

Engineering School Internships Planned

By Robert C. Di Iorio
Staff Writer

A new program that offers students wide opportunities for internships in industry and government and leads to the simultaneous award of the SB and SM degrees has been organized by the School of Engineering at MIT.

The Engineering Internship Program is available to students in the School of Engineering and will begin with this year's sophomore class. Students will be placed in internships starting next summer.

The new school-wide program was announced by Dr. Joseph M. Sussman, associate dean for educational programs for the School of Engineering, who said that Dr. Ernest G. Cravalho, whom he succeeded as associate dean for educational programs, played a

major role in developing the internship program. The program was one of the major accomplishments during Professor Cravalho's two years as associate dean for educational programs.

Dean Sussman also announced that John R. Martuccelli, administrative officer of the Department of Aeronautics and Astronautics since 1967, has been appointed director of the internship program.

The US Office of Education of the Department of Health, Education, and Welfare has given MIT a \$60,000 grant to help initiate the program.

The program couples work and study in an educational program that combines the best that academe and industry have to of-

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Weiner Appointed Ford Professor

Dr. Myron Weiner, a professor of political science and a senior staff member at the Center for International Studies at MIT since 1965, and head of the Department of Political Science from 1974 to 1977, has been appointed Ford Professor of Political Science.

The appointment, which was effective July 1, was announced by Dr. Harold J. Hanham, Dean of the School of Humanities and Social Science.

Dr. Weiner, who has done extensive research on political change in developing countries, is currently engaged in research on the political consequences of migration in multi-ethnic societies. He is also completing a book on the parliamentary elections that took place in India earlier this year.



Dr. Weiner

Dr. Weiner has been chairman of the National Academy of Sciences Project on Population Policy in Developing Countries and is a member of the American Academy of Arts and Sciences, the Council on Foreign Relations, and the International Union for the Scientific Study of Population.

Much of Dr. Weiner's work has been concentrated on India and he has published a number of books on that country, including *Politics of Scarcity*, *Party Politics in India*, *Party Building in a New Nation: The Indian National Congress*, *Indian Voting Behavior*, and *State Politics in India*. He recently completed (as co-author and co-editor) a four volume work, *Electoral Politics in the Indian State*.

He is also editor or co-editor of several comparative studies in political development including *Political Parties and Political Development*, *Crises and Sequences of Political Development*, and *Modernization: the Dynamics*

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Rep. Burke Advocates Right to 'Influence' Canal

Rep. Yvonne Brathwaite Burke of California, a strong supporter of the proposed Panama Canal treaty, speaking yesterday at the annual MIT Sea Grant Lecture, said the

AARP Meeting To Hear Dreyer

The first fall meeting of the MIT-Cambridge Chapter of the American Association of Retired Persons will be held Tuesday, Sept. 27, at 5pm in the Sala de Puerto Rico.

Speaker will be Dr. Harold Dreyer, benefits officer at the Charles Stark Draper Laboratory, Inc. Dr. Dreyer, who is an attorney, will discuss "You and the Law," with particular reference to the statutes of the Commonwealth as they apply to senior citizens.

Refreshments will be served beginning at 4:30pm.

Membership in AARP is open to all who are 55 years of age or older, whether they are retired or not. The MIT-Cambridge Chapter was formed last spring and is beginning its first full year of programs.

United States must retain its right to "influence" the operation of the canal" and "should never be placed in a position of not being able to defend it."

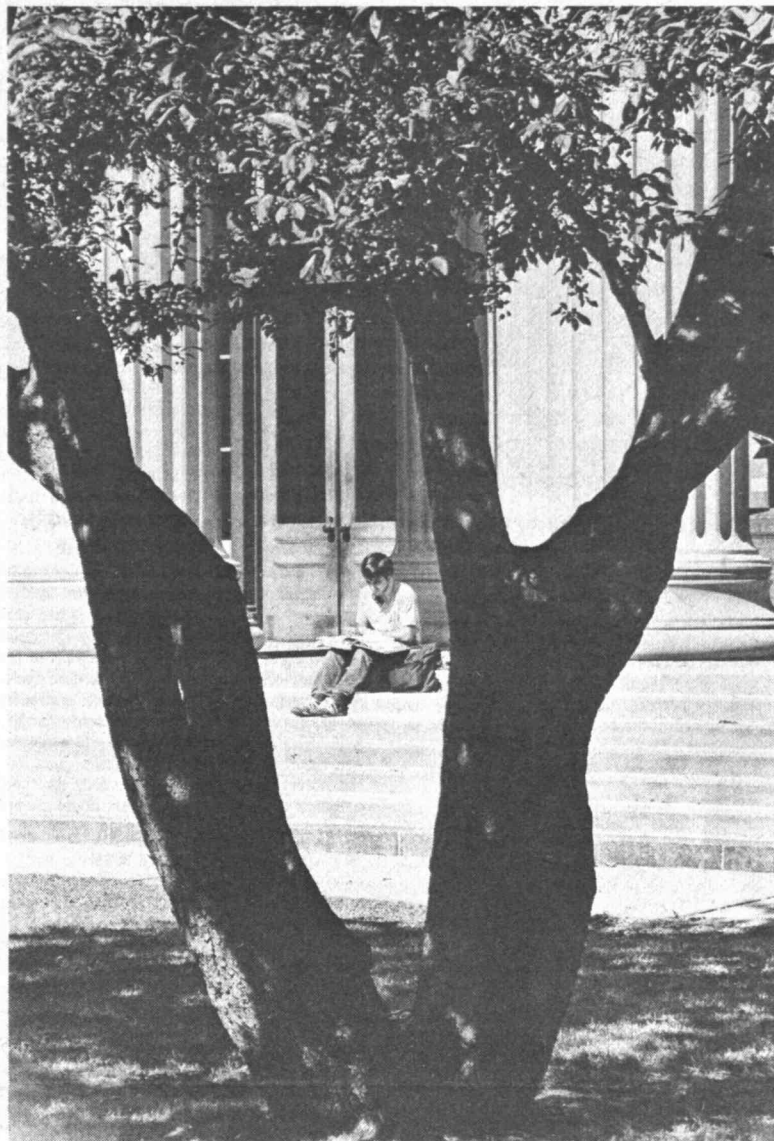
Rep. Burke said the United States must be assured that the treaty will guarantee free passage for ships of all nations and warned against "destructive changes that can undermine our Latin American policy."

In delivering the Sixth Annual MIT Sea Grant Lecture, the congresswoman also urged the creation of a center of oceanic education in Massachusetts, to be named for the late John F. Kennedy, that would serve as a "center for human progress with continuous flow of fresh, exciting and creative ideas."

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Solicitors to Meet

An orientation meeting for chief solicitors in the MIT United Way of Massachusetts Bay Campaign will be held on Wednesday, September 21, from 3-4pm in Rm. 9-150.



The split trunk of the flowering crab in Killian Court frames a student already hitting the books on the steps of the Maclaurin Building.

—Photo by Calvin Campbell

Hagopian Named Director Of Corporate Relations

The appointment of Robert Hagopian, formerly an Institute Secretary, as Director of Corporate Relations at MIT has been announced by General James B. Lampert, Vice President for Resource Development.

In his new position, Mr. Hagopian will have major responsibility for directing and implementing programs of the National Business Committee organized in support of MIT's on-going \$225 million Leadership Campaign.

The National Business Committee, composed of leading corporate executives, was formed last year as a means of

strengthening and expanding MIT's interaction with industry.

The National Business Committee is chaired by Richard L. Terrell, vice chairman of the board, General Motors Corporation. It has a membership of approximately 50.

Internal operations of the committee at MIT will be coordinated by Dr. Irwin W. Sizer, consultant for resource development, in association with Mr. Hagopian. Professor J. Francis Reintjes, professor emeritus of electrical engineering, will provide part-time assistance.

Mr. Hagopian will also maintain close ties with MIT's Industrial Liaison Program and Associates Program, organizations that promote close communication on current research efforts with industry. Both programs are mutually beneficial to their industrial

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Mr. Hagopian

'Morning Pro Musica' to Air MIT Symphony Recordings

Composer/conductor David Epstein and the music of the MIT Symphony Orchestra will be heard on "Morning Pro Musica" with Robert J. Lurtsema on WGBH FM (89.7 MHz) from 10am to 12noon on Friday, Sept. 23.

Dr. Epstein, professor of music at MIT and conductor of the MIT Symphony Orchestra, will talk about the orchestra and its recording project with Vox Productions, Inc., of New York City. Selections from the three records released so far this year on the Vox/Turnabout label will be played. A fourth recording is scheduled for release later this season.

Copland's *Dance Symphony* and Piston's *Suite from the Ballet "The Incredible Flutist"* are on the first record. Pianist Abbott Ruskin is soloist with the orchestra on the second record, playing piano concertos by Copland and Barber. Violist Marcus Thompson, associate professor of music at MIT, is soloist for the third record, performing first recordings of works by Bloch and Martin, and *Der Schwanendreher* by Hindemith. A fourth record in the series will feature the first recording of *Night Voices* by Epstein with Janet Bookspan as narrator. Recordings of the first three records are available at the Tech Coop.

Deutch To Direct Energy Research

Dr. John M. Deutch, professor and head of the Department of Chemistry at MIT, has been nominated by President Carter to be Director of the Office of Energy Research in the newly-created U S Department of Energy.

Dr. Deutch will be the principal scientific and technical advisor to the Secretary and will be responsible for the Department's basic research programs including high energy and nuclear physics.

The nomination is subject to confirmation by the U S Senate. Energy Secretary James R. Schlesinger, in explaining organization of the new department at a White House press conference last week, said the position of Director of the Office of Energy Research will be the equivalent of an assistant secretary.

Dr. Deutch was among 10 persons nominated by President Carter to fill top positions in the new department. The nominee for deputy secretary of energy is John F. O'Leary, presently administrator of the Federal Energy Administration. The nominations were announced at the same time that President Carter signed the executive order bringing the new department into formal existence.

Dr. Deutch, who is trained both as a physical chemist and as an

economist with experience in systems analysis, has long been interested in stimulating the application of broad areas of science and technology to problems of national importance.



Dr. Deutch His research interests have centered on non-equilibrium mechanics, structure of fluids, dielectric and magnetic relaxation, light scattering and polymer theory.

Born in Brussels, Belgium, Dr. Deutch, 39, came to the U S with his family in 1941 and became a naturalized American citizen in 1946. He was raised in Washington, D.C., where his father, Michael Deutch, is a consulting engineer.

Dr. Deutch received the B A degree in history and economics from Amherst College in 1960 and

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No Luncheon At Faculty Club On October 7

A luncheon for the MIT Corporation will be held Friday, Oct. 7, in the MIT Faculty Club and as a result the Club will be closed for lunch that day to members of the MIT community.

"We regret any inconvenience this may cause our regular members," said John Arnold, manager of the Faculty Club, "but space limitations force us to take this step for this one, special occasion."

The Faculty Club will return to its regular schedule after the Corporation luncheon, and will be open for dinner as usual on the evening of October 7.



Rep. Yvonne Brathwaite Burke of California, right, who delivered the Sixth Annual Sea Grant Lecture here Monday, Sept. 19, talks with Evelyn Murphy, state secretary of environmental affairs; Matthew E. Goode, right, Murphy's assistant, and Dean A. Horn, director of the MIT Sea Grant Program.

Sea Grant Lecture

(Continued from page 1)

Such a center, she said, could serve as a "focal point for changing the thought patterns of a land-conscious nation and could encourage a climate for advancing oceanic thinking in favorable and productive terms."

Rep. Burke, the first woman to give the Sea Grant Lecture at MIT, also called for more stringent requirements for tanker safety and for more emphasis on ship inspection for vessels entering US ports.

Moderator for the lecture and symposium was Dean A. Horn, director of the MIT Sea Grant Program.

Panel members, who responded to Congresswoman Burke's views and gave their own opinions on marine issues, were Paul E. Atkinson, president, Sun Shipbuilding and Dry Dock Co.; ad Dr. A. Douglas Carmichael, professor of power engineering, MIT Department of Ocean Engineering; Erling D. Naess, chairman International Association of Independent Tanker Owners, and Edward J. Nadeau, deputy director of bilateral affairs in the State Department's office of Panamanian affairs.

Rep. Burke, speaking of the difficulty of regulating ship standards when flags of other nations are flown by the vessels, said the Treasury Department estimates "that flags of convenience permit American-owned firms to escape \$100 million in United States taxes annually. More significantly, these flags of convenience deprive Americans of employment opportunities on ships, in shipyards and in ancillary industries.

"Some authorities say that if only a modest 30 per cent of United States oil imports were transported by United States flag ships, it would result in the creation of 330,000 new jobs during the next three years. The jobs so created would represent 12 per cent of the total number of jobs needed to satisfy President Carter's goal of 5 per cent unemployment by 1980," she said.

Although she expressed her concern at the continued ability of the US to defend the Panama Canal, Rep. Burke said she questions the need to have "expensive bases" in Panama.

"We must retain our right to influence the operation of the canal (for defense purposes) but do we need a total government there to do it? Do we need schools, hospitals, stores and all the other accoutrements necessary to the operation of a government to do it?"

"As matters stand now, the specter of colonialism hangs over the shoulders of America, at least in the eyes of the people in Panama and in South and Central America. I think we must listen to the sensitivities of these people."

Blood Drive

Lincoln Laboratory's Fall Blood Drive, conducted by the Lexington Red Cross, will be held on Monday and Tuesday, Sept. 26 and 27, in the Conference Room, A-166.

INSTITUTE NOTICES

Announcements

Changes in Undergrad Psychology Offerings—9.59, Psychology of Language and Communication, will be offered this term, Tues & Thurs, 9-10:30am, Rm E10-013. As prerequisites are being changed, enrollment will be possible by permission of instructor, ie, Prof. Merrill Garrett. 9.30, Animal Behavior, will not be offered this term, but Prof Hein will definitely be teaching this course spring term. Info: Psychology Headquarters, x3-5742 or x3-5751.

Embroidery Classes—the MIT Women's League will sponsor four fall classes: Beginning Crewel Embroidery, 11:30am-12:30pm and Intermediate Crewel Embroidery, 12:30-1:30pm, Tues, beginning Oct 18, Emma Rogers Room (10-340), instructor Mrs. Priscilla Gray; Advanced Crewel and Canvas Workshop, Wed, beginning Oct 5, 9:30-11:30am, Jackson Room (10-280), instructor Mrs. Rene Fell; Creative Stitchery Classes, Thurs, beginning Oct 20, noon-1pm, Emma Rogers Room, instructor Mrs. Gray. Info: Nancy Hollomon, 734-4763, Priscilla Gray, 729-4098.

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

Graduate Student Council—Open Hearings for Institute Committees, Wed, Sept. 21, Internat'l Student Lng, Walker Memorial Bldg, Rm 50-210 (directly above Muddy Charles Pub). Interviews: 6pm, the Corporation Joint Advisory Committee on Institute-wide Affairs, contact: Max Donath x3-3202; 6:30pm, Discipline Committee; 7pm, Committee on Graduate School Policy, contact: Harvie Branscomb x3-2195 or Greg Paris, x3-3724; 7:30pm, Library Systems Committee, contact: James Mays, x3-3361; 8pm, Committee Preprofessional Advising & Education; 8:30pm Medical Advisory Board, contact: Jay Kunin x3-5882 or 8-547-1217. If there is no contact person listed under the committee in which you are interested, call the Graduate Student Council office, x3-2195.

IPS Seminars—Fri, Sept 30, first class of course. Intro to JCI for the Non-programmer, Deborah Colaw, & Intro to Graphics at IPS, Maria Bozzuto. Sponsored by the Academic and Computing Services, Information Processing Services. Preregister, Rm 39-427, x3-1744.

Japanese Flower Arranging—MIT Women's League to sponsor beginning and advanced classes, Wed, 9:30-11:30am, taught by Mrs. Fumiko Masubuchi in her Arlington home beginning Wed, Oct 26. Contact: Mabel Nevins, 272-1556.

New York State Regents Scholarships—Applications for the study of medicine or dentistry are available in Preprofessional Office Rm 10-186. Open to New York residents. Deadline: Oct 1, 1977.

Pistol Course—The MIT Pistol & Rifle Club is sponsoring a basic pistol marksmanship course designed to acquaint the novice with safety & basic skills. Thursdays, Sept 29-Oct 27, 6:30pm, du Pont Shooting Range, \$20. Info: Pat Melaragno, x3-3296 or Andy Platias, x8-1419 Draper.

Preprofessional Advising—Meeting, Thurs, Sept 29, 3:30pm, Rm 4-231 for students interested in Harvard Law School. Speaker, Assistant Dean Patricia Lydon.

Student Loans—All students holding MIT student loan awards for the current term must sign their loan notes at the Student Loan Office, Rm E19-225. Failure to sign notes could cause the assessment of late payment fines on the term bill and/or cancellation of the award.

Strobe Lab—Open house for Graduate Students, Thurs, Sept 29, 3-5pm, Rm 4-405. Special demonstrations and slides of high-speed photography subjects will be shown.

Transcripts—with summer session, 1977, included available week of Sept 26, Registrar's Office, Rm E19-335.

TWO Crafts Fair—The Technology Wives Organization is seeking participants for its Crafts Fair, Thurs & Fri, Dec 15-16, 8am-4:30pm, Lobby Bldg 10. Contact: Marcia Schwenke, 862-3516 or Penny Quint, 738-8299.

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.

UROP: BEHIND LAB DOORS

Come hear about UROP and the exciting research fellow students have undertaken. Learn how you too can become involved. UROP and Sigma Xi are sponsoring a symposium on Mon, Sept 26, 7pm, Rm 9-150. All welcome. Refreshments.

JAMES McCORMACK MEMORIAL FUND

The McCormack Fund provides wage and materials support for students doing work in areas relating to technology and its applications to problems of society or the arts. Proposals are welcome anytime.

UNIROYAL UNDERGRADUATE RESEARCH AWARDS

Eligibility for Uniroyal Awards is limited to students who are starting projects in the physical, chemical, and engineering sciences. Requests for materials support and/or materials are accepted at any time.

New England AQUARIUM

The New England Aquarium is studying movement of organic pollutants through stages of a mariculture ecosystem. Petroleum hydrocarbons and selected halogenated hydrocarbons will be measured in the secondary sewage effluent which supplies nutrients to the marine phytoplankton that are, in turn, fed to populations of shellfish. Some of these compounds will then be traced through each level of the mariculture system. Prospective participants should be familiar with methods of trace organic analysis, particularly those based on gas chromatography.

PETER BENT BRIGHAM HOSPITAL

An opportunity for a student to determine the use of radiotracers to evaluate cardiac functions. The approach currently being used uses scintillation cameras coupled with digital minicomputers to evaluate contraction of the left ventricular wall during the cardiac cycle. An undergraduate would require computer programming background and some facility with the PDP-11 type computer. The student will also be in charge of computer function: computer programming operation, data acquisition and additional software development on cardiac function measurement.

NUCLEAR POWER PLANT SITING

An opportunity for two upperclass students to work on an anthropological study of nuclear power plant siting in Mass. During the summer the group studied an existing plant and now proposes to assess the potential impact of proposed plants. Students working on this project will do library research on the nuclear power controversy, conduct interviews with town official and resident and observe public hearings on the proposed Montague and Pilgrim plants. It is hoped that the students will have an active interest in energy issues and the nuclear debate.

LIPIDS

Research in this laboratory at Peter Bent Brigham Hospital centers on the physical chemistry and biophysics of biologically important lipids, particularly understanding the structure and function of lipids of the alimentary tract in both health and disease. Interest focuses on the molecular properties of normal bile, the mechanism of bile formation and bile secretion and the derangements that occur in gall stones. Interested students should have a strong background in the chemical and physical sciences and interest in the application of physical techniques and physical-chemical rationale in solving biological problems at a molecular level.

GRAPHIC GALAXIES

This project is intended to develop graphically clear ways of representing the combined interaction and movements of celestial bodies through animation on the Architecture Machine. It is meant to depict a series of complex relations between axis, rotation, orbit, direction, and speed so that their mutuality

CABLE TV SCHEDULE

X3-3625

September 21 - 27, 1977	
Wednesday, Sept. 21 Channel 8: 11am-12noon	RHETORIC & JOURNALISM (Course 21 940) with Ed Diamond. Special guest: Phyllis Malamud of Newsweek - Boston. Recorded 2/18/77.
12noon 1pm	OFFSHORE ONSHORE. Explores the role of offshore drilling in the quest for gas and oil.
2-3pm	THE PRESIDENT & THE PRESS (Course 17 27) with Ed Diamond. Special guest: Curtis Wilkie of the Boston Globe. Recorded 2/24/77.
4-5pm	OFFSHORE ONSHORE. Explores the role of offshore drilling in the quest for gas and oil.
Thursday, Sept 22 Channel 8: 10-11am	OFFSHORE ONSHORE. Explores the role of offshore drilling in the quest for gas and oil.

can be seen.
Contact: Christopher Herot, Rm 9-512, x3-5158, or Lowry Burgess, Rm W11, x3-6849.

Club Notes

MIT Amateur Radio Society—Meeting, Tues, Sept 27, 9pm, Rm 4-270. All members should attend, newcomers welcome. Info: x3-3776.

Beginner's Sailing—Instruction, Mon & Thurs, 5:15pm, MIT Sailing Pavilion.

MIT/DL Bridge Club—ACBL duplicate bridge. Tues, 6pm, Stu Ctr Rm 473.

MIT Bridge Club—ACBL duplicate open pairs game Thurs, 7pm, Stu Ctr Rm 407. Info: 494-8593. Admission .25.

MIT Chess Club—Informal speed chess, analysis, etc., every Sat, 1-7pm, Stu Ctr Rm 407. Info: Brad, DL5-8156.

MIT Comic Book Club—Weekly discussion meetings, Wed, 7:30-9pm, Rm 7-102.

MIT Electronics Research Society—First meeting, Mon, Sept 26, 8pm, Rm 20C-104. Freshman dues, \$5/year, other, \$8. Come by the lab in Rm 20B-119 or call x3-2060 for more info.

MIT Goju Karate Club—Instruction, Wed & Fri, 7-9pm, Stu Ctr Rm 491 or 407. Info: x3-2018.

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

MIT Judo Club—Mr. Yanagi, 6th degree black belt, chief instructor. Judo practice: Mon, Wed, Fri, 5:30-7pm; Sat, 1-3pm. Du Pont exercise rm. Teaches conditioning, coordination and balance. Beginners welcome. Mike, 3-7319, Lance, 3-2559.

MIT Juggling Club—Juggling practice and get-together Suns, 1-4pm, Kresge Oval (in front of Stu Ctr). We teach beginners.

MIT Math Club—First meeting, Sun, Sept 18, 4:30pm, Rm 4-182. All undergrads welcome. Info: DL5-8442.

Scuba Club—Meetings Tues, 7pm, Rm 20E-021 to discuss upcoming weekend dives. Pool sessions after meetings or alternate Tues. Scuba rentals available from scuba locker. Check schedule at pool.

MIT Shotkan Karate Club—Rigorous training in classical style of karate. PE credits may be earned. Active in intercollegiate competition. Varsity Club Lng, du Pont Gym, Call x3-6550 or DL5-9633 for dates and times.

MIT Society for Creative Anachronism—Invitation to interested people, SCA medieval fighting practice, slide show and informal talk about what the SCA is. Fri, Sept 23, 3pm, behind Kresge Auditorium from 3-5pm then Stu Ctr Rm 473. Light refreshments served. Info: Leif, 354-5152.

MIT Space Habitat Study Group—Interdisciplinary discussions of space industrialization, colonization & related issues. Thurs, 7pm, Marlar Lng (Rm 37-252).

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

MIT Tiddlywinks Association—Meetings Wed, 8pm, Stu Ctr Rm 473.

Travel Club—First meeting, Thurs, Oct 27, 10am, at the home of Pat Crandall, Tabor Hill Rd., Lincoln. Jane Lorenz is taking us 10,000 miles to a wedding! Our co-hostesses will be Isabel Pelloux and Florence Vivian. Please call Mrs. Pelloux, 729-0984, or Mrs. Vivian, 646-3129, if you wish to join us. We welcome new people at all meetings or at any you find interesting.

Unicycle Club—Learn to ride, play uni-polo, learn stunts, etc. Sundays, Kresge Oval (in front of Stu Ctr).

Religious Activities

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

Campus Crusade for Christ—Fri, 7:15pm, Rm 37-252. Info: Dan Lu, DL 5-9641.

3-4:30pm WILLY BRANDT, Chairman of the Social Democratic Party of Germany and President of the Socialist International. Recorded 3/9/77 for the "World Change and World Security" lecture series.

Friday, Sept. 23
Channel 8:
11am-12pm

THE PRESIDENT & THE PRESS (Course 17 27) with Ed Diamond. Special guest: Curtis Wilkie of the Boston Globe. Recorded 2/24/77.
OFFSHORE ONSHORE. Explores the role of offshore drilling in the quest for gas and oil.
RHETORIC & JOURNALISM (Course 21 940) with Ed Diamond. Special guest: Phyllis Malamud of Newsweek - Boston. Recorded 2/18/77.

Channel 10:
12noon-8pm

LOOKAROUND Produced by the Video Club.

Monday, Sept. 26
Channel 8:
11-12noon

OFFSHORE ONSHORE. Explores the role of offshore drilling in the quest for gas and oil.
THE PRESIDENT & THE PRESS (Course 17 27) with Ed Diamond. Special guest: Curtis Wilkie of the Boston Globe. Recorded 2/24/77.
RHETORIC & JOURNALISM (Course 21 940) with Ed Diamond. Special guest: Phyllis Malamud of Newsweek - Boston. Recorded 2/18/77.

Channel 10:
12noon-8pm

NEWS/SPORTS SHOW Produced by the Video Club.

Tuesday, Sept. 27
Channel 8:
12noon-1:30pm

ROBERT MCNAMARA, President of the World Bank. Recorded 4/20/77 for the "World Change & World Security" lecture series.

Chinese Bible Study Group—Fri, 8-10:30pm, The Cambridge Church of the Nazarene, 234 Franklin St., Cambridge. Info: Chris Law, DL 5-9636.

Christian Students Fellowship—Thurs, Sept 22, Open Fellowship Time, 7pm, Rm 1-236.

Christian Worship Service—Sundays, 10:45am, chapel. Refreshments following services.

Foundations of World Unity—MIT Baha'i Assoc sponsors talk and discussion Sat, Sept 24, 2pm, West Lng, Stu Ctr. Speaker: Dr. Wilma Brady, representative of Baha'i International Community at the UN. Refreshments. Free. Info: Ramin, x3-6535, 494-9240.

You are invited to the weekly Interdenominational worship and holy communion, Wed, 5:05pm, Chapel, sponsored by the Lutheran Episcopal Ministry. Get-acquainted supper following, \$1 donation. Info: Randy Clark, x3-6921.

MIT Islamic Society—Friday Prayers will be held in Kresge Rehearsal Rm B at 1pm.

Jewish Holiday Services—Yom Kippur: Wed, Sept 21, Traditional Servs, 6:15pm, Kresge, Reform Servs, 7pm, Chapel; Thurs, Sept 22, Traditional Servs, 8:30am, Kresge, Reform Servs, 9am, Chapel, Mincha-Ne'ilah, 5:30pm, Kresge. Sukkot: Mon, Sept 26, Mincha-Ma'ariv, 6:30pm, Kosher Kitchen (Rm 50-005); Tues, Sept 27 and Wed, Sept 28, Traditional Servs, 8:30am Kolker Rm (Rm 26-414); Mon, Oct 3, Mincha-Ma'ariv, 6:25pm, Kosher Kitchen; Tues, Oct 4 Traditional Servs/Yizkor, 8:30am, Kolker Rm.

Prayer Time—Fri, 1-2pm, Rm 20E-207. Public welcome to attend Bible class with guest speakers, music, refreshments. Led by Miriam R. Eccles, founder-director, Alpha and Omega Missionary Society.

MIT Seekers—Sun, 9:55am, leave for AM Service at Park St. Church, Boston, from McCormick Hall; 4:55pm, group leaving for PM Service and College Fellowship Time, Park St. Church, from McCormick Hall. Info: Scott Cunningham, DL 5-9224.

Southern Baptist Students—Sun, 9:45-11am, Metropolitan Baptist Church, Porter Sq, Cambridge. Info: Roch Skelton, 262-5090.

Tech Catholic Community—Liturgies, Sun, 9:15am, 12:15 & 5:15pm; Tues, 5:05pm; Thurs, 5:05pm; Fri, 12:05pm. Chapel.

United Christian Fellowship—MIT-IVCF prayer, singing and teaching, Fri, 7pm, Rm 1-236. Info: Bill Spencer x3-6813.

Echoes

September 17 - 23

50 Years Ago

Freshmen will leave for Camp Massapoag in Dunstable, Mass., this week. The Technology Christian Association is sponsoring a program of discussion groups, talks by activity men and faculty, and entertainment for the purpose of acquainting new students with Technology life.

40 Years Ago

The School of Architecture is scheduled to move into its new building on Massachusetts Ave. in September of next year. The architecture of the new building, designed by Welles Bosworth '89, who was responsible for the main educational group built in 1916, will carry on the pilaster treatment of this main complex. The dignified entrance will be marked by four columns five feet in diameter and rising three full stories of the building.

25 Years Ago

The first numerically controlled milling machine in the world is now in operation at the Institute. The new machine responds to instructions submitted to it as numbers, substituting mathematical operations for many of the hand operations now required in industrial production.

Prepared by Marcia Conroy, MIT Historical Collections, x3-4444.

TECH TALK

Volume 22, Number 7
September 21, 1977

Tech Talk is published 44 times a year by the News Office, Massachusetts Institute of Technology. Director: Robert M. Byers; Assistant Directors: Charles H. Ball, Robert C. Di Iorio, Katharine S.C. Jones, Joanne Miller, William T. Struble and Calvin D. Campbell, photojournalist; Reporters: Cathryn M. Chadwick (Institute Notices); Jakki Kougasian (Institute Calendar, Classified Ads), Sheila Richards, Business Manager. Address news and editorial comment to MIT News Office, Room 5-111, MIT, Cambridge, MA 02139. Telephone (617) 253-2701. Mail subscriptions are \$8 per year. Checks should be made payable to MIT and mailed to Business Manager, Room 5-111, MIT, Cambridge, MA 02139.

Human Studies Collection Receives Mellon Grant

The Humanities Library has received a \$5,000 grant from the Richard King Mellon Foundation of Pittsburgh for work on its Human Studies Collection.

Housed in the Reserve Book Room, the Collection contains newspapers and journal articles, unpublished papers and ephemera of both the Women's Movement and the Men's Movement. The core of the Collection was donated to the MIT Libraries from the private research collections of Mary Rowe, special assistant to the president for women and work; Joseph Pleck, associate director, Center for the Family, University of Massachusetts at Amherst, and Robert Fein, a psychologist on the staff of McLean Hospital.

Awarded by the Wellesley College Center for Research on Women in Higher Education and the Professions, the Mellon Grant money will be used to update the Human Studies Collection in terms of currentness and relevancy to the MIT teaching and research interests. The end product will be a revised catalogue of the Collection and an annotated bibliography. A further objective of the project is the investigation of methods of providing the Human Studies Collection in package form to other libraries and individuals.

The Collection provides course materials for several subjects in the MIT curriculum and serves the research needs of innumerable investigators at the Institute and at local academic institutions. Bibliographies have also been sold to several hundred people across the country. The Collection continues to be cited as an important resource in the major women's and men's resource directories.

One of the strong points of the Collection is the unique character

of the Men's Studies section. Nowhere in the world is there such a wealth of information of the concept of masculinity and its various impacts on both men and women. The Collection is an invaluable resource for serious social investigators.

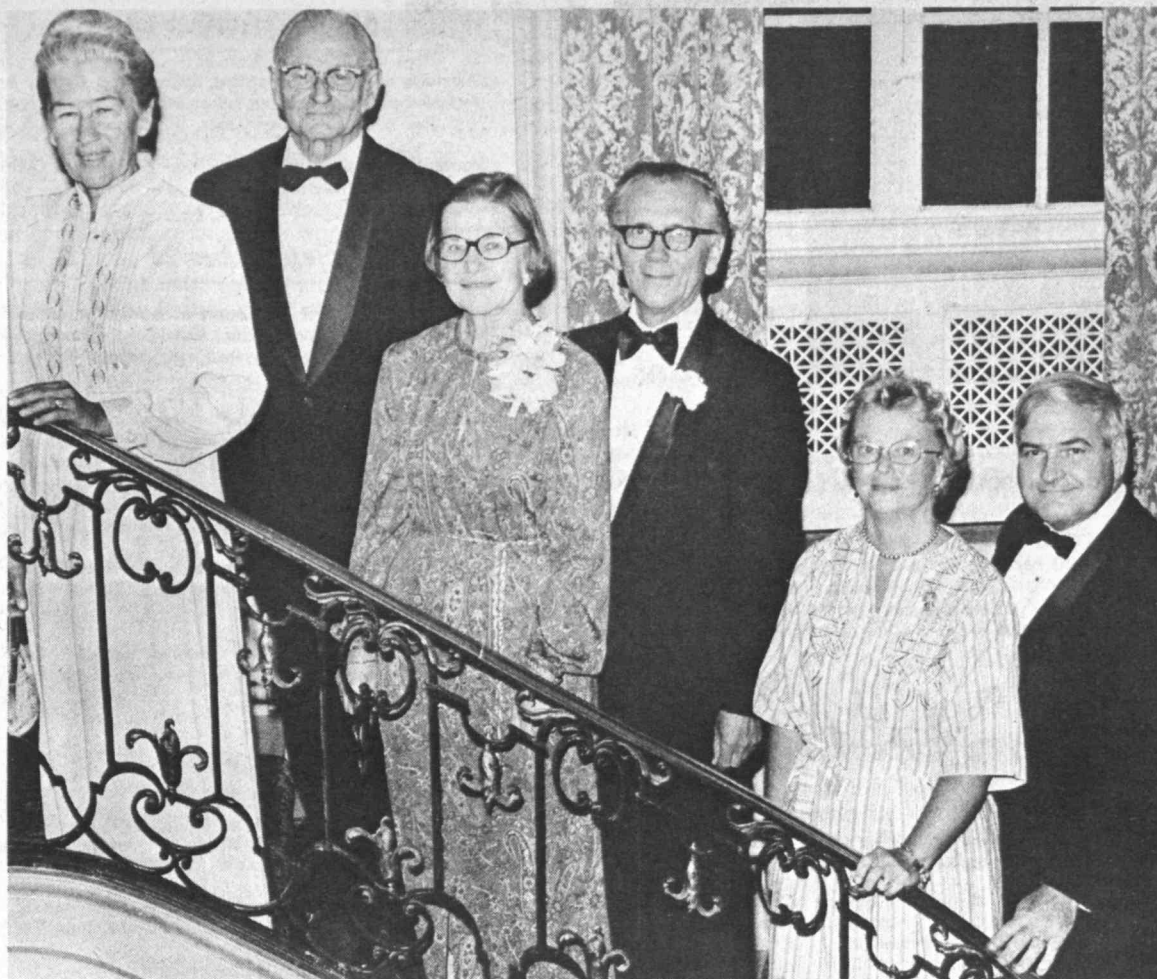
A special grant from the Office of the President of MIT in February of 1975 provided for a major update of the Collection and the publishing of a *Women's Studies Bibliography* and a *Men's Studies Bibliography*. They were revised in February, 1977, and are available for purchase through the Humanities Library.

TV to Display Monitor Salvage

A videotape showing this summer's salvage operations off Cape Hatteras of the Civil War ironclad *Monitor* will be on display from 3 to 5pm Thursday, Sept. 29, in the MIT Strobe Laboratory, Rm. 4-409.

Professor Harold E. Edgerton, Institute Professor Emeritus, played a major role in the 1973 expedition that located the *Monitor*, which sank in a gale Dec. 31, 1862, while being towed by the paddle-wheel steamer *Rhode Island*. The vessels were headed for Charleston where the *Monitor* was to take part in the Union blockade of the port.

The tape shows the raising of a piece of the *Monitor's* armor plate, a red lantern and an underwater camera-strobe lost during the 1973 expedition. The 1977 expedition was sponsored by the National Oceanographic and Atmospheric Administration and the Harbor Beach Foundation of Ft. Pierce, Fla.



ENDICOTT HOUSE was the setting for a dinner Saturday evening honoring Dean Alfred A.H. Keil (center, with Mrs. Keil) as he retires as dean of the School of Engineering. Former deans of the School attending were

Institute Professor Emeritus Gordon S. Brown and Mrs. Brown, left, and Chancellor and Mrs. Paul E. Gray, right.

—Photo by Calvin Campbell

Three Russians Are Sloan Fellows

Question: What is the only management school in the United States where Russians are enrolled in a degree-granting program?

Answer: MIT's Alfred P. Sloan School of Management.

The newest arrivals—Vadim V. Andronov, Boris G. Ivanov and Valentin M. Oushakov—bring to eight the number of Russian managers who have been enrolled in the Sloan School's Sloan Fellows Program in recent years.

According to Peter P. Gil, Sloan School associate dean and director of the Fellows Program, the presence of the Russian students here results from a close relationship between the Sloan School and the Soviet Union's State Committee for Science and Technology.

"They send people here about every two years, and I take Sloan Fellows to Russia every year, to Moscow and Leningrad, where they meet with industry and government people."

Sloan Fellows ordinarily travel abroad as part of their yearlong program. Foreign students, however, often spend the time traveling in the United States, which is what the three visitors from Russia plan to do this spring.

It is their first visit to this country, and all three say they have been particularly impressed by the friendliness of Americans.

Andronov, 35, and Oushakov, 37, are Fellows of the Academy for Foreign Trade in Moscow. Ivanov, 43, is a former Fellow with the Academy who is now a senior consultant with the Department of International Economic, Scientific and Technical Organizations—a branch of the State Committee for Science and Technology. Ivanov is also a former merchant marine captain who skippered a 6,000-ton capacity tanker.

The three men are sharing an apartment in Belmont until their families arrive in November or De-



Sloan Fellows from Russia, from the left, are Valentin M. Oushakov, Vadim V. Andronov and Boris G. Ivanov.

Fifty-five men and women from the United States and 16 other nations are enrolled in this year's Sloan Fellows Program, which is a 12-month course of study for young executives leading to the degree of Master of Science in Management. The participants are sponsored by industry, government and other organizations in the United States and abroad.



Dr. Paul A. Samuelson, Institute Professor and professor of economics, right, greets two of the participants at panel discussion Friday (September 16) that highlighted three-day convocation sponsored by the Alfred P. Sloan School of Management. With Professor Samuelson, who was the keynote speaker on the theme, "The Changing Relationship Between Business and the Government," are Edgar H. Twine, associate general counsel of the Atlantic Richfield Company left, and Willis S. White Jr., chairman of the board of the American Electric Power Company, Inc. Other panelists were Charles A. Myers, Sloan Fellows Professor of Management, chairman; Edward E. Barr, president of the Sun Chemical Corporation; John H. Gerstenmaier, President of The Good-year Tire and Rubber Company; and Wayne L. Horvitz, director of the Federal Mediation and Conciliation Service. All except Myers are alumni of the Sloan School's Fellows or Senior Executive programs. More than 400 graduates of the programs and their spouses attended the triennial convocation.

Minkoff To Present Kurtz Lecture

Professor Isaac Minkoff of the Israel Institute of Technology's Department of Materials Engineering, will deliver the Jacob Kurtz Memorial Lecture in Materials at MIT on Wednesday, Sept. 28, at 4pm in Rm 66-110.

Dr. Minkoff will discuss "Materials Technology in the Economy of Israel."

The Jacob Kurtz Memorial Fund was established at MIT by the family of Jacob Kurtz, founder and first

board chairman of the Kulite Tungsten Corp. and Kulite Semiconductor Products of Ridgefield, N.J., a pioneer metallurgist in the development of refractory metals.

The purpose of the fund is to promote interchanges between MIT and Technion—the Israel Institute of Technology—in the field of materials. The program includes visiting lectureships in both directions as well as the exchange of young research scientists. Professor Wal-

ter S. Owen, head of the Department of Materials Science and Engineering at MIT, Professor B.Z. Weiss of the Technion, and Professor Morris Cohen of MIT, constitute the committee administering the program. Professor Cohen, Institute Professor, is chairman of the committee.

Professor Minkoff, whose main research activities are in solidification, casting and welding, received the SM in 1956 and the ScD in 1957, both from MIT.

Computer Applications in Manufacturing Is Conference Topic

Speakers active at the frontiers in computer science, industrial research, and government policy will discuss the applications of computers to manufacturing at the Center for Advanced Engineering Study in Room 9-150 on September 26.

The Computer and Discrete Product Manufacturing, is the title of the day long meeting which is being supported by the National Science Foundation, and is expected to attract managers of manufacturing plants, production managers, and engineers.

Research on computer-based production systems in Japan, West Germany, and Norway will be described respectively by Professor Toshio Sata, Faculty of Engineering, University of Tokyo, by Dipl.-Ing. Karl V. von Schoening, Institut für Werkzeugmaschinen und Fertigungstechnik, Technical University of Berlin, and by Dr. Finn Ola Rasch, Manager, Institutt for Maskinteknikk Fabrikdrift, Norwegian Technical University.

Dr. Myron Tribus, Director of the Center for Advanced Engineer-

ing Studies is hosting the event, and the Symposium Chairman is David C. Gossard, Assistant Professor, Mechanical Engineering Department. Other speakers in the program are Professor Michael Athans, Director, Electronic Systems Laboratory, MIT, Assoc. Professor Berthold K. P. Horn, Artificial Intelligence Laboratory, Department of Electrical Engineering and Computer Science, MIT, Kenneth G. Mehlhope, Manager, Manufacturing Research Cincinnati Milacron, Inc., and John M.

Evans, Jr., Acting Director, Office of Developmental Automation and Control Technology, National Bureau of Standards.

"Near-term Implications and Opportunities of Computer-Aided Manufacturing" is the topic of a panel discussion, chaired by Robert T. Lund of the Center for Policy Alternatives.

Panelists will be: for labor - Anthony W. Connole, formerly Administrative Assistant to Vice President of United Auto Workers; for production management - M.

William Grant, Vice President of Corporate Manufacturing, Ingersoll-Rand Company; for manufacturing engineering - Frank Daley, Director of Manufacturing Development, General Motors Technical Center; and for top management - Professor George K. Hutchison, School of Business Administration, University of Wisconsin.

Attendance is paid registration in advance. For information and reservations, call x3-7400.

THE INSTITUTE CALENDAR X3-3270

September 21 through October 2

Events of Special Interest

1977 W.O. Atwater Lecture* — Dr. Nevin S. Scrimshaw, Institute Professor and head, nutrition & food science, will give a lecture entitled **Through a Glass Darkly: Discerning the Practical Significance of Human Dietary Protein Energy Interrelationships**. Sponsored by the International Nutrition Policy & Planning Program. Mon, Sept 26, 4pm, Rm 66-168.

Seminars and Lectures

Wednesday, September 21

Symmetric & Quasi-Symmetric Models of Ocean Circulations* — Jule G. Charney, meteorology. Oceanographic Sack Lunch Seminar. 12n, Rm 54-915. Bring lunch, coffee available.

Smith's Last Stand: Rhodesia Now* — Geoffrey Godsell, overseas editor, Christian Science Monitor. MIT African Luncheon Seminar. 1pm, Rm E53-482. Bring lunch.

Propeller Research — Composite Material Construction: Propeller Theory* — E.E. Larrabee, astro/aero. Astro/Aero Seminar. 2pm, Rm 37-252.

Heat Transfer & Fluid Flow Aspects of Fuel Coolant Interactions* — Michael Corradini, G. Nuclear Engineering Seminar. 4pm, Rm NW12-222.

Thursday, September 22

Research Opportunities in Modern Optics & Quantum Electronics in EECS Dept* — Open House. EECS Optics Seminar. 3pm, Rm 3-428.

Gas Chromatographic-Mass Spectral Studies of Thyroid Hormones* — Paul Vouros, chemistry, Northeastern University. Analytical Chemistry Seminar. 4pm, Rm 8-205.

Changing Views of Symmetry* — Steven Weinberg, Harvard University. Physics Colloquium. 4:15pm, Rm 26-100. Refreshments 3:45pm, Rm 26-110.

Friday, September 23

Restricted Transport of Macromolecules Across Capillaries in the Kidney* — William Deen, chemical engineering. Chemical Engineering Seminar Series. 2pm, Rm 66-110.

The Differential Transform, Its Relation to Integral Transforms and Applications* — A. Ungar, Mathematics Division, National Research Institute for Mathematical Sciences, Pretoria, South Africa. Special Applied Mathematics Colloquium. 2:30pm, Rm 2-338.

What is a Drag-Free Satellite* — Daniel B. DeBra, aero/astro, Stanford University, Stanford, CA. Mechanical Engineering Seminar. 3pm, Rm 3-133. Coffee 4pm, Rm 1-114.

Language in Child & Chimp* — John Limber, psychology, University of New Hampshire, Durham, NH. Psychology Colloquium. 4:30pm, Rm E10-013. Coffee 4:15pm.

Monday, September 26

Orientation to IPS* — Brenda Ferrero, academic & research computing service. Information Processing Services Seminar. 12n-2pm, Rm 3-370. Required text, IPS memo G1-14.

Current Levels of Volcanic Migration & a Speculative Analysis* — Joel Gregory, demography, University of Montreal. CIS Migration & Development Seminar. 12:30pm, Rm E53-482.

Strongly Nonlinear Elliptic Boundary Value Problems* — P. Browder, visiting professor, mathematics. Applied Mathematics Colloquium. 4pm, Rm 2-338. Refreshments 3:30pm, Rm 2-349.

Research in Water Quality, Its Physics and Modelling at the Parsons Laboratory* — Keith D. Stolzenbach, Bryan R. Pearce, E. Eric Adams, civil engineering. Water Resources & Environmental Engineering Seminar. 4-5pm, Rm 48-316. Coffee 3:45pm, Rm 48-410.

UROP: Behind Lab Doors* — James Pustejovsky, Dennis Solomon, Peter Canani, Carol Schwartz, undergraduates. UROP & Sigma Xi Symposium. 7pm, Rm 9-150. Refreshments following presentations.

Tuesday, September 27

Introduction to Computing* — Arthur Anger, academic & research computing services. Information Processing Services Seminar. 12n-2pm, Rm 3-370.

Physiology of the Blood-Brain Barrier: Causes and Consequences of Permeability Changes* — Dr. William Partridge, medicine, division of endocrinology & metabolism, U.C.L.A. Center for the Health Sciences. Nutrition & Food Science Seminar. 12n, Rm 6-120.

Critical Behavior of Gels and Critical Behavior of Protein-Water Mixtures in Rat Lenses* — Toyochi Tanaka, physics. Physical Chemistry Seminar. 4pm, Rm 4-370. Coffee 3:45pm, Rm 5-321.

Energy Policy in the Real World: Energy in Boston* — Mitchell G. Tyson, nuclear engineering. Nuclear Engineering Seminar in Energy Assessment. 4pm, Rm 24-121.

A Satellite Control Problem* — Herman Chernoff, mathematics. Statistics & Operations Research Seminar. 4pm, Rm 24-115. Coffee & tea following.

Wednesday, September 28

Overview of ARCS' Operating Systems* — Arthur Anger, academic & research computing services. Information Processing Services Seminar. 12n-2pm, Rm 39-530. Required Texts, IPS memos G1-2 & G1-23.

Standoff Distances on a Flat Flame Burner* — Colin R. Ferguson, G. Mechanical Engineering Seminar. 4pm, Rm 3-343.

Thursday, September 29

Blood-Brain Barrier Transport of Amino Acids and Glucose* — Dr. William Partridge, medicine, division of endocrinology & metabolism, U.C.L.A. Center for the Health Sciences. Nutrition & Food Science Seminar. 12n, Rm 6-120.

Introduction to Terminal Use* — Jose Bauzo, academic & research computing services. Information Processing Services Seminar. 12n-2pm, Rm 39-530.

Spatial Light Modulators & Their Applications* — Cardinal Warde, electrical engineering. EECS Optics Seminar. 3pm, Rm 36-428.

Analysis of Complex Mixtures by Laser Spectroscopic Techniques* — Jeffrey Steinfeld, chemistry. Analytical Chemistry Seminar. 4pm, Rm 8-205.

Do Neutron Stars Obey the Laws of Physics?* — Kenneth Brecher, physics. Physics Colloquium. 4:15pm, Rm 26-100. Refreshments 3:45pm, Rm 26-110.

Friday, September 30

Turnover & Metabolism of Cholesterol in Man* — Dr. DeWitt Goodman, College of Physicians & Surgeons, Columbia University. Arteriosclerosis Center Seminar. 12:30-2pm, Rm E17-421. Bring lunch.

Conversion of Fuel-Bound Nitrogen Components to NO_x During Combustion* — B.R. Taylor, G. Chemical Engineering Seminar. 2pm, Rm 66-110.

Catalytic Hydrodenitrogenation of Quinoline* — J.F. Cocchetto, G. Chemical Engineering Seminar. 3pm, Rm 66-110.

Mining 2 Miles Below the Surface* — Austin Whillier, director, Environmental Engineering Laboratory, Chamber of Mines of South Africa. Mechanical Engineering Seminar. 3pm, Rm 3-133. Coffee 4pm, Rm 1-114.

Community Meetings

Wives' Group** — Group leader, Charlotte Schwartz, sociologist Myra Rodrigues, social worker, both from Medical Dept; Carol Hulsizer, faculty spouse in residence, Ashdown Hse. First meeting Wed, Sept 21, 3-5pm, Stu Ctr Mezzanine Lng. Babysitting Stu Ctr Rm 473. Karen x3-2916.

The "Tech" Lodge** — Wed, Sept 21, 5:45pm, Masonic Temple, 1950 Mass Ave, Camb, Buffet Dinner 6:30pm. Regular communication of Richard C. MacLaurin Lodge AF & AM. Master Masons welcome. Dinner reservations x3-5149.

Chess Tournament* — MIT Chess Club. Rated. 3 round tournament. Sat, Sept 24, Registration 9:30am, Rounds, 10am, 2:30pm, 7:30pm. 50/2 time limit. Stu Ctr Mezzanine Lge. \$2 entry fee. USCF membership required, available at door. Info: Louis, x5-6453 Dorm.

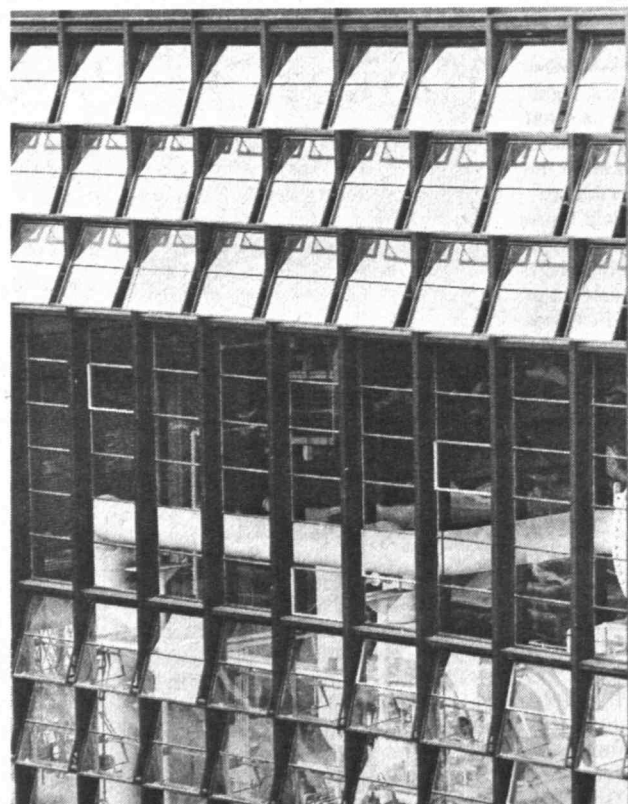
Thomas Gindon Memorial Chess Tournament* — MIT Chess Club. Rated. 4 round tournament. Sat, Sun, Sept 24-25, Registration 9:30am, Rounds at 10am, 3pm. 40/2 time limit. Stu Ctr Mezzanine Lge. \$3 entry fee (returned as prizes). USCF membership required. Info: Louis, x5-6453 Dorm.

Prenatal & Parent Education Group Meeting* — Tues, Sept 27, 12n-1:30pm, Infirmary, 3rd floor conference room. Take front stairway at elevator. Luise Flavin, director of MIT Technology Children's Center will talk about "Child Care" and answer questions. Bring lunch, we provide coffee, tea, and juice. Info: x3-1316.

MIT-Cambridge Chapter of the American Association of Retired Persons* — Regular meeting, Tues, Sept 27, 5pm, Sala. Coffee at 4:30pm. Harold Dreyer, Benefits Officer, C.S. Draper Lab, will speak on **You and the Law — Statutes of the Commonwealth as They Apply to Senior Citizens**. New members welcome.

Swimming Program for Parents & Children** — Sign up now for swimming program for parents & children 2-5 yrs, sponsored by Child Care Office. Classes Sat, Oct 1 thru Sat, Dec 3, 9am. Fee: \$30. Info: Child Care Office, x3-1592.

Speed Chess Tournament* — MIT Chess Club. Informal speed chess tournament. All entry fees will be returned as prizes. Sat Oct 1, 2pm, Stu Ctr Rm 407. Entry fee 50¢. Info: Brad, x5-8156 Dorm.



PATTERNS are created by the windows of the power plant opened at uniform angles in this picture by photojournalist Calvin Campbell taken with a telephoto lens from the roof of Albany Garage

Social Events

15 Lansdowne Disco** — MIT Night sponsored by the Undergraduate Association. Thurs, after 10pm, 15 Lansdowne St., Boston, near Fenway Stadium. Admission free with MIT ID.

Movies

The Front** — LSC Movie. Fri, Sept 23, 7 & 9:30pm, Kresge. Admission 75¢ w/MIT or Wellesley ID.

Leda (Web of Passion) (Chabrol)* — MIT Film Society. Fri, Sept 23, 7:30 & 9:30, Rm 6-120. Donation, \$1.25.

Bogart Film Festival** — LSC Movies. Sat, Sept 24, Rm 26-100. **The Caine Mutiny**, 5:45 & 10pm; **The African Queen**, 8 & 12:15pm. Admission 75¢ w/MIT or Wellesley ID.

Butch Cassidy and the Sundance Kid** — LSC Movie. Sun, Sept 25, 6:30 & 9pm, Rm 26-100. Admission, 75¢ w/MIT or Wellesley ID.

Murder by Death** — LSC Movie. Fri, Sept 30, 7 & 9:30pm, Kresge. Admission 75¢ w/MIT or Wellesley ID.

Line of Demarcation (Chabrol)* — MIT Film Society. Fri, Sept 30, 7:30 & 9:30pm, Rm 6-120. Donation, \$1.25.

Chinatown** — LSC Movie. Sat, Oct 1, 7 & 10pm, Rm 26-100. Admission 75¢ w/MIT or Wellesley ID.

Theatre of Blood** — LSC Movie. Sun, Oct 2, 6:30 & 9pm, Rm 26-100. Admission 75¢ w/MIT or Wellesley ID.

Theatre and Shows

Evening of One Act Plays* — Fri, Sept 30, Sat Oct 1, 8pm, Kresge Little Theatre. **Bus Riley's Back in Town** by Inge, directed by Mark De Lemos. **Theatre II** by Beckett, directed by David Dreyfuss. Free.

Dance

MIT Dance Workshop* — Open meeting for all interested dancers. Wed, Sept 21, Mon, Sept 26, 5:15pm, T-club lounge, W31, 1st floor.

Tango Workshop* — MIT Ballroom Dance Club. Sun, Sept 25, 2:15-4pm, Sala. Admission 50¢.

Tech Squares* — Tues, Sept 27, 8-11pm, Sala. First lesson of 9 week square dancing crash course. Admission \$1/wk or \$7/9 wks. Info: Marianne, x3-6724.

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

Exhibitions

Banned Books* — An exhibit of books which have been banned for assorted reasons at various times and places. Thru Sept 30, Humanities Library Reading Room, 14S-200.

Watercolors by Carolyn Latanision* — Thru Sept 30, Faculty Club.

Paper Forms* — Handmade paper projects, both paintings and sculptures by Kenneth Noland, Ellsworth Kelly, Alan Shields, Frank Stella, and Robert Rauschenberg. Sponsored by the MIT Committee on the Visual Arts. Thru Wed, Oct 5, Mon-Sat 10am-4pm, Hayden Gallery and Hayden Corridor Gallery. Public Reception in the Gallery, Fri, Sept 9, 8-10pm.

Unfinished Works* — Music Library, Rm 14E-109. Examples of unfinished musical compositions from Bach to Bartok.

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

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

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

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

Athletics

Maggie's Self-Design Fitness Class** — An athletic class that can fit into anyone's schedule: choose 12 hrs for 2 credits. 12n-1pm, 1-2pm, 5-6pm Mon-Fri. du Pont Wrestling Room.

Home Schedule* — **Wed, Sept 21** — V Field Hockey, Boston University 3:30pm, Briggs Field. **W V Tennis**, Boston University, 3:30pm, du Pont Tennis Court. **V Water Polo**, Boston College, "B" Team 4:30pm, "A" Team 5:30pm, Alumni Pool. **Sat, Sept 24** — V Cross Country, WPI & RPI, 1pm, Franklin Park. **J V Cross Country**, WPI & RPI, 12:30pm, Franklin Park. **W V Tennis**, Bates, 12n, du Pont Tennis Court. **Tues, Sept 27**, W V Tennis, Wheaton, 4pm, du Pont Tennis Court. **Wed, Sept 28**, V Baseball, Babson College, 4pm, Briggs Field. **Thurs, Sept 29**, V Field Hockey, Pine Manor College, 3:30pm, Briggs Field. **Fri & Sat, Sept 30 & Oct 1**, V Water Polo, MIT Invitational, Fri, 4-8pm, Sat 9am-8pm, Alumni Pool. **Sat, Oct 1**, V Baseball, University of Lowell, 12n, Briggs Field; **JV & V Soccer**, Trinity, 2pm, Briggs Field. **Sat & Sun, Oct 1 & 2**, W V Sailing, NEWISA Man-Label Trophy, 9:30am, Charles River Lower Basin.

MIT Grad Soccer* — Mass Industrial League. Uniform: Dark blue shirt w/MIT seal on left breast, white trunks & socks. Show up dressed to play 1/2 hr before home game time. All games Sat, 2pm, Briggs Field. Sept 24, Polaroid Oct 1, Waltham.

MIT Chinese Students Intercollegiate Sports Union* — Sat, Sun, Sept 24 & 25. Sponsored by MIT Chinese Students Club. Info: Yam Lee, 688-7769, or Henry Yim, x5-9106 Dorm.

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 Sept 28 through Oct 9 to the Calendar Editor, Room 5-111, Ext. 3-3270, before noon Friday, Sept 30.

Environmental Scientists Urged to Study Mountains

"Montology"
That word—meaning the study of mountain ecology—was coined by a group of government officials, planners, agriculturists and academics who met in Cambridge recently to urge that environmental scientists turn their attention to mountains.

As oceans have oceanography, mountains need a field of study uniquely theirs, the conferees said, to cope with the exploitation and overuse of mountains in many parts of the world.

The work of the group—their meeting was called the Cambridge Conference on Mountain Environments—has been described in the July/August issue of *Technology Review*, a journal of science and technology published at MIT.

"Far from eternal, the article in the *Review* states, 'mountains with their thin air and soil are delicate, and their disruption can have far-reaching effects.' These can include, according to the conference participants, the silting of rivers and harbors and the aggravation of flood conditions in the valleys and plains on which nearly half the earth's people depend for food and water.

An example cited at the conference was the situation in Nepal where, in the last 30 years, at least 50 per cent of the forests on the Himalayan slopes and foothills have been stripped away. As a result, the thin soil of the slopes is washed toward the plains under the force of the monsoon rains, silting the rivers and filling the Ganges, whose sources lie in the Himalayas. The floods of Bangladesh and the water-borne diseases of poorly drained Calcutta are both indirect results of this condition, it was said.

The Cambridge conference, which met in May under the auspices of the Institute on Man and Science, followed up a five-day symposium held in Munich in 1975 on the same topic.

The Cambridge meeting produced a manifesto which said that "a clear and present danger threatens the integrity and viability of the

mountain regions of our planet. The accelerated destruction of mountainside forest cover and accompanying soil erosion has seriously damaged the survival opportunities of the planets, animals, and the human communities who depend on them."

The manifesto said that a "first step" must be a network of activities, projects and institutions that can halt the destruction of mountain environments and promote conservation-oriented development.

It continued: "The national governments principally concerned must create schools, research institutes and legislation, and must sponsor cadres of volunteers to reclaim the destroyed land and protect and improve the fragile topsoil of endangered land.

"The world academic and research community must make its best advice available immediately. We urge governments, universities, research institutions and international agencies to summon the resources for an interdisciplinary, interprofessional and all-inclusive effort to preserve and extend the mountain resource base

"The Conference recommends the prompt establishment of specialized journals, research and teaching institutions, volunteer mountain improvement corps, and model mountain reforestation and forest development schemes as a practical first step in realizing our goal."

One suggestion at the meeting was for an international institute for mountain studies, which could serve as an information and financial center and also develop programs to increase public awareness of the plight of mountains.

The organizers of the Cambridge conference included Frank P. Davidson, chairman of the System Dynamics Group Steering Committee at MIT's Alfred P. Sloan School of Management, and Dr. Kathleen Lusk, who originated the seminar on "The American Mythology of Success" at Harvard University's Radcliffe Institute.

Food Industry Experts to Speak

Three leading authorities on three separate aspects of the food industry in America will participate in the 1977 Underwood-Prescott Memorial Award ceremony and symposium on Tuesday, Sept. 27, at MIT.

Peter Barton Hutt, former chief counsel of the federal Food and Drug Administration (FDA) and a nationally recognized authority on laws governing the content and marketing of foods, will receive the Underwood-Prescott Award at a luncheon and award ceremony beginning at noon in the Sala de Puerto Rico in the MIT Student Center. Mr. George C. Seybolt, president of the Wm. Underwood

serves as committee chairman.

The committee said the award was made to Mr. Hutt for "his contributions to humanity for the development of sound federal regulatory procedures for foods and drugs."

Mr. Hutt was chief counsel for the Food and Drug Administration and assistant general counsel of the U.S. Department of Health, Education and Welfare from 1971 to 1975.

At the FDA, Mr. Hutt helped institute changes in the agency's overall policy. An article in the News and Comment Section of the Sept. 8, 1977 issue of *Science* magazine, published by the American Association for the Advancement of Science, said, in part:

"... a new regulatory philosophy, implanted in the FDA by its former general counsel Peter Hutt and others, holds that the agency should not prevent food producers making use of new technologies as long as the nutritional standards of the products are maintained."

Mr. Hutt is a member of the Institute of Medicine of the National Academy of Sciences (NAS) and a member of its Governing Council. In addition, he is a member of the NAS Committee on a Study of National Needs for Biomedical and Behavioral Research Personnel.

He is a member also of the Institute of Medicine Health Sciences Policy Advisory Committee, a member of the Advisory Board of the Center for the Study of Drug

Dr. Johnson had served earlier as Chief, Domestic Unit, Nutrition Program, Health Services and Mental Health Administration of the U.S. Department of Health, Education and Welfare; as assistant secretary of the Council on Food and Nutrition of the American Medical Association; and as senior research chemist of the A.E. Staley Manufacturing Company.

Dr. Johnson received his BS, MS and PhD degrees in food science from the University of Illinois. He is a member of a number of professional societies including the Institute of Food Technologists, the American Institute of Nutrition, the American Public Health Association, and the American Chemical Society.

Dr. Gordon F. Bloom is an authority on food management, with wide experience both in commercial food marketing and distribution, and in research on productivity in the food industry and food economics.

Dr. Bloom served as chairman of a task force of MIT scientists who assisted the food industry in selecting the Universal Product Code symbol now displayed on packages of most grocery products for automatic checkout systems.

He is also one of the originators of an experimental MIT program called TAFI, standing for Technology Applied to Food Industry, which is attempting to effect collaboration of food industry execu-



Mr Hutt

Co. of Westwood, Mass., will participate in the program and MIT's president, Dr. Jerome B. Wiesner, will present the award.

Following the luncheon, a symposium in MIT's Kresge Auditorium on "Government Regulation: How Much is Enough?" will be presented by Mr. Hutt, Dr. Odgen C. Johnson, and Dr. Gordon F. Bloom.

Mr. Hutt, who has been called the architect of the FDA's new regulatory doctrine, will give a paper on "The Basis and Purpose of Government Regulation of Adulteration and Misbranding of Food."

Dr. Johnson, who is Corporate Vice President of Scientific Affairs, Hershey Foods Corporation, will speak at the symposium on "Food Labeling for Consumers."

Dr. Bloom is senior lecturer in MIT's Alfred P. Sloan School of Management and a specialist on productivity, marketing and distribution, and labor management in the food retailing industry. He will speak on "Government Regulation: The Hidden Tax on Food."

More than 300 food scientists, nutritionists, and food industry executives are expected to attend the luncheon and symposium.

The 1977 award marks the 15th anniversary of the Underwood-Prescott lectures and symposia, in which outstanding food scientists from throughout the world have participated.

The Underwood-Prescott Award and Lectureship are in memory of William Lyman Underwood, grandson of William Underwood, who founded the Wm. Underwood Co. in Boston in 1822, and Dr. Samuel Cate Prescott, the first dean of the School of Science at MIT.

In one of the first industry-university partnerships, they were the first to establish in 1895 that spoilage in canned food was due to bacteria. Together they developed the temperature and time guides necessary to destroy the spore-forming organisms responsible for the spoilage of food and thus established the scientific basis of the modern canning industry.



Dr. Johnson

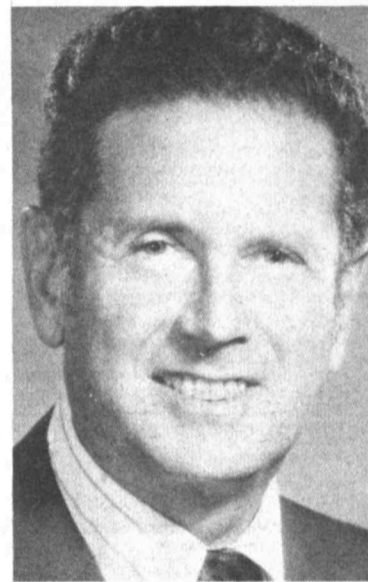
Development at the University of Rochester School of Medicine and Dentistry and a member of the Advisory Panel on Regulatory Reform of the U.S. Senate's Committee on Government Operation.

Mr. Hutt received the BA degree magna cum laude from Yale University in 1956, the LL B degree from Harvard Law School in 1959, and the LL M degree in 1960 from New York University where he studied under a fellowship from the Food and Drug Law Institute. From 1960 to 1971 he practiced law, specializing in food and drug law, with the Washington, D.C. firm of Covington and Burling, which he rejoined in 1975. He became a partner in this firm in 1968.

He has received numerous honors and awards for his work and is the author of many papers and articles in his fields. He has been a member also of the New Foods Panel of the White House Conference on Food, Nutrition and Health (1969-70), a member of the Committee on Cosmetics and on Agency Procedure of the Food, Drug, and Cosmetic Law Division of the American Bar Association's Corporation, Banking and Business Law Section (1970-71), and chairman of the Food and Drug Law Committee of the American Bar Association's Administrative Law Section (1965-66).

Dr. Odgen C. Johnson is responsible for the research and development programs and coordinates quality assurance and laboratory activities for the Hershey Foods Corporation, Hershey, Pennsylvania.

Before joining Hershey, he was Director of the Office of Nutrition and Consumer Sciences of the Food and Drug Administration, with responsibility for nutrition, consumer science, and food service sanitation programs.



Dr. Bloom

tives and engineers who have an interest in developing technology for the industry.

Dr. Bloom has served as chairman of the board of directors of the National Association of Food Chains and is former president and general manager of Elm Farm Foods Co., a Massachusetts supermarket chain. He is a member of the Food Retailing Advisory Commission, Office of Emergency Preparedness, Executive Office of the President, and a member of the Food Industry Advisory Committee of the Federal Energy Administration. He is the author of numerous publications in his fields, which include business and urban problems, economics and labor law, and public policy and administrative law.

Dr. Bloom holds the BA degree from the University of Buffalo; MA and MPA and PhD degrees from Harvard University, and LL B and JD degrees from Harvard Law School.

Gardner Museum To Host Ensemble

The MIT Shakespeare Ensemble will give a scene presentation at the Gardner Museum (280 The Fenway, Boston) at 8pm on Tuesday, September 27.

The Ensemble is the first non-musical group invited to perform as part of the museum's concert series. It will present scenes from *King Lear*, *Coriolanus*, *As You Like It* and *Twelfth Night* by Shakespeare, and from *The Changeling*, a Jacobean play by Middleton and Kewley.

The performance will be open to the public without charge.

Quarter Century Club Lists Upcoming Trips

The MIT Quarter Century Club has announced a schedule of some 40 trips it will sponsor this year, with departures from New York, Chicago, Washington, Miami and Los Angeles, in addition to Boston.

Trips range in price from a thrifty \$199 + 15 per cent for a week in Freeport, the Bahamas, to up to \$3,000 for a 16-day, fly-sail tour of the Classic lands (Greece, Israel, Egypt). Departures are as follows: From Boston

- Russia, \$699 and \$749, October 7 and November 4.
- Hawaii/West Coast, \$829, October 8.
- Copenhagen, \$299 + 15 per cent, October 11.
- Sicily, \$299 + 15 per cent, November 2.
- Majorca, \$499, November 6, December 25 and February 19.
- Dakar, \$299 + 15 per cent, November 15.
- St. Thomas/St. Croix, \$299 + 15 per cent, December 15.
- India, \$1,398, January 7 and March 4.
- Tanzania, \$499 + 15 per cent, January 9.
- Peru, \$299 + 15 per cent, January 12.
- St. Thomas, St. Maarten, San Juan cruise, \$529, January 21.
- Classic Lands, \$1,800-\$3,000, February 7.
- Montego Bay, \$229 + 15 per cent, February 26.
- Freeport, \$199 + 15 per cent, March 7.
- Caribbean/Panama cruise, \$1,700, March 11.
- Hawaii/West Coast, \$829, March 18.
- Alpine Lakes, \$1,595, August 3. From New York
- Copenhagen, \$299 + 15 per cent, October 4.

- Russia, \$699 and \$749, October 7 and November 4.
- Dakar, \$299 + 15 per cent, November 22.
- Orient, \$1,595, December 1, March 23 and April 20.
- Sicily, \$299 + 15 per cent, December 21.
- India, \$1,398, January 7 and March 4.
- Colombia, \$499, January 20.
- Rio de Janiero/Sao Paulo, \$799, January 23 and March 20.
- Tanzania, \$499 + 15 per cent, January 23.
- Montego Bay, \$299 + 15 per cent, January 31.
- Russia, \$689, March 13.
- Freeport, \$199 + 15 per cent; March 14.
- From Chicago
- Dubrovnik, \$349 + 15 per cent, October 17.
- Copenhagen, \$349 + 15 per cent, October 18.
- Sicily, \$349 + 15 per cent, October 26.
- Peru, \$299 + 15 per cent, January 19.
- From Washington
- Dakar, \$329, + 15 per cent, October 11.
- Copenhagen, \$349 + 15 per cent, November 1.
- Sicily, \$349 + 15 per cent, November 9.
- Dubrovnik, \$349 + 15 per cent, November 28.
- Tanzania, \$499 + 15 per cent, January 16.
- Freeport, \$199 + 15 per cent, January 17.
- Montego Bay, \$199 + 15 per cent, January 17.
- Peru, \$299 + 15 per cent, March 2.
- From Miami
- Colombia, \$429, January 20.
- From Los Angeles
- Russia, \$926, March 13.

CLASSIFIED ADS X3-3270

Ads are limited to one per person per issue and may not be repeated in successive issues. All ads must be accompanied by full name and Institute extension. Only Institute extensions may be listed. Members of the community who have no extensions may submit ads by coming in person to the *Tech Talk* office, Room 5-111, and presenting Institute Identification. Ads may be telephoned to Ext. 3-3270 or mailed to Room 5-111. **Please submit all ads before noon, Friday, Sept. 30. They will be printed on a first come first serve basis as space permits.**

For Sale, Etc.

Pirelli stl bltd radials, 2, 650-14, gd cond, \$25/both, x5-8658 Dorm.

Rust crpt, 9x12, w/pad, \$100; 2 snows, G78-15, less than 4K. Celia, x3-1756.

Kenmore 5000BTU air cond, wrntty, 8 wks, \$98. Call 926-5588, evgs.

Br nw wht wall bias-ply tire, FR78-14. Thurmon, x5-9589, aft 6.

Used refrig, approx 9 cu ft, not in wrkg cond, \$15 or best. Barbara, x3-5944.

Sears Briarwd 8' pool tbl, 1 yr, exc cond, incl accsries, \$125 or best. Tom, x8-3382 Draper.

Univox cstm semi-acstc elec guitar, dual pkup, sunbrst, \$85. Call 262-3192, lv msg, kp tryng.

Olivetti prtbl manual typwrtr, 3 yrs, gd cond, \$40. Call 547-4386.

Hydryr, Contnl ProStyle, 900 wts, cold, warm, ht, v ht, \$15; Rossignol Strato 105 equipmnt, plate bdngs, stl undr wrntty, \$200. Linda, x3-7023.

Pool tbl, best. Gail, x3-1811.

Mhngny dbl bd, mtrrs, sprng, \$60. x3-7627.

Skis & bdngs, Kastinger, 175 cm long, \$10. x3-3343.

Am Orientl pttm rugs, 4, 4x6, \$10/ea; Swvl chr, up-hlstrd, \$15. x3-2766.

Gld brll chr, gd cond. Diane, x8-1766 Draper.

Head 185 cm skis w/Spandeman bdngs + poles, \$60; Roberts 1660 D r-to-r tape deck w/cbnt, tapes, accsries, \$70. x5749 Linc.

Sofa, 87", red & gld, \$40; Dinette + 4 chrs, 36x60 + 12" extra fl, wint grain formica top, \$15; Dbl bed, mtrrs, bx sprng, \$5 Elec grill + rotsarie, \$10. Dave, x5451 Linc.

Nikkormat FT2 SLR cmra, 50mm/f2, \$200; Olympus 35-SP cmra, \$40; Tamron auto lens, 35mm/f2.8, \$35; Realistic auto trmbt w/cvr, \$40; Philips casstc rcrdr, \$15; 2 tires, 2 snows for VW Bug, \$10/ea; F long leather coat, sz 9, \$100; M all wthr coat, sz L, \$30; Other items x3-6231.

Open end wrch set, 7 pcs, nvr used, \$12; Chain lock w/2 keys for dr, \$2. Joan, x3-6922.

Chas Webb spindle sgl sofa-bed, nw, oak, cstm-md mtrrs, \$235; Other items. Call 965-1768, evgs.

Heath 10-102 osclosep, \$100; Heath Dual-tree adptr for osclosep, 20dB added gain, \$30; Dynaco PAT-5K, beaut, \$130; Old golf clbs, bag, cart, \$25. Harry, x5811 Linc.

Pool, 10'dia, 30" high, w/fltr, etc, \$50. x7777 Linc.

Tires, 2, 6-15/13, lk nw, mtd on Cortina rims, \$40/both. John, x3-4791.

Glass aquariums, 2, 10 gal, wrgt iron stand, fltrs, cvrs, lgts, htr, \$35. x7221 Linc.

M 10 sp 26" bike; King sz brlr ovrn; Both exc cond. Call 267-5571, evgs.

Rim, 2-14", for Dodge or Plymouth. C.W. Janiak, x8-2442 Draper.

New m shoes, sz 12, lgt brwn, med wtd, rubber sole, 1/2 price because wrong size, \$18. Jeanne, x3-3951.

Gerry baby shldr carrier, \$7.50. x3-2008.

GE prtbl dshwshr, rns wl, but not hsebroken, \$25. Leslie, x3-7874.

Paint, 3 nw gal Dutch Boy super latex extrior pnt, orig \$42, ask \$30 or best. Roberta, x3-7078.

Nw GR78-14 tires, 4, lk, orig \$130, ask \$80. Don, x3-3839.

Exquisite sofa, empire styl, nwly uphlstrd in Desgrn Fbrc, \$300. Call 864-6379.

BSR minittrtbl, \$10; Heathkit GR 64 shrtwve rcvr, \$15. Ron, x5-6259 Dorm, kp tryng.

GE Refrig, 7 1/2 cu ft, \$30 or best. Call 783-5951.

Wurlitzer organ, mdl 4373, 3 keybrds, w/synthesizer, tp rcrdr, x3-2759.

Menwear, sz 36 & 42, cstm md coats & suits, modelled only. Deborah, x3-6605.

HP65 prgrmblc clcultr w/applctn pacs in math, statstcs, etc, \$200. x3-4288.

Desk, solid wd w/mhngny veneer, 36x52, 6 drwrs, rcntly refnshd, \$75. Call 492-8835, evgs.

Electronic data bks, compl Motorola, TI, Natnl, Sgntcs, Fairchild, EEM, \$50 or best. Sue, x5-7191 Dorm, kp tryng.

Magnavox stereo rcdr plyr, \$20. Kg sz wtr bed frame & mtrrs, \$40. x5-8256 Dorm.

Great buy, 19" b&w TV & cbnt, 35" x37", nd hip to carry, gd cond, \$45. Call 322-3034, aft 5.

Honda 500/550 parts: frnt end, tank, pipes, exc to gd cond, nego. Call 731-1948, evgs.

SCM prtbl elec typwrtr, Coronet Auto 12, elec retrn, 12" crgghl keys, lk nw. Call 862-3276, evgs.

Dinette set w/6 chrs, exc cond, \$80. Shey, x5763 Linc.

M 10 sp bike, 23" frame, exc cond, \$80. Jon, 232-7277, evgs.

Olds Ambssdr Trumpet, nw cond, \$150. Bob, x5877 Linc.

Gd lkg contemp K chrs, wnt brksts, blk vinyl padded sts, 2/820; Cstm md burgundy antique satin drapes, 18'wd, 90" lng, \$50. x8-2577 Draper.

Philco prtbl color tv, 19", 2 yrs, \$160. Call 494-8347, aft 5.

Setnl chr, \$45; Sml cocktail tbl, \$7; K tbl, 3 chrs, \$20. Lloyd, x3-2215.

Emrns stereo, nw, \$70, ask \$35. x3-5763.

K wall cbnts & undr counter cbnts w/formica cntrs, sold sep or tgthr; K sink w/cbnts, best; bit-in dw, gd cond, \$75; 2 std sz wndws w/scrns & storms, x3-6085.

Sailbt, 420, exc cond, full sails, w/trlr. Dr. Pikula, x3-1302.

Bkesc, 67", \$15; Rckng chr w/cshns, \$20, nego. Call 661-9788.

Snows, 635x13, prtly nw. Rich, x3-3826.

Vermiculite attic inslttn, \$2.50/3 cu ft bag. x8-2884 Draper.

KLH 40 tape rcrdrs, 2 compl units, xtra playbk & rcrd brds, 2 xtra sets of heads, compl manual & circuts diagrams for EE hack, \$250, wl sell 1 compl syst. Bob, 494-9205, lv msg.

Piano, spinet, wint, exc cond, \$600. x7447 Linc.

Amercn Orntl rug & pad, 9x12; Glass china cbnt/bkesc, 39x15x49; B pole cbnt w/2 xtra shlvs. Call 354-0433, evgs.

Gr spd tires, 2, lk nw, 13" rims, \$9/ea. Chris, x3-8021.

SCM prtbl elec typwrtr, \$95. Nigel, x8-1185 Draper.

Vy old Wstnghse upright vacuum w/attchmnts; Orbital sander; both wrk, \$7.50/ea. Cynthia, x3-3959.

Royal prtbl typwrtr, \$15; Blu-grn rcldr chr, \$25. x5893 Linc.

Delux tstr-ovn, \$20. John, x5-9738 Dorm.

BIC Fmula 4 spkrs, 100 w max input, lk nw, \$185. Call 494-8207.

Bike, 3 sp, full equipmnt, 2 big sdbskts & pump, \$60. Call 494-8147.

Vinyl brgndy sofa, \$20; Tbl imp \$5; Prtbl manual typwrtr. Jeannie or Emden, x3-7579.

Wstnghse frnt loader wshng mchne, \$25; Whrpl auto dryer, \$45; both avail 10/1. x7905 Linc.

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Motobcane 10 sp f bike, br nw, x8-3463 Draper.

Fl sz bx sprng, \$20; 16 1/2" hse trlr. Dave, x3-4489.

Lrg ornl-type pttm rug, exc cond, \$60; Antique brass candy trays, ideal for wndw plnts, \$20/ea. Robert, x7288 Linc.

Bronica w/50mm Nikkor f35 wd angle lens & close up attchmnts, lens almost unused, wl sell lens & bdy sep, lens, \$200; bdy w/attchmnts, \$65 firm. x3-2534.

Sml baby crib, \$100; Sgl bed, almost nw, \$35; Mtl dsk & chr, \$40; Desk lamps, \$5, \$4; Dual 1228 trmbt w/Shure M95ED crtrdg, \$125; 2 Splndng rcktbl rckts & 2 bls, \$20. John, 494-8765, aft 7.

Rims, 2, 14", for AMC. x3-4314.

Shlvs; Cffee tbl, exc cond; 4 drwr filing cbnt; Punch bowl & glsscs. x3-2160.

Qn sz wtrbd, htr, liner, frame, less than 1 yr, mst sell, \$90 or best. Mike, x5-9637 Dorm.

Yamaha guitar, exc cond, w/case, \$40; Sears Kenmore tbl mdl sewing mach, rcntly ovhrld, gd cond, \$110, sells for \$300. Paul, 738-0186.

Adidas, br nw, sz 10, Super Star bsktbl shoes, \$25. Doug, x3-5918.

Yamaha nw tennis rckt, L 4 1/2, \$45; rebilt eng, tires, accsries for '70 2 dr Mvrc, bdy damaged. Call 862-1935.

Microphne, Electro-vee mdl 630, \$15. Victor, x3-3960.

Spinnet piano, cherry Wurlitzer, exc cond, \$595. x3-4493.

Porcelain china: 60 pc serv for 8, nw, still in orgnl pkg, \$55. Call 494-9264.

Pioneer 8-trk tp dck, mdl H-R88/K, lk nw, nw, \$140, ask \$70 or best; 8 trk tapes, \$1/ea. Sam, x5-6330 Dorm.

Emrns stereo, nw, \$70, ask \$35. x3-5763.

K wall cbnts & undr counter cbnts w/formica cntrs, sold sep or tgthr; K sink w/cbnts, best; bit-in dw, gd cond, \$75; 2 std sz wndws w/scrns & storms, x3-6085.

Sailbt, 420, exc cond, full sails, w/trlr. Dr. Pikula, x3-1302.

Bkesc, 67", \$15; Rckng chr w/cshns, \$20, nego. Call 661-9788.

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Shlvs; Cffee tbl, exc cond; 4 drwr filing cbnt; Punch bowl & glsscs. x3-2160.

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Vy old Wstnghse upright vacuum w/attchmnts; Orbital sander; both wrk, \$7.50/ea. Cynthia, x3-3959.

'75 Audi Fox, 4 dr, 4 sp, drk brn, 23K, rust proof, lk nw, avail Oct/Nov, \$3,700. x7789 Linc.

'75 Ford Gran Torino, yel w/wht vinyl rf, wht/blk int, pwr st & brks, ac, rear wndw defog, exc cond, orig ownr, 37K, 18 mpg city, 22 mpg hghwy, \$2,800. Ruth, x3-3558.

'75 Honda TL250, dirt bike, top cond, rgrstr, lgts for on st ridng, Nancy, x3-7649.

'75 Honda CB400F, exc cond, lw K, xtras. Walter, 494-8683.

'75 Kawasaki KZ400 w/xtras, 15K, \$675. Tim or Mani, 247-8048.

'76 Ford Granada, 4 dr, hrtp, 6 cyl, 350 cu in eng, pwr st & brks, auto, wht w/blu vinyl rf, 5 radials, 13K, psngsr sd mirror, reading lgts, exc cond, ask \$3,450. Call 3-2772.

'76 Hornet, Amer Mtrs, std, 2 dr, blu, 8K, \$2,700. Call 268-2590.

'75 Audi Fox, 4 dr, 4 sp, drk brn, 23K, rust proof, lk nw, avail Oct/Nov, \$3,700. x7789 Linc.

'75 Ford Gran Torino, yel w/wht vinyl rf, wht/blk int, pwr st & brks, ac, rear wndw defog, exc cond, orig ownr, 37K, 18 mpg city, 22 mpg hghwy, \$2,800. Ruth, x3-3558.

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Transportation Conference Held

A three-day international conference and workshop on Noncontacting Suspension and Propulsion Systems for Advanced Ground Transportation, arranged by the Vehicle Dynamics Laboratory of MIT's Department of Mechanical Engineering and supported by the U.S. Department of Transportation's Office of University Research, was held Sept. 7-9 at Endicott House.

The conference brought together the world's leading experts to summarize the state of the art of high-speed ground transportation and to discuss the direction future research should take.

At a pre-conference dinner several of the 100 engineers, scientists and planners who attended heard introductory remarks by Professor Herbert H. Richardson, head of the mechanical engineering department, and by Lloyd Money and John Fearnside, both from the Secretary of Transportation's office.

The opening conference session was devoted to an overview of advanced transportation research programs. Professor David N. Wormley of the mechanical engineering department gave the preliminary remarks.

Professor Wormley and Professor J. Karl Hedrick, also of the mechanical engineering department,

arranged the conference. Both professors are associated with the Vehicle Dynamics Laboratory.

The conference closed with a presentation of workshop results.

Rugby Club Seeks Members

The MIT Rugby Club is seeking new recruits before its season begins in less than two weeks.

The club is open to all members of the MIT community and practices have already begun. If interested, contact Jim Scheimer, x3-7899, Rm 34-400.

'Eating in America' Receives Critical Acclaim

"The food we find in supermarkets, restaurants, and cafeterias is so familiar to us, so completely intermeshed with almost every aspect of our lives, that it is difficult to come to the realization that some of it, eaten in the quantities now generally consumed, may be debilitating or deadly."

—Sen. George McGovern, in the foreword to *Eating in America*.

The U.S. Senate Select Committee on Nutrition and Human Needs, chaired by George McGovern, surveyed the American diet and concluded that what we've been swallowing since the advent of heavily processed and junk foods "represents as great a threat to public health as smoking. Six of the ten leading causes of death in the U.S. have been linked to our diet."

As an antidote, the McGovern Report ("Dietary Goals for the U.S."), reprinted by The MIT Press as *Eating in America* (\$1.95), offers a commonsense diet which would save 350,000 lives a year in the U.S., drop family food costs dramatically, and reduce the nation's health bill by one third.

The diet, which would help people live longer, healthier, and more productive lives, was greeted with continuing fanfare by the media, and with a loud volley of Bronx cheers by the soft drink and fast foods industry.

In the Washington Post, Marian Burros wrote (August 24, 1977) that the report, reprinted as *Eating in America*, is "The most specific yet issued by the Federal government... In the past its nutrition education has come in the form of admonitions to 'eat something from the four food groups every day,' and 'all food is good food.'"

The British Medical Journal, "Lancet," commented that "The American goals will be welcomed by people who have thought seriously about the diet of Western man."

Harvard nutritionist Mark Hegsted says that the current American diet is merely "a happenstance related to our affluence, the productivity of our farmers, and the activities of our food industry. The risks associated with eating this diet are demonstrably large. The question to be asked is not why should we change our diet, but why not?"

Why not indeed, particularly if the Des Moines Register is accurate

in its definition of Americans as a "people who sit around a lot gorging on fatty meat, candy, salty, oily potato chips, and junky, sugary snacks — and dying off in increasing numbers from diet-induced cancers, strokes, heart attacks, and liver diseases."

Eating in America presents the entire McGovern Report, plus a specially written foreword by McGovern, in compact, concise format. As a guide to consumers in a population sorely in need of dietary advice, *Eating in America* should replace every fad diet book in use throughout the country.

New Books From the Press

The MIT Press has published J.N. Newman's *Marine Hydrodynamics* (\$24.95) and it is available at the Coop for students of aerodynamics and hydrodynamics.

"The applications of hydrodynamics to naval architecture and ocean engineering have expanded dramatically in recent years," Newman states. "Ship design has been related increasingly to the results

of scientific research, and a new field of ocean engineering has emerged from the utilization of offshore resources. The number of technical symposia and journals has increased in proportion to this expansion, but the publication of textbooks has not kept pace."

Solidly based on fundamentals, *Marine Hydrodynamics* was designed to meet the need for a text that's up to date in terms of both content and approach. J.N. Newman, professor of naval architecture at MIT, developed the book's content from course notes at the late undergraduate and graduate levels.

Despite Straight Lines by Joseph Albers ((\$20.00) has just been published by MIT Press, and is available at the Coop. A revised and expanded edition of the classic study of the graphic constructions of one of the great artists and teachers of our time, *Despite Straight Lines* features an analysis of Albers' constructions by Francois Bucher.

Chinese Students' Club Sponsors Sports Union

More than 400 students from 18 colleges and universities in the northeast are expected at MIT for the first Intercollegiate Sports Union for Chinese Students ever held on the East Coast, Friday, Saturday and Sunday, September 23, 24 and 25.

Sponsored and organized by the MIT Chinese Students' Club, the events will begin on Friday, Sept. 23, with a reception in the Student Center (W20-400) from 7pm-midnight. A late reception, from midnight-3am will follow in Student Center Room 475.

Sports events will begin on Saturday, Sept. 24, with basketball, volleyball, and badminton in the du Pont Gymnasium and table tennis in the Varsity Club Lounge from 9am-4pm. Other Saturday events include a tug-of-war from 4-5pm at Brigg's Field; outdoor soccer from 1-5pm; a free movie from 7:30-9pm, Rm 26-100, and a meeting of the executive committee from various schools from 8-9:30pm, Student Center Rm 491.

The highlight of Saturday's events will be a semi-formal Moon Festival Party from 8:30pm-1am in Walker Memorial.

Sunday sports events begin with basketball, volleyball and badminton finals, from 9am-noon in the du Pont Gym. Finals for the tug-of-war will take place at Brigg's Field and table tennis in the Varsity Club Lounge also from 9am-noon. Soccer finals will be held from 9-11am.

Eugene Chamberlain, foreign

Barker Library Conducts Tours

The Barker Engineering Library will conduct a series of orientation tours to introduce new MIT staff, faculty and students to its resources and services.

Tours will meet in the Library's 4th floor conference room (enter through Rm 10-500 and follow signs) and will last about 45 minutes. The schedule will be as follows: Wed, Sept 21, 3:15pm; Thurs, Sept 22, 5:15pm; Tues, Sept 27, 10:15am; Wed, Sept 28, 3:15pm and Thurs, Sept 29, 5:15pm.

The orientation tours will include an overview of the Library, a description of its collection, an introduction to catalog searching techniques and an explanation of the services unique to Barker.

draft and machine dictation; type material with mathematical content; organize and maintain articles and other materials for professional journals, as well as material related to faculty recruitment. Good typing and English grammar skills required. B77-501 (9/21).

Secretary IV, part-time, in the Center for Materials Science and Engineering. Duties include preparation of various payroll reports; maintain and publish directory of building occupants; directing visitors; type correspondence and financial and technical reports; process Annual Report requests; maintain related lists. Typing skill and ability to work effectively with people required. 24 hrs./wk. B77-495 (9/14).

Secretary IV, part-time, for a Dept. of Urban Studies and Planning research project: type correspondence, manuscripts; distribute reprints; order various documents, and monitor their receipt; catalogue material for a small library; maintain a mailing list. Typing skill, some cataloguing experience required as well as ability to operate word processing equipment or willingness to learn. 20 hrs./wk. B77-493 (9/14).

Secretary IV, Group Secretary for the Plasma and Laser Systems Group of the National Magnet Laboratory will perform all secretarial functions for group: type technical reports and papers; set up and maintain filing system; answer telephones; type correspondence; arrange travel and appointments. High school training or equivalent with at least 3 years secretarial experience, or college training and 1 year's secretarial experience required. Excellent typing skill including technical typing experience or willingness to learn also necessary. B77-486 (9/14).

Secretary III/IV in Civil Engineering to two faculty members to do technical typing; xerox; answer phones; monitor accounts. Technical typing skill is required. B77-499 (9/21).

Secretary III or IV to perform all general secretarial and clerical duties for two staff members in the Office of Sponsored Programs. High school graduate, or equivalent, plus three years of progressively responsible secretarial experience, or formal secretarial training and one year of experience required. Familiarity with MIT helpful. B77-489 (9/14).

Secretary III, in Materials Science and Engineering will handle varied duties related to administration of Department's academic program, particularly the graduate admissions process: correspond with prospective students; arrange faculty committee meetings; maintain student records. Will also type various material; assist in maintaining departmental conference room; prepare and distribute lists and schedules. Strong organization skill as well as ability to handle detailed work, and to type required. B77-485 (9/14).

Library Asst. II, part-time, temp. in Dewey Library to assist users in the reserve book section; mail out overdue notices; maintain billing for overdue fines; assist in reshelving books. Ability to deal well with a variety of people and to enforce regulations pertaining to reserve material required. Sept., 1977 thru May, 1978; 10:30AM-2:30PM B77-508 (9/21).

Clerk IV, Account Representative, in Administrative Computing Services to act as liaison between computer operations facility and users of the service to ensure quality and timeliness of production commitments; prepare jobs for processing; review completed jobs. Position requires at least 4 years experience in data processing, particularly in scheduling and operation of equipment, training in operation of hardware and in job control languages. Customer service experience also required. B77-513 (9/21).

Sr. Clerk III in the Admissions Office to type address labels; assist in large volume mailings and other special projects as required. Excellent typing skill and ability to organize detailed work with speed and accuracy required. Will be trained to occasionally operate IBM Magcard machine. Non-smoking office. B77-503 (9/21).

Sr. Clerk III in Athletics to work in equipment room and men's locker room: control admission to locker room; process sale of athletic cards; maintain records and files; take facility reservations on phone; circulate information associated with schedule and operation of the athletic facility; supervise student employees. Applicants must be male (due to work site), have the ability to handle detailed work and to interact favorably with members of the community and their guests. Wed.-Sun., 12N-8PM B77-502 (9/21).

Clerk III, part-time, in the Campus Patrol Dept. to assist the administrative assistant: handle general clerical duties; type; file; answer telephones; xerox; assist in administration of parking system. Good typing skill with familiarity of office procedures, and ability to work under pressure required. 15-20 hrs./wk. B77-500 (9/21).

Sr. Clerk III/Receptionist in the MIT Press to receive and direct visitors; answer phones and inquiries; sort and process all incoming mail. Typing skill necessary. High school graduate or equivalent, with secretarial school training required. B77-498 (9/21).

Clerk III in the Physical Plant, Telecommunications Dept. to perform general clerical duties: type; file; answer phones and route calls to appropriate persons; relieve teletype and switchboard operators as needed (will be trained). Typing skill and previous office experience required. B77-507 (9/21).

Clerk III, part-time, in Architecture to perform various clerical tasks: type; answer phones; perform other duties as necessary. Good typing skill, ability to organize work and occasionally work under pressure required. 20 hrs./wk. B77-515 (9/21).

Accounting Clerk III in the Center for International Studies to type assorted forms; process invoices for payment; reconcile monthly statements; maintain files. Typing skill and a knowledge of bookkeeping procedures required. B77-491 (9/14).

Clerk/Messenger II, temporary, in the Office of Sponsored Programs to perform messenger duties between headquarters and several campus locations on a pre-scheduled daily basis, and make special trips as required; route office mail; file publications; maintain xerox machine; sort and distribute accounting reports; perform other clerical duties as required. Some typing ability is required. B77-506 (9/21).

Computer Operator III, part-time, to operate IBM 360/65 system: perform all phases of batch processing installation (i.e. input-output); maintain log of hardware and software malfunctions; report maintenance problems to IBM engineers; perform maintenance functions such as cleaning tape drives. Ability to operate entire IBM 360/65 computer complex including console without supervision and familiarity with HASP and OS operating commands required. 4PM-8PM (20 hrs./wk) B77-504 (9/21).

Counterworker in Dining Service to prepare ready-made desserts: cut cakes and pies; set up food. Will help supply counter during meal times; refrigerate leftovers; clean area. Applicants must be able to follow written and verbal instructions. 40 hrs./wk. including Sat. and Sun., (5 day week) H77-150 (9/21).

Hourly, 2nd Class Engineer, in Physical Plant must have Mass. Second Class Engineer's license (stationary) or higher, and experience on high pressure boilers, oil and gas fired with automatic combustion controls; turbine driven auxiliaries, AC and DC generation. Experience on turbine driven refrigeration and water treatment systems also necessary. Must be willing to do all kinds of work and work any and all shifts consistent with the self sufficiency of the Power Plant. H77-151 (9/21).

Hourly, Sheet Metal Worker in Physical Plant requires at least five years recent experience in sheet metal trade and layout experience in parallel line development, triangulation, radical line pattern development. Experience with insulation procedures, new air handling systems and modifications to older type systems also necessary. Applicants must be qualified in Arc welding, brazing and oxy/acetylene procedures, and have a working knowledge of machinery applicable to sheet metal fabrication. Position requires irregular shift and/or irregular schedule. H77-145 (9/21).

Hourly, Instrument Systems Worker, in Physical Plant must have knowledge of electro/mechanical instruments, and control devices including testing procedures, related equipment calibration and repair techniques. Demonstrated electro/mechanical skills required, as well as knowledge of interrelationship of instruments and control devices in sophisticated control systems. An Associates degree and/or 2 years technical school is necessary plus at least 3 years applicable electro/mechanical instrumentation experience. Must be able to work any and all shifts. H77-148 (9/21).

Bus Person, part-time, in the Faculty Club to bus dish trays and unload dish racks using banquet trays; clear and reset tables; serve banquets; rearrange tables and chairs for functions; perform various other tasks related to dining room service. Mon.-Fri., 12:00-4:00pm, possible week-end work. H77-147 (9/14).

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:
A77-3, Systems Prog., Info. Processing Serv. (2/16)
A77-15, Director, MIT Alumni Fund (4/13)
A77-21, Prog. Analyst, Info. Proc. Serv. (8/31)
A77-38, Appl. Prog., Admin. Comp. Serv. (6/22)
A77-43, Editor in Chief, MIT Press (7/20)
A77-49, Admin. Staff, Industrial Liaison Office (8/10)
A77-52, Applications Prog., Admin. Comp. Serv. (8/31)
A77-54, Benefits Officer, Off. of Pers. Rel. (9/7)
A77-56, Systems Prog., Inf. Proc. Serv. (9/7)
A77-57, Tutored Video, Instr., Center for Adv. Eng. Studies (9/7)

BIWEEKLY:
B77-155, Sec. IV, Industrial Liaison Prog. (5/11)
B77-179, Sec. IV, Biology (5/25)
B77-219, Sec. IV, Energy Lab. (9/7)
B77-221, Reactor Oper. IV, Nuclear Reactor Lab. (6/15)
B77-264, Sr. Clk. III, Registrar (6/22)
B77-266, Sec. III, Ctr. for Space Res. (6/22)
B77-285, Sec. IV, Physical Plant (7/20)
B77-286, Sec. III-IV, Meteorology (7/20)
B77-301, Sec. IV, Chemistry (9/7)
B77-324, Sec. IV, National Magnet Lab. (8/10)
B77-344, Sec./Receptionist III, Admissions (8/31)
B77-353, Sec. III-IV, Chem. Eng. (8/31)
B77-377, Sec. IV, Pol. Sci. (8/31)
B77-384, Sr. Clk. III, Medical Dept. (8/31)
B77-385, Sec. III, Alum. Assn. (8/31)
B77-396, Sec. III-IV, Off. of Spons. Prog. (8/31)
B77-399, Sec. IV, Energy Lab. (8/31)
B77-409, Sec. IV, Civil Eng. (9/7)

B77-414, Sec. IV, Humanities (9/7)
B77-415, Sec. IV, Humanities (9/7)
B77-417, Clk. III-IV, Elec. Sys. Lab. (9/7)
B77-419, Sect. Head V, Barker Eng. Library (9/7)
B77-427, Acctg. Clk. III, Graphic Arts (9/7)
B77-429, Admin. Asst. V, Mat. Sci. & Eng. (9/14)
B77-431, Sec. IV-V, Nuc. Reactor Lab. (9/7)
B77-432, Sr. Clk. III, Registrar's Office (9/7)
B77-436, Sec. IV-V, Meteorology (9/7)
B77-437, Sec. III-IV, Chem. Eng. (9/7)
B77-440, Sec. IV, Medical Dept. (9/7)
B77-441, Sec. IV, Medical Dept. (9/14)
B77-446, Sr. Clk. IV, Comp. Acctg. Off. (9/7)
B77-450, Sec. IV, Mat. Sci. & Eng. (9/7)
B77-455, Sec. IV-V, Off. of Pres. & Chan. (9/7)
B77-460, Clk. III, Resource Planning (9/7)
B77-461, Sr. Clk. IV, Resource Planning (9/7)
B77-462, Admin. Asst. V, School of Eng. (9/7)
B77-464, Lib. Asst. III, Physics (9/14)
B77-465, Sec. III-IV, Civil Eng. (9/14)
B77-466, Sec. III-IV, Resource Devel. (9/14)
B77-467, Sr. Clk. IV, Alum. Assn. (9/14)
B77-468, Sec. IV, Alum. Assn. (9/14)
B77-469, Sr. Clk. IV, Alum. Assn. (9/14)
B77-471, Sec. IV, Mech. Eng. (9/14)
B77-472, Sec./Clk. Typ. III, Career Planning & Placement (9/14)
B77-473, Sec. IV, Res. Lab. of Elec. (9/14)
B77-475, Sec. III, Div. for Stdy. & Res. in Educ. (9/14)
B77-476, Sec. III, Sloan School (9/14)
B77-477, Sec. IV, Center for Int. Studies (9/14)
B77-479, Clk. II, Pres. Off. (9/14)
B77-481, Sec. III, Sloan School (9/14)
B77-482, Sec. IV, Housing (9/14)

The following positions are on HOLD pending final decision:
B77-397, Sr. Clk. III
B77-456, Lib. Asst. III
B77-478, Sec. IV-V

ACADEMIC STAFF:
C77-18, Asst. Radiation Protection Off., Medical Dept. (5/4)
C77-23, Mng. of Financial Serv., Medical Dept. (5/25)
C77-29, Tech. Asst., Biology (7/20)
C77-34, Nursing Supervisor, Medical Dept. (8/10)
C77-39, Admin. Off., Aero./Astro. Dept. (9/14)
C77-40, Admin. Off., Civil Eng. (9/14)

SPONS. RES. STAFF:
D76-17, Biochemist, Res. Lab. of Elec. (2/25)
R77-17, Systems Theory Res., Elec. Syst. Lab. (2/9)
R77-22, Astrophysics Res., Ctr. for Space Res. (2/16)
R77-37, High Energy Physics Res., Bates Linear Accelerator (3/9)
R77-49, Res. Eng., Energy Lab. (3/23)
R77-51, Sr. Res. Eng., Energy Lab. (3/23)
R77-53, postdoc. res., Physics, Res. Lab. of Elec. (4/6)
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)
R77-85, Comp. Specialist, Energy Lab. (5/11)
R77-91, Sr. Accelerator Physicist, Lab. for Nuclear Sci. (5/18)
R77-93, Biophysicist or Medical Physicist, Nat'l. Magnet Lab. (5/25)
R77-94, Design Eng., National Magnet Lab. (5/25)
R77-95, Biophysicist, Biology (5/25)
R77-97, Chemical Eng., Energy Lab. (6/1)
R77-98, Elec. Eng., Har/MIT Div. of Hlth. Sci. & Tech. (6/1)
R77-105, Managing Dir., Energy Lab. (6/22)
R77-109, Systems Prog., Har/MIT Health Sci. & Tech. (6/22)
R77-110, Spons. Res. Staff, Lab. for Nuc. Sci. (6/22)
R77-112, Spons. Res. Staff, Nat. Magnet Lab. (6/22)
R77-122, Spons. Res. Staff, Center for Space Res. (8/10)
R77-130, Asst. to the Plant Eng., National Magnet Lab. (8/10)
R77-133, Technical Editor/Writer, Energy Lab. (8/10)
R77-136, Programmer, Earth and Pl. Sciences (8/10)
R77-137, Spons. Res. Staff, Bates Linear Accelerator (8/31)
R77-138, Tech. Asst., Earth & Pl. Sci. (8/31)
R77-139, Programmer, Res. Lab. of Elec. (8/31)
R77-141, Tech. Asst., Nut. & Food Sci. (8/31)
R77-150, Spons. Res. Staff, Res. Lab. of Elec. (9/7)
R77-151, Spons. Res. Staff, National Magnet Lab. (9/7)
R77-152, Spons. Res. Staff, Psychology (9/7)
R77-153, Reactor Util. and Elec. Sup., Nuc. Reactor Lab. (9/7)
R77-157, Spons. Res. Staff, Psychology (9/7)
R77-159, Spons. Res. Staff, Psychology (9/7)
R77-160, Spons. Res. Staff, Nut. & Food Sci. (9/7)
R77-161, Elec. Engineer, Mech. Eng. (9/7)
R77-163, Spons. Res. Staff, Psychology (9/7)
R77-165, Spons. Res. Staff, Earth & Pl. Sci. (9/14)

EXEMPT:
E77-27, Asst. Food Prod. Super., Food Serv. (7/20)
E77-29, Admin. Asst., Stu. Loan Office (9/7)
E77-32, Accountant, Comp. Acctg. Off. (8/10)
E77-34, Engineering Asst., Energy Lab. (8/10)
E77-42, Dental Hygienist, Dental Clinic (9/14)

HOURLY:
H77-58, Tech. A, Bates Linear Accelerator (6/8)
H77-76, Tech. A, National Magnet Lab. (6/22)
H77-121, Tech. A, National Magnet Lab. (8/31)
H77-133, Tech. B, Res. Lab. of Elec. (9/7)
H77-137, Tech. A, National Magnet Lab. (9/14)
H77-138, Mach. B, Nuc. React. Lab. (9/14)
H77-139, Cook, Endicott House (9/7)
H77-143, Glassware Washer, Arteriosclerosis Center (9/14)

The following positions have been FILLED since the last issue of *Tech Talk*:
H77-136, Hourly
C77-38, Acad. Staff
B77-454, Sec. IV
B77-403, Sec. IV
B77-311, Sr. Clk. IV
H77-89, Hourly
B77-444, Sec. IV
B77-35, Spons. Res. Staff
R77-36, Spons. Res. Staff
D77-188, Spons. Res. Staff
B77-352, Sec. IV
E77-38, Exempt
B77-484, Sec. IV
B77-215, Sec. IV
B77-453, Bookchecker II
B77-434, Sec. III
B77-340, Sec. III
B77-494, Copy Mach. Asst. III
B77-442, Sec. III
B77-459, Sec. IV
B77-449, Sec. IV
B77-351, Sec. IV
B77-387, Sec. IV
A77-39, Admin. Staff
H77-90, Hourly
H77-91, Hourly
B77-492, Sec. IV
B77-443, Acctg. Asst. V
R77-158, Spons. Res. Staff
B77-317, Sec. IV

The following positions are on HOLD pending final decision:
B77-397, Sr. Clk. III
B77-456, Lib. Asst. III
B77-478, Sec. IV-V

Engineering School Internships Planned

(Continued from page 1)

fer, the announcement said. The typical student will spend three summers and one term in residence at a participating company or government agency, earning academic credit and a salary to help defray educational expenses. Strong emphasis is placed on involving students in rewarding work assignments and in real-world problems that extend the learning experience to areas not available in an academic setting.

The new School-wide program is modeled on the Department of Electrical Engineering and Computer Science's highly successful 70-year-old cooperative education program (known as Course VI-A) which presently enrolls 172 students and involves 18 industrial firms. The school-wide program and Course VI-A, headed by John A. Tucker, a lecturer in the Department of Electrical Engineering and Computer Science, will be operated as parallel entities.

"The educational benefits that have derived to the Department of Electrical Engineering and Computer Science from the Course VI-A program have been substantial and are reflected in its faculty, curricula and research," Dean Sussman said.

"We are grateful for the opportunity to draw on the experience of the department in developing the

new, School-wide program," the dean said.

"We are also fortunate to have a man of Mr. Martuccelli's long experience with MIT and the School of Engineering as director of the new Engineering Internship Program," Dean Sussman said.

Mr. Martuccelli, who received the BS and MS degrees in aeronautics from MIT in 1954, has been a teaching assistant, research engineer and senior project engineer at MIT. He was an executive officer of the Aeroelastic and Mr. Martuccelli Structures Research Laboratory from 1963 to 1967, the year he became administrative officer of the Department of Aeronautics and Astronautics.

A registered professional engineer, Mr. Martuccelli was a Navy pilot and also attended St. Lawrence University, Union College and Brown University.

He is a member of the American Institute of Aeronautics and Astronautics, Tau Beta Pi, Sigma Xi, Sigma Gamma Tau and Sigma Zeta.

Mr. Martuccelli and his wife, the



former Vilma Nicolo of Providence R.I., live in West Concord, Mass., with their four children—Nina, Cristina, Lisa and Peter.

The new internship program is designed principally as a joint undergraduate and graduate program leading to simultaneous SB and SM degrees in an engineering department.

Students normally enter the program in the summer after their second year at MIT, but this can vary from department to department, Dean Sussman said.

Participants are selected in the preceding spring by the participating companies after a series of interviews at MIT arranged by Mr. Martuccelli's office.

For students, the program consists of three work assignments at the same industrial firm. There are two undergraduate work assignments of three months each—one after the second year at MIT and one after the third year, but work assignments can occur during the academic year if a department desires.

In the fourth year students accepted to their department's graduate program will have an additional work assignment of seven months—three months in the summer and the four-month fall term of the fifth year.

Students involved in the third work assignment will do a combin-

ed SB-SM thesis on a topic related to their work in industry.

Those students not admitted to the graduate program will end their involvement with the internship program at the SB degree level.

Students will receive six units of academic credit for each of the first two summer work assignments and 12 units of academic credit for the last work assignment.

Students interested in information on the School of Engineering's new Engineering Internship Program should contact John R. Martuccelli, director of the program, in Rm 1-206, x3-3294.

A member of the MIT faculty will be assigned to each company participating in the program. The faculty member will be an advisor to the students on work assignment with the company and will ensure that students are engaged in work that is academically and professionally meaningful and consistent with their abilities.

The faculty member will also meet often with company officials to ensure that student perfor-

mance is consistent with company expectations.

Before students begin their first work assignments they will meet in a series of orientation lectures and discussions on the organization of work in a modern corporation. Topics to be covered include the way authority is distributed, the way work effectiveness is measured, the reward structure and the balance between team plans and initiative.

Each department of the School will have a faculty member who will be responsible for the department's participation in the program. These responsibilities will include working out the details of the cooperative program as they apply to the departmental curriculum.

A committee composed of these department coordinators and chaired by Dean Sussman will act as a steering committee to oversee the program and to maintain close communication among the departments.

"Extensive faculty participation is a key element of this program. The department coordinators and the faculty liaison are all available to both students and practicing professionals to help in enriching the quality of the program," Dean Sussman said.

Weiner Appointed Ford Professor

(Continued from page 1)

of Growth.

At MIT he chairs an interdepartmental Study Group on Migration and Development. He is also co-chairman of the joint Harvard-MIT Faculty Seminar on Political Development and is a member of the Center for Population Studies in the Harvard School of Public Health. He teaches both graduate and undergraduate subjects on political change in the developing countries. These include a Humanities Distribution subject, 17.05, the Quest for Equality and Development in the Third World, in the fall, and in the spring a subject on Political Change in South Asia.

Dr. Weiner is also a consultant to the National Security Council and to the Agency for International Development. He served as a member of President Carter's Task Force on Asia, as a consultant to the Rockefeller and Ford Foundations, and as a contributor to the Rockefeller Commission on Critical Choices for Americans. He is a member of the editorial board of various journals, including the *Journal of Comparative Studies*, *Global Political Assessment*, and the *Journal of Interdisciplinary*

Frank Press to Address Alumni Officers Conference

Dr. Frank Press, director of the Office of Science and Technology Policy and science and technology advisor to President Carter, will return to MIT on Saturday, October 8, to deliver the first Robert H. Richards Alumni Lecture.

The lecture, "Science and Technology Policy—The Role of the University and Its Alumni," will be given at 11am in the newly renovated Huntington Hall (Rm. 10-250) as part of the 1977 Alumni Officers Conference. Members of the MIT community are invited to attend.

Before going to Washington last spring as President Carter's chief science advisor, Dr. Press was Robert R. Shrock Professor of Earth and Planetary Sciences and head of the MIT Department of Earth and Planetary Sciences, a position he had held since 1965. He is an outstanding geophysicist who has influenced the development of modern geophysics and planetary

History.

Dr. Weiner was awarded his BA by the City College of New York in 1951 and his MA and PhD by Princeton University in 1953 and 1955.

He joined MIT in 1961 after serving as an instructor in politics at Princeton, and then as an assistant professor in the Political Science Department at the University of Chicago.

Since 1953 he has done extensive field research in India under grants from the Fulbright Program, the Ford Foundation, the Social Science Research Council, the Guggenheim Memorial Foundation, the Rockefeller Foundation and the National Institutes of Health. During 1966-67 he was in Paris and the Balkans under grants from the Carnegie Corporation and the Social Science Research Council, conducting research on political participation and national integration in the pre-war Balkans.

He was the recipient in 1968 of the Watumull Prize in the History of India from the American Historical Association for his book *Party Building in a New Nation*.

Dr. Weiner lives in Brookline.

sciences, and has contributed significantly to national science planning and administration.

Before coming to MIT in 1965, he taught at Columbia University, where he received the MA and PhD degrees in geology, and at the California Institute of Technology, where he directed the Seismological Laboratory. He is the author or co-author of more than 140 scientific articles and of four books, including a widely praised basic textbook in geological sciences.

The Richards Alumni Lecture—to be given this year for the first time—is named in honor of the founder of the MIT Alumni Association and a member of MIT's first graduating class. It is intended to highlight the obligation MIT alumni have to influence public policy.

The 1977 Alumni Officers Conference will be held October 7 and 8, and more than 600 people are expected to attend.

New Ideas Planned for Drama Program

By Katharine Childs Jones
Staff Writer

"It's a continuation of things as usual for this year," Dr. Robert N. Scanlan, MIT '71, said when discussing MIT's drama program, but that doesn't mean he's not working on a few new ideas.

Dr. Scanlan, assistant professor of drama and theatre arts in the Literature Section of the Department of Humanities, is assuming many responsibilities of Professor Joseph D. Everingham, director of drama who has reduced his MIT activities. Professor Scanlan believes his principal job is to maintain and increase the high standards set by Professor Everingham.

One of Professor Scanlan's primary goals is to build more flexibility and innovation into the one-act program. MIT Dramashop traditionally produces four programs of one-act plays each academic year. The plays are produced, directed and performed by MIT students. Professor Scanlan would like to expand this program.

"Students in the playwriting seminar should have a place to perform original works," he said. "All drama courses should provide an option for students to have hands-on experience producing a play."

Another project Professor Scanlan is working on is to use music as an accessory to drama.

"I'm thinking very seriously of doing an evening of Moliere," he said. "There are some wonderful compositions by Lully who collaborated with Moliere on the plays. The music is really the best clue to the plays' style. The one-act plays were originally performed for Louis XIV as full evenings of entertainment—music, theatre and ballet."

Professor Scanlan believes that drama at MIT needs more discipline if it is to be sustained at the academic level and would like to have more drama courses offered for credit.

"I'll try to blend performing theatre with purely literary courses in dramatic literature," he said. "It's difficult to teach drama if students don't know what a live production is like."

He credits the technical staff—William Fregosi, Cecelia Eller and Edward Darna—as being the backbone of MIT's drama program.

"They are extremely well qualified professionals who stay here because of their interest in the program. The real draw for students is that they can get training in set design, costume design, lighting and make-up from people with pro-

fessional credits," he said.

Professor Scanlan has an unusual perspective on drama at MIT because he is an MIT graduate, having received SB degrees in mechanical engineering and in humanities in 1971. He received the MA and PhD degrees from Rutgers University in comparative literature, examining in his doctoral dissertation three modern plays by Brecht, Sartre and Beckett in the light of Aristotle's *Poetics*.

He began his activity in drama as an MIT undergraduate, writing and producing plays both on- and off-campus with a group of friends, one of whom, Jay Tormey, is now head of the Pockety Mime Theatre. He directed Brecht's *Three Penny Opera* in Kresge Auditorium during the political turmoil of the late '60s. He also directed for MIT Dramashop and had an original play produced there during his last semester at MIT. He gained professional training in the theatre by working at Provincetown Playhouse-on-the-Wharf in the summer of 1971 and at Loeb Drama Center in the 1973 and 1974 summer seasons.

"I never expected to come back to MIT," Professor Scanlan said, "but I've always been interested in the interface of technology and the humanities. Technologists are generally known to underestimate the humanists but to an even greater extent the humanists underestimate the level of culture involved in high technologies."

Hagopian Named

(Continued from page 1)

members and the MIT faculty by keeping each in touch with the other's research interests and needs. As Institute Secretary for the Industrial Liaison Program, Mr. Hagopian played an instrumental role in expanding its membership to 159 companies.

A native of Newburyport, Mass., Mr. Hagopian received the SB degree from MIT in 1947 after serving in the Army during World War II. He received the MA degree from New York University's Center for Safety, and worked for a number of years as director of industrial safety for what is now the American Insurance Association.

Mr. Hagopian returned to MIT in 1967 as associate director of the Alumni Fund where he was responsible for all geographic programs world wide. He was appointed Institute Secretary in 1973.

Mr. Hagopian lives in Reading.

Coming back to MIT is full of all kinds of potential."

Carter Appoints Deutch

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the SB degree in chemical engineering from MIT in 1961 under a joint Amherst-MIT program. Following graduation, Dr. Deutch worked in the Systems Analysis Office headed by Alain Enthoven within the office of Secretary of Defense Robert S. McNamara.

Pursuing graduate studies at MIT, Dr. Deutch then received the ScD degree in chemistry from MIT in 1965 and spent 1965-66 as a National Academy of Science/National Research Council Postdoctoral Fellow at the National Bureau of Standards. He was assistant professor of chemistry at Princeton University 1966-69. He returned to MIT in 1970 as associate professor of chemistry, was promoted to full professor in 1973 and head of the department in 1976. At Princeton, he held an Alfred P. Sloan Research Fellowship 1967-69 and was a John Simon Guggenheim Fellow at Harvard 1974-75.

Dr. Deutch is consultant to the Urban Institute and the Ford Foundation and presently serves as vice chairman of the Defense Science Board and a member of the Army Scientific Advisory Panel. He is a former member and chairman of the National Science Foundation's Advisory Panel for Chemistry.

At MIT, Dr. Deutch has served on the Faculty Committee on Outside Professional Activities and on the Faculty Committee on Nominations of which he was chairman 1974-75. He is a former member of the Interdisciplinary Environmental Council and chairman, 1973-74, of the Ad Hoc Committee to Consider the Advisability of the Establishment of a Faculty Review Group for Research Contracts. He presently is a member of the Committee on MIT Research Structure and the Management Board of the MIT Press.

Dr. Deutch is married to the former Samayla Dodek of Washington, D.C. His wife is a practicing Boston attorney associated with the firm of Sherburne, Powers and Needham. They have three children, Philip, 13, Paul, 11, and Zachary, 7. The family lives in Lexington, Mass.