet prepared by designer Ralph Coburn-received an award of distinctive merit. Other designers from MIT represented with winning designs were Jacqueline S. Casey, Design Services director, and Betsy Hacker.

All told, there were nearly 1,500 pieces of graphic design entered in this year's contest. One hundred twenty five were selected for awards. MIT's Design Services was among those that received the largest number of awards

### **Rotberg** Authors Book on Africa



The MIT Symphony Orchestra performing in Avery Fisher Hall at Lincoln Center. -Photo by Roger Goldstein

### Symphony NYC Appearance Enthusiastically Received

The MIT Symphony Orchestra, under conductor David Epstein, made its debut at New York's Lincoln Center last Wednesday (April 12) evening and played itself proud.

"The ensemble performed smartly in a program that included Stravinsky's Scherzo a la Russe, Kurt Weill's Suite from the opera Silbersee and Berlioz's Harold in Italy," wrote New York Times critic Raymond Ericson.

"The orchestra, 95 players strong, showed how skillful its wind sections are by sparkling through the dry wit of Stravinsky's bit of native color. The strings added luster to the Weill suite, which was being given its New

### **Doksansky Wins CLR** Fellowship

Florence Kell Doksansky, assistant Rotch Librarian in charge of acquisitions at MIT, is one of nine mid-career librarians receiving Council of Library Resources (CLR) Fellowships for 1978-79.

Her proposed program of research is a comparative study of staff development practices in several major academic libraries. Many large library systems have personnel policies that include active staff development programs. Ms. Doksansky will concentrate on the effectiveness of these programs from the points of view of the staff and the administration within the library. By comparing several types of programs she hopes to find guidelines and methods that can promote further staff development.

Costs of a three-month program of investigation, which reflects an interest that has grown over several years, will be covered by the fellowship.

Ms. Doksansky completed the Administrative Development Program at MIT in 1974-75. She is a member of the Advisory Committee on Librarian Staff Development at MIT and is a member of the MIT Working Group on Office and Clerical Issues. She received the BA degree from Wilson College, Chambersburg, Penna., in 1966 and the MLS from Simmons College Library Science School in 1969. She lives in Salem, Mass., where she is active in community

York premiere," he wrote. "This is a particularly beguiling work that ought to find a place in lighter symphonic programs."

Describing soloist Marcus Thompson as an "elegant violist," Mr. Ericson also said "Mr. Epstein did everything right in the Berlioz, as did Marcus Thompson.'

The precision of the orchestra was evident near the end of Harold in Italy when first violinist Arthur Hu broke his E-string and his solo passage was immediately and smoothly assumed by co-concertmaster Daniel Yuan.

The orchestra played to a nearly full house in Avery Fisher Hall, home of the New York Philharmonic in a concert sponsored jointly by the MIT Council for the Arts, the MIT New York Alumni Center, and the Department of Humanities. The enthusiastic audience included special friends of the arts at MIT, New York area alumni and alumnae, admitted freshmen from the area and prospective students with an interest in music.

The New York appearance was the final concert in the Symphony Orchestra's annual spring tour which this year included concerts at Wellesley College and Smith College en route to New York. Orchestra members were houseguests of New York alumni during their overnight stay.

### **Young Elected BES** President

Professor Laurence R. Young of the MIT Department of Aeronautics and Astronautics, a widely recognized expert on vestibular systems, aerospace medicine and bioinstrumentation, has been elected the next president of the Biomedical Engineering Society. His one-year term will begin in April 1979. Professor Young, director of MIT's Man-Vehicle Laboratory, is a founding member of the 10-yearold society, which was organized in February 1968 "to promote the increase of biomedical engineering knowledge and its utilization.' From 1972-75 he was on the board of directors. The organization, currently listing nearly 600 members, will hold its annual business meeting April 9-14 in Atlantic City.

## David Bostein to Receive Lilly Microbiology Award

#### (Continued from page 1)

teins. His work has led to a method for determining the order of events in a biological pathway using coldsensitive and temperature-sensitive mutant genes. He has provided insight into the mechanisms by which drug resistance spreads among bacteria, by showing that defined pieces of DNA are able to jump from one molecule to another.

Professor Botstein, who has been associate professor at MIT since 1973, first came to the Institute in 1967, after receiving his PhD from the University of Michigan. He

began his work Dr. Botstein with P22 while he was at Michigan, under the guidance of U. of M. Professor Myron Levine.

## Fellowships

(Continued from page 1)

- gineering from Skokie, Ill. Tomas S. Mattison, a senior in physics from
- Wheaton, Ill. Albert B. Zisook, a senior in mathematics from
- Hubbard Woods, Ill. George W. Hart, SB, mathematics, from
- Bloomington, Ind. Teresa J. Costanza, a senior in materials science and engineering from Berkshire, Md. Gerald L. Epstein, a senior in physics from
- Silver Spring, Md. Allan S. Jacobs, SB, physics, from Oak Park, Mich.
- Tina T. Kangas, a senior in chemistry from Midland, Mich.
- Timmy T. Jones, a senior in biology from Kansas City, Mo.
- John W. Lott, a senior in mathematics from Kansas City, Mo. Yu-Ling Cheng, SB, chemical engineering,
- from Albuquerque, N.M. Richard E. Stone, SB, mathematics, from
- Bronx, N.Y. Mitchell I. Weitz, a senior in chemistry from
- Bronx, N.Y. Peter R. Shaw, a senior in earth and planetary
- sciences from Columbus, Ohio Lawrence C. Siegel, a junior in electrical en-gineering and computer science from Shaker Heights, Ohio
- Robert W. Bjorge, a senior in nuclear engi-neering from Eugene, Ore.
- Susan N. Coppersmith, a senior in physics from Johnstown, Penna.
- Michael J. Foster, SB, mathematics, from Pittsburgh, Penna
- John B. Horton, SB, mathematics, from State College, Penna. Robert A. Indik, a senior in mathematics from
- Wyncote, Penna. Jordin T. Kare, a senior in electrical engi-
- neering and computer science from Narberth, Penna. Gerald A. Kriss, a senior in physics from
- Pittsburgh, Penna. Leslie J. Federer, a senior in mathematics
- from Providence, R.I.
- Lester A. Longley, a senior in electrical engi-neering and computer science from Chattanooga, Tenn. Gregory B. Stephenson, SB, materials sci-
- ence and engineering, from Nashville, Tenn. Peter R. Altroggen, SB, architecture, from McLean, Va.
- Joan E. Hooper, SB, biology, from Beckley, W. Va.
- John J. Ottusch, SB, physics, from Fox Point, Wisc.

### **Open House** Is Coming

Since coming to MIT, Professor Botstein has been very active as a teacher as well as a researcher. In 1968, he designed the Genetics and Microbiology Project Laboratory (Subject 7.031), which has become a very popular course for undergraduates. It was the first of the advanced project laboratories in the department. Professor Botstein continues to teach the course on a regular basis.

Professor Botstein's awards include two National Science Foundation Undergraduate Research Fellowships, a Woodrow Wilson National Fellowship, and a **Career Development Award from** the National Institutes of Health. He is on the editorial boards of Virology and Journal of Virology and a member of the American Cancer Society study section on Virology and Cell Biology, and he was for three years a member of the National Science Foundation study section on genetic biology.

Professor Botstein lives in Cambridge.

### **Graybiel Wins** Herrick Award

Dr. Ann M. Graybiel, associate professor of psychology and brain science in the Department of Psychology at MIT, was given the 1978 Charles Judson Herrick Award by the American Association of Anatomists (AAA) at its meeting in Vancouver, B.C., on April 5. The Charles Judson Herrick

Award was established by the AAA in 1962 to encourage work of high merit in the field of comparative neurology. For the past 10 years, nominations have been restricted to young scientists within a period of six years following their first definitive publication.

Professor Graybiel received the AB magna cum laude, from Radcliffe College in 1964, and the PhD from MIT in 1971. In 1970, she was the recipient of the Williams and Wilkins Award of the AAA for the best paper delivered by a graduate student. She was appointed assistant professor of psychology and brain science at MIT in 1973, and became associate professor in 1976

She is a member of the American Association of Anatomists, the Cajal Club, the Society for Neuroscience, the International Brain Research Organisation, the American Association for the Advancement of Science and Sigma Xi. Professor Graybiel lives in Lincoln, Mass.

### Weiss Appointed In Energy Lab

Dr. Malcolm A. Weiss has been appointed to the new post of deputy director of the Energy Laboratory, according to an announcement by Professor David C. White, di-rector. Since joining MIT in September, 1977, Dr. Weiss has been the acting managing director of the Center for Energy Policy Research. "Dr. Weiss will work closely with me and will assume special responsibility in certain specific areas: among them are strengthening our working relationships with industrial organizations, encouraging more effective interaction between our technology and policy activities, and improving the internal management and administration of the laboratory,' Professor White said. Dr. Weiss is a Columbia University chemical engineer who came to MIT from a career with Exxon Corporation. At Exxon he had broad experience in R&D and technology management in many fields ranging from refining and chemical processes to rocket propellants, and from basic research to plant engineering support. He has done personal research and has publications and patents in the fields of combustion, mixing, atomization, fuel cells, and hydrocarbon recovery by in situ thermal methods.

The University of California Press this month published Professor Robert I. Rotberg's latest book on Africa. Rotberg is professor of political science and history at MIT and editor of the Journal of Interdisciplinary History

Entitled Black Heart: Gore-Browne and the Politics of Multiracial Zambia, his book is a biography of a titled Briton who settled in colonial Africa after World War I, established an essential oils industry on a remote rural estate, and championed Africans. Black Heart contains a foreword by Kenneth D. Kaunda, president of Zambia and a longtime admirer of Gore-Browne's contribution to the evolution of his country.

Several of Professor Rotberg's earlier books are about the politics and history of Zambia and southern Africa.

### April 29

An experiment headed by Professor Young has been selected by the National Aeronautics and Space Administration to be aboard the first Spacelab flight in 1980. The experiment will investigate the inflight and after-flight effects of space motion sickness and weightlessness.

## Horizon Company Exhibition Set

An exhibition by the Horizon Company of the luminous murals of Stephen Hannock and the electronic music of Andrew Shannon will be held in the Bush Room (10-105) April 22-24. Admission is free.

affairs.

The exhibition will be open Saturday, April 22, from 7pm until midnight; Sunday, April 23, from 2-11pm; and Monday, April 24, from 10am until 11pm. Mr. Shannon will perform original music on

piano, synthesizer and organ Saturday and Sunday nights at 7:30, 8:30, and 9:30. An informal gallery talk will be held Sunday at 3pm.

The Horizon Company exhibition has been displayed at the Boston Center for the Arts, on the Boston Common, and in the Hatch Shell on the Esplanade. Mr. Hannock's murals are done in fluorescent paint, and viewed under ultra-violent or "black" light. The

music, by Mr. Shannon, is largely improvised. The Boston Globe has called the exhibition a "bold, experimental attempt at fusing art with music," and says that Shannon's "tonal coloring enhances the sensuous imagery in Hannock's murals.'

The MIT Graduate Student Council, the Undergraduate Association, and the Council for the Arts at MIT are sponsoring the exhibition.

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