October 23, 1985 Volume 30, Number 9

Teatime

Priscilla K. Gray and the members of the Women's League invite all women of the MIT community to a tea this afternoon (Wednesday, Oct. 23), 3:30-6pm at the President's House, 111 Memorial Drive. Features at the tea will include Women's League activities and a display of books by MIT-affiliated women.

Wasting away

Dr. Gordon F. Bloom, a senior lecturer at the Sloan School of Management and a specialist on law and government regulation of business, will discuss the broad implications of hazardous waste disposal Wednesday, Oct. 30, noon-2pm in Rm 9-150. The problems posed will affect the cost of consumer goods, the tax rates of cities and towns as well as the solvency of many leading corporations.
The talk is part of Perspectives, a series

of seminars for the Institute cosponsored by the Personnel Office, the Sloan School and the Office of the Provost.

Pass the word

Are any of your friends, relatives or neighbors interested in working at MIT in a support staff position? If so, the Personnel Office would like to talk to them about varied and interesting employment opportunities now available. The Personnel Office will be open Tuesday, Oct. 29, 5-7pm, for interviews with those interested. For further information, call x3-4251.

IAP progress

Good news! If you are organizing an IAP activity and you have an Athena account, you can fill out and submit your IAP activity listing form via computer.

This step toward making IAP information more timely and accessible was arranged by Project Athena and the IAP Office. Efforts are also being made to put the IAP Guide on-line for this January. Using the on-line form will ensure that listings are published more accurately and efficiently

Filling out the on-line activity listing form is easy. After you have logged on, simply type the command "iapform" and press return. The form, complete with directions, will appear on the screen. When you have finished, the form will automatically be sent to the IAP Office.

The deadline for submitting listings is Thursday, Oct. 31.

Peace Corps visit

Peace Corps representatives will be on campus October 24 and 28 to talk to people interested in serving in the Peace Corps which has ongoing projects in 60 developing countries. Prospective volunteers should attend a film and information session Thursday, Oct. 24, at 7pm in Rm

Deadline coming

The deadline for submitting proposals for special summer programs for 1986 is Monday, November 4. Send proposals to the Office of the Summer Session, Rm E19-356.

Erratum

The item calling for nominations for Rhodes Scholarships in the last Tech Talk was misleading in that there is no limit on the number of nominations MIT may make. However, time is short so students interested in applying should call Professor Eugene B. Skolnikoff, x3-3140, Rm E38-648, as soon as possible.





Lights, cameras, balloons, action. Newspaper and television reporters and photographers besiege Professor Franco Modigliani at a Sloan School press conference following his selection as the 1985 Nobel Prize winner in economics. —Photo by Calvin Campbel -Photo by Calvin Campbell

day of days' for Franco

By CHARLES H. BALL Staff Writer

Franco Modigliani's day of days (in a year of years) began at 7 in the morning October 15 with a telephone call to his Belmont home from the Royal Swedish Academy of Sciences informing him that he had won the 1985 Alfred Nobel Memorial Prize in Economics.

It was the beginning of a joyous and exhausting 12 hours that ended in a Cambridge television studio with Professor Modigliani telling a national TV audience pretty much what he had been saying to interviewers from near and far all day at MIT-that the Reagan administration's failure to cope with the nation's growing deficit could have ruinous consequences

The television appearance, in a quiet, nearly deserted studio at WGBH-TV, also offered a stark contrast to an otherwise hectic day that included a high-spirited-one newspaper called it festive-press conference at the Sloan School of Management.

It was there at mid-morning that the 67year-old Institute Professor was greeted by applause from students, faculty members and adminstrators, several of whom then toasted him with champagne. They included Provost John M. Deutch, Dean Ann F. Friedlaender of the School of Humanities and Social Science and Professor Peter A. Diamond, head of the Department of Economics. Dr. Modigliani holds dual appointments in the department and the Sloan School.

Standing beside Dr. Modigliani, as she continued to do throughout the day, was his

Ceramics may provide answer to radioactive waste disposal

By SHAWNA VOGEL

News Office Intern

Research on ceramic materials, which may yield a means for long-term storage of the radioactive waste from nuclear reactors, is underway at MIT.

A research group headed by Professor Linn W. Hobbs of the Department of Materials Science and Engineering, is exploring how ceramics behave over a long period of time in

a radioactive environment such as that which will occur if ceramics are used to encapsulate and neutralize in nuclear waste disposal.

According to Professor Hobbs, ceramics theoretically are best suited for waste disposal because of their stability over geological time

"You ask yourself, what in nature has stuck around for four billion years un-(continued on page 7)

South Africa forum takes shape

The new Institute Colloquium Committee will sponsor a two-day forum on apartheid and Thursday, Wednesday Professor Robert I. Rotberg, chairman of the planning subcommittee has announced. The preliminary program includes:

—A keynote address on "The Battle for

South Africa" by Dr. Nthato Motlana, chairman of the Soweto Committee of Ten and the Soweto Civic Action Committee, and a longtime militant political activist. He will speak November 6 at 3:30pm in Kresge Auditorium.

-Workshops on various specific South Africa-related issues on November 6 at 7:30pm. eaders so far enlisted include Roy Schotland, professor of law at Georgetown University Law School, who will discuss "Immorality, Ineffectiveness, and the Illegality of Absolute Dissent," at Ashdown House, and Joel Clark, associate professor of materials systems at MIT, whose topic will be "The Myth of South Africa's Strategic Minerals," at East Campus. There also will be further discussion with Dr. Motlana in McCormick Hall.

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MIT's Nobelists

Professor Franco Modigliani is the sixth member of the MIT faculty to become a Nobel Laureate. The others are: Dr. Samuel C.C. Ting of the Department

of Physics, holder of the Thomas Dudley Cabot Institute Chair, who shared the 1976 prize in physics for the discovery of a new kind of heavy elementary particle.

Dr. David Baltimore of the Department of Biology, director of the Whitehead Institute for Biomedical Research, who shared the 1975 prize in medicine or physiology for discoveries concerning the interaction between tumor viruses and genetic material of cells.

Dr. Paul A. Samuelson of the Department of Economics, who received the 1970 prize in economics for his efforts to raise the level of scientific analysis in economic theory.

Dr. Salvador E. Luria of the Department of Biology, who shared the 1969 prize in medicine or physiology for his work with virus injection in living cells.

Dr. Har Gobind Khorana, Alfred P. Sloan Professor of Biology and Chemistry in the Department of Biology, who shared the 1968 prize in medicine or physiology for his work with genetic coding.

XXI marks three decades of liberal learning

Professor of Literature and Director of the Humanities Undergraduate Office

During his undergraduate years at MIT, the president and chief executive officer of the New England Medical Center majored jointly in history and biology. The internationally known multimedia sculptor focused on literature, visual design and mechanical engineering. For the principal cellist of the Monte Carlo Philharmonic Orchestra, the combination was history and mathematics. Anthropology and aeronautics absorbed the interest of the woman who would become contamination control engineer in space program research for the Jet Propoulsion Lab. What these diverse four people hold in common is the SB in Course XXI.

In an MIT atmosphere crackling these days with talk of a "new liberal arts," "dual literacy," and "integrative education," Course XXI this year enters the fourth decade of its commitment to these very goals. The formal observance of the occasion will be this week's Course XXI 30th Anniversary Convocation (Friday and Saturday, October 25 and 26) in which alumni and current majors, joined by active and emeritus faculty, invite the Institute community to discuss a variety of topics under the central theme, "How Many Cultures Now?-What An Educated Person

Should Know.

Established in 1955, Course XXI was part of a broad movement of educational reappraisal and change which stirred MIT profoundly in the decade following World War II. The 1949 landmark Report of the Committee on Educational Survey (the Lewis Committee), prompted by a sense of nuclear urgency and a heightened awareness of the Institute's special responsibility to society, set forth principles for strengthening the humane "general education" which should accompany all professionally specialized studies. On one hand this led to

(continued on page 5)

INSTITUTE **NOTICES**

- Open to public
 Open to MIT Community only
 Open to members only

Announcements Seniors Wishing to Apply for Graduate Work in Dept of

Electrical Engineering and Computer Science – are urged to apply by November 1, 1985. Applications may be picked up in Rms 38-444 and 3-103.

Freshmen - should give Evaluation Forms to instructors by Fri, Oct 25. Instructors should send completed forms to advisors by Fri, Oct 30.

Graduate Students - The Graduate Student Council will con duct interviews for seats on Institute Committees on Thurs, Oct 31. All interested graduate students are invited to apply for the following seats. Standing Committees of the Faculty: Committee on the Undergraduate Program (Prerequisite that student have attended MIT as undergraduate); Faculty Policy Committee; Committee on the Library Systems (2). Committees Appointed by the President: Commencement Committee (1); Community Service Fund Board (2); Dining Advisory Board (1); Equal Opportunity Committee (2); Committee on Foreign Scholarships (1); IAP Policy Committee (1); International Institutional Commitments (1); Prelaw Advisory Council (1); Medical Advisory Board (2); Radiation Protection Committee (1); Committee on Safety (1); Student Activities Development Board (1); Toxic Chemicals (1), Use of Humans as Experimental Subjects, (2); Committee on the Visual Arts (2); Committee on Women Students' Interests (3). For info, application forms and to schedule an interview, call the GSC Office, x3-2195, 1:30-5pm.

IAP Organizers - Get funding for your activities. Apply now; review begins Oct 31. See your department coordinator or the IAP Office, Rm 7-108 for details and applications.

PE Registration — Second quarter Physical Education program registration, Mon, Oct 28, 8:30-11am, duPont Athletic Ctr

Law School Forum - 100 law school participants, Nov 1-2, Boston Park Plaza Hotel, 50 Park Plaza. All are welcome. For more information, call x3-4737, Preprofessional Advising, Rm

Trip to Sturbridge Village – International Students Office trip, Sat, Nov 4, 9am-4pm. Cost: \$6/pp includes round trip bus ride, admission to the village, orientation and town meeting, four hands-on studio activities; bring your own lunch or buy it a the Tavern. Sign up in Rm 5-106; first-come, first-served.

Project Contact - Undergraduates interested in com-municating with high school students and guidance couselors about what it's like to be an MIT student are encouraged to join Project Contact. For more contact the Educational Council Office, Rm 4-240, x3-3354.

Information Services Computing Courses and Seminars**
- FREE SEMINARS: How to Select a Microcomputer, Oct 31, 10-12noon, Rm 1-390; Database Software on Micros, Nov 6, 2-4pm, Rm 1-390; Introduction to the Macintosh, Nov 7, 10-12noon, Rm 1-390; How to Select a Microcomputer, Oct 31, 10·12noon, Rm 1·390; Database Software on Micros, Nov 6, 2·4pm, Rm 1·390; Introduction to the Macintosh, Nov 7, 10·12noon, Rm 1·390; Statistical Software on Micros, Nov 13, 10-12noon, Rm 1-390; Statistical Software on Micros, Nov 13, 10-12noon, Rm 1-390, Kermit Demonstration, Nov 14, 10-12noon, Rm 1-390, FEE COURSES: FORTRAN on CMS Nov 12, 3-5pm, Rm 1-390; FORTRAN on Multics, Nov 14, 3-5pm, \$m 1-390. VENDOR PRESENTATIONS: Motorola MC68000, Oct 28, 9-12noon, Rm 1-390; Motorola MC68020, Nov 4, 9-12noon, Rm 1-390; A Survey of Spreadsheet Software for the Macintosh, Nov 8, 9-30-12noon, Rm 1-390; A Survey of Graphics Software for the Macintosh, Nov 15, 9-30-12noon, Rm 1-390, All fee seminars, courses and training 9:30-12noon, Rm 1-390. All fee seminars, courses and training sessions require 1 week advance registration, Rm 11-315, 9:30-12noon, 1-4pm. Payments due at time of registration. MIT ID required to avoid paying maximum fee. For info, call Joan Bubluski, x3-1744.

Career Planning and Placement Company Recruitment Presentations** - TRW, Redondo Beach, Oct 23, 4:30-6:30pm, Rm 4-149. Boeing, Oct 23, 7-9pm, Rm 4-153. Na-4:30-6:30pm, Rm 4-149. Boeing, Oct 23, 7-9pm, Rm 4-153. National Computer Board of Singapore, Oct 24, 5-7pm, Rm 12-142. Peace Corps, Oct 24, 7-9pm, Rm 4-159. Ford Aerospace & Communications, Oct 24, 4-6pm, Rm 4-153. General Electric, Oct 24, 5-7pm, Rm 4-149. Lockheed Missiles & Space Co, Oct 28, 5-6pm, Rm 4-149. Rolm Corp, Oct 28, 5-6pm, Rm 4-149. Rolm Corp, Oct 28, 7-9pm, Rm 4-159. Marakon Associates, Oct 29, 7-9pm, Rm 4-145. General Dynamics, Oct 30, 4:30-7pm, Rm 4-153. Schlumberger, Nov 3, 7-9pm, Rm 4-149. 7-9pm, Rm 4-149.

Talbot House Available - MIT's guest house in beautiful Vermont has weekends available in December. Any MIT group, 15-27 people, may apply to enjoy a relaxing, informal weekend. Applications for December must be in by Oct 31. For information and applications, contact Sharon Shea, x3-4158, Rm 7-103.

Babysitters Needed for Wives' Group - Every Wednesday, 3-5pm, to sit for children of international wives during Wive Group meetings, for 2 hours. \$5/hr. Call Wives' Group, x3-1614 or stop by Rm E23-376 for more information.

MIT Hunger Drive Food Drive - We need non-perishable, unopened foods for Boston's less fortunate. Ongoing collection all day and night at drop-off boxes in Lobby 7, Walker, McGregor desk.

Arts Hotline - Recorded information on all arts events at MIT may be obtained by dialing x3-ARTS. Material is updated every Monday morning.

Nightline** - a student-run hotline open every evening of the term, 7pm.7am. If you need information about anything or you just want to chat, give us a call. We're here to listen.

Faculty Members - Technology Review would like to hear about books being published by MIT faculty members. Please notify us, as far in advance as possible, of your upcoming book. Technology Review, 10-140, x3-8250.

Club Notes

WMBR** - is looking for students interested in radio and tech nical work. Contact Eli Polonsky, x3-4000. Leave name and

MIT Student Cable Programming Group** - Looking for students interested in programming the MIT Cable Television channels. Contact Randy Winchester, x3-7431.

Student Center Committee (SCC)** – Has fun every Sunday, 7pm, Student Ctr Center Lounge. Do you? Call x3-3916 anytime

MIT Student Duplicate Bridge Club* - Bridge games eve Sat, 7pm; every Thur, Sun & Mon, 6:30pm, \$.75 entry fee, Rm 407, Student Center. Lessons free w/entry at 6:15pm from Bridge Senior Masters. No partners necessary, all welcome.

MTT/DL Bridge Club* - Duplicate bridge, Tues, 6pm, Student Center Rm 349. ACBL masterpoints awarded; come with or without partner, newcomers always welcome. Special tour-naments monthly. Info call Gary Schwartz, x8-2459 Draper, or Mark Dulcey, 272-8428. Admission: \$.75/students, \$1.50/

MIT Table Tennis Club** - Meets Fri, 8-10pm; Sat, 6pm, T-Club Lounge. Info: Hoang Do, x3-2843.

MIT Hobby Shop** - Complete supervised facilities for woodworking and metalworking, Rm W31-031, M-F, 10am-6pm; Wed, 10am-9pm. Fees: \$15/term students; \$25/term community

MIT Rugby Football Club** - 1985 Schedule: Oct 26, NER-FU Playoffs (H); Nov 2, MIT Tournament (H), 9:30am. Men & Women, anyone welcome to play. Practice T/Th, 5-7pm, Briggs Field. Contact Mike Murphy, x3-8118, Joe Goss, x3-5260 or Kel-

MIT Aikido Club. – meets Mon-Fri, 5:30pm, DuPont exercise room. Aikido is a non-competitive Japanese martial discipline. Beginners welcome.

MIT Nautical Association** - Sailing Pavillion schedule: 9am-sunset every day through Nov 15. Sailing on Tech dinghies, lasers, larks, catamarans, CCT's, 24' & 38' cruise boats, windsurfing. Shore School: Beginners Class in Tech Dinghies (introduction, rigging, actual sailing), M/Th, 5:15pm. Sailing trips to Boston Harbor & special regattas will also be arranged. Call x3-4884 for details.

Human-Powered Vehicle Association* - New England Chapter meets Thurs, 8pm, Bicycle Exchange, 3 Bow St. Harvard Sq. Come help plan an HPV workshop for IAP '86.

MIT Outing Club* - Camping, cycling, climbing, canoeing, cabins: meets M/Th, 5-6pm, Student Center Rm 461. Also, see our bulletin board in "Infinite Corridor" next to Athena.

MIT Wu-Tang Club* - teaches northern Chinese kung fu, Tues & Thurs, 8pm, Burton Dining Hall; Sat, 10am, Athletic Center. Beginners welcome. For info call Roger Walco,

MIT Tae Kwon Do Club** - Tae Kwon Do is a Korean martial art. Meetings Sundays, 4pm, T-Club Lounge; Mon-Wed, 6pm, Burton Dining Hall; Fri, 6pm, T-Club Lounge. For info call In Ho Kim, 266-2827.

Scuba Club** – The club sponsors dives throughout the term. Call scuba locker (x3-1551) for info and equipment rentals. For more info contact Dave Summa, x3-6464 or Mike Fox 492-4407.

MIT Guild of Bell Ringers* – meets Mondays, 6:30-9pm, 2nd floor Lobby 7, for change ringing on handbells. We also ring the tower bells at Old North Church. Beginners are welcome. Contact Steve Costenoble, x3-3664 for more information.

Religious Activities

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

Christian Science Organization at MIT* - Weekly Testimony Meeting, Thurs, 5:45pm, Rm 4-145.

Tech Catholic Community* — Roman Catholic Masses: Suns, 9am, 12noon, 5pm; Weekdays: T/Th: 5:05pm & Fri 12:05pm. All Masses in MIT Chapel. Morning Prayer: M-F, 8:15am, Chaple Basement. Charismatic Prayer Group, Mon, 6:45pm, Rm 1:114. Bible Study: Tues, 8pm, Chaplaincy Library. Exploring Cathol-Thurs, 7-8:30pm through Nov 14, Chaplaincy Basement. Chaplaincy Office: x3-2981.

Lutheran Ministry and Episcopal Ministry** - Weekly service of Holy Communion: Wed, 5:10pm, MIT Chapel. Supper following at 312 Memorial Drive. For further info, call

Baptist Student Fellowship* - Invitation to Adult Bible Study Home Fellowship for non-Christians, Weds, 8-9pm, Eastgate Apt 4-H; Invitation to College Bible Study, Bostonwide event for students, Thurs, 7-8:30pm, Metropolitan Baptist Church, 16 Beech St, Cambridge, Dinner served, van pick-up at 6:10pm across from Bldg 7.

Islamic Society* – Daily prayers, Ashdown House (basement), 5 times a day. Call x5-9749 dorm, for schedule. Friday prayer, Ashdown House 1-1:45pm, Khutba starts at 1pm, congregation

Meditation and Discourse on the Bhagavad Gita* Swami Sarvagatananda, MIT Vedanta Society, head of Ramakrishna Vedanta Society of Boston, meets Fridays through Dec 13, 5:15pm, MIT Chapel.

Charismatic Prayer Group* - Mon eves, 6:45, Miller Rm 1-114. Pot-luck supper followed by prayer meeting, Bible sharing, music & praise. Patrick Doyle, x5-8471 dorm or Frank Camacho, x3-8642 or 494-1932.

United Christian Fellowship** - MIT Chapter of Inter Varsity Christian Fellowship, weekly meetings: large group for worship and sharing from God's word, Fri, 7pm, Student Ctr Rm 491; small group meetings for Bible Study and support, week-ly at different times. For more info, call Chiu-Oan, x5-6123

MIT Seekers Christian Fellowship* - Park Street Church Seekers Teaching and Worship Time, Sundays, 9:15am, enjoy our biblical teaching, worship and sharing at Park Street Church, right in front of the Park Street T stop. MIT Seekers leave from McCormick at 8:30am, Come join us.

Campus Crusade for Christ . - Family time, 7:15pm, Fri, eves, Rm 37.252. Fellowship, scripture teaching, prayer, singing, refreshments & fun. Tues, prayer time, 7;30-9am, W20.441, Student Center. Call x5.9153 dorm.

Lincoln Laboratory Noon Bible Studies* - Tues & Thurs, Kiln Brook III, Rm 239. Annie Lescard, x2899 Linc.

Morning Bible Studies - Fri, 7:30-8:30am, L-217. Ed Bayliss,

Noon Bible Study* - Every Wed, Rm E17-109; bring lunch. Ralph Burgess, x3-2422. (Since 1965).

Edgar Cayce Study Group* - Tuesdays, 6:30-9pm, Edgar Cayce's Search for God material will be used as the basis for group discussion & meditation. For info: Douglas McCarroll, 876-7134 12-9pm or Scott Greenwald, x3-7423.

Graduate Studies

Unless otherwise indicated, contact Dean Jeanne Richard at the Graduate School Office, Rm 3-136, x3-4869 for further

Massachusetts Graduate Scholarship Grant Program. Funds are available for direct financial assistance to needy graduate students who are US citizens and who have been per manent legal residents of Massachusetts for at least two years prior to September 1985. These individuals must also be fulltime students enrolled in degree programs requiring at least two years of college work prior to admission. Students who meet the eligibility criteria should file a Financial Need Determina-tion Form with the Student Financial Aid Office (Rm 5-119) if they have not already done so, and then contact Dean Jeanne Richard, Rm 3-136A for an application form.

Fulbright Scholar Awards 1986-87. The Council for Interna tional Exchange of Scholars (CIES) has announced the opening of competition for the 1986-87 Fulbright scholar awards in research and university lecturing abroad. The basic eligibility requirements for a Fulbright award are US citizenship, PhD or quirements for a Fulbright award are US citizenship, PhD or comparable professional qualifications, university or college-teaching experience, and for selected countries, proficiency in a foreign language. Application deadlines: Nov 1, 1985 for junior lectureships to France, Germany, Italy, and Spain; Dec 1, 1985 for administrators seminars in Germany, Japan, and the United Kingdom; Dec 31, 1985 for NATO Research Fellowships; and Feb 1, 1986 for the seminar in German civilization, Spain Re-search Fellowships, and France and Germany travel-only awards. For more information, contact Dean Eugene R. Chamberlain, Rm 5-106, x3-3795.

National Science Foundation NATO Postdoctoral Fellow National Science Foundation NATO Postdoctoral Fellowships in Science 1985-86. Awards made for appropriate work in the mathematical, physical, biological, engineering and social sciences, and the history and philosophy of science, as well as interdisciplinary areas comprised of two or more of these fields. Awards may not be used to support residency training or similar work that may lead to qualification or certification in a clinical field. These fellowships are not designed to support the preparation of prior research results for publication or the writing of textbooks as a primary objective. Applicants must: 1be ing of textbooks as a primary objective. Applicants must: 1)be citizens or nationals of the US at the closing date for applications; 2)have earned by the beginning of their fellowship tenures, a PhD in one of the fields of science listed above, or have had research training and experience equivalent to that represented by a PhD in one of these fields; and 3)have not received their Doctorates earlier than Jan 1, 1981. These fellowships are awarded for scientific research and/or study at appropriate non-profit scientific institutions. Recipients are expected to study in countries that are members of NATO, other than the US. A fellow may elect a full-time tenure of 9-12 months, and must begin tenure by September 1987. The stipend is \$1,500/month for up to 12 months. Fellows are also provided with dependence allowances of \$100/month for a dependent spouse and for each of not more than two dependent children for up to 12 months. A travel allowance will normally be offered, but will only be provided if reimbursement is not received from other sources and the distance is greater than 200 miles. The travel allowance may not exceed \$2,000 for any one individual, and the maximum travel allowance, including dependents' travel, is \$4,800 for the entire fellowship tenure. All applicants will be notified by letter in late Feb 1986 of the disposition of their applications. Applications may be obtained from the National Science Foundation, NATO Postdoctoral Fellowship Program, Directorate for Science and Engineering Education, Washington, DC 20550. Deadline: November 1, 1985.

The Fannie & John Hertz Foundation. Awards graduate fellowships to students of outstanding potential in the applied physical sciences. The fellowships may be used at one of 20 institutions, including MIT. Applicants must be US citizens, or have documented proof of intent to acquire it. The proposed field of graduate study must be concerned with applications of the physical sciences to human problems. High previous scholastic performance is expected of all applicants, including at least an A-average during the last two years of undergraduate work. For 1986-87, the fellowships will cover \$7,000 towards tuition and a 12,500 stipend. It is the student's responsibility to make up the difference between the educational allowance and tuition at MIT. Applications in Rm 3-138. Deadline: November 1, 1985.

American-Scandinavian Foundation Grants and Fellov ships for study in Scandinavia for 1985-86. Awards open to US citizens and permanent residents who will have completed their undergraduate education at the time this overseas program begins. Demonstrated language skills required. Inquiries should be made directly to the American Scandinavian Foundation, 127 E 73rd St., New York, NY 10021, 212-879-9779. Also see Dean Chamberlain, Rm 5-106, x3-3795. Deadline: November 1,

International Research and Exchanges Board (IREX). Program for faculty, postdoctoral researchers, and graduate stu-dents in all fields to participate in research exchange with the countries of East Central and Southeastern Europe and the USSR. To be eligible applicants must have: US citizenship; in most cases, a full-time affiliation with a North American college or university as a member of the faculty, postdoctoral researchers, or advanced doctoral or professional degree candidate; a command of the language of the host country sufficient for research. Application deadline for all programs: November 1, 1985. For further information and applications, contact: Ms. Lillian Whelpley, Rm 4-437, x3-1939.

Churchill Scholarships. The Churchill Foundation of the US awards 10 scholarships annually to US citizens between the ages of 19 and 26 to pursue one or three years of graduate study in science, engineering, or mathematics at Churchill College, Cambridge University. Applications available in Rm 5-106, x3-4861. Application deadline: November 12, 1985.

The Lady Davis Fellowship Trust. Seniors, graduate students, and those who have recently completed doctoral studies in any field are eligible to apply. Fellowships are tenable at the Hebrew University of Jerusalem and the Technion-Israel Institute of Technology, Haifa. Grants cover tuition, travel and living stipends in Israel. Renewal for a second year is possible. Applications are available in Rm 3-138. Deadline: ember 30, 1985.

Bell Laboratories Graduate Research Programs for Women. Provides financial support for outstanding women students pursuing full time doctoral sutdies in the following fields: chemistry, computer science, economics, electrical engineering, experimental human psychology, materials science mathematics, operations research, physics, and statistics. The Fellowship Program provides full tuition and fees plus a sti-pend of \$925/month for the academic year (9 months) plus an al-lowance for books, fees and related travel expenses. The Grant Program provides an annual award of \$1,500 which the reciprogram provides an annual award of \$1,000 which the recipient may use during the academic year in any way that benefits her professional development. Fellowships and grants will be renewed on a yearly basis for the duration of the graduate program, provided the student maintains satisfactory progress program, provided the student maintains satisfactory progress toward the doctoral degree. Applications must be received by January 15, and all supporting material by January 31, 1986. Two fellowships and four grants are awarded annually in late March for graduate study beginning in September. Applications are usually submitted during the candidate's senior year in college. For further information, contact Dean Richard. If interested in meeting with two Bell Labs representatives on campus Oct 28-29, call the Office of Career Planning and Placement for

Other Opportunities

National Endowment for the Humanities Younger Scholars Program. This independent, grant-making agency the federal government which supports scholarship, research, education and public programs in the humanities invites ap-plications for students to be given an opportunity to conduct noncredit independent research and writing projects during the summer. Students may apply for up to \$2,200. Applicants must be 21 years of age or under throughout the entire year in which the application is submitted; or if they are over 21 they must be full-time college students pursuing an undergraduate degree at the time of application. For further questions about eligibility, the program, and the application process, see the booklet in the Fellowship notebook in the Office of Career Services, Rm 12-180. Deadline for applications: November 1, 1985.

International Opportunities

The following is a list of opportunities available to foreign nationals. For more information on these, please see the Interna-tional Jobs notebook in the Office of Career Services, Rm 12-170.

China-Japan Services, a Washington, DC-based firm, seeks to assist American and Canadian undergraduates and graduates in locating positions as instructors of English conversation in Tokyo, Japan and Taipei, Taiwan. They provide current infor-mation on privately owned English language institutes in Tokyo and Taipei: visa requirements; living arrangements; salary range and negotiation; budget travel; job search strategy guidelines; and reference listings of US sponsored university exchange programs in Japan, Taiwan, and the People's Republic

The Intergovernmental Committee for Migration has sent us some brochures for their Return of Talent Program for Africa and Latin America. They offer a variety of services regarding job placement, tranportation assistance and other financial benefits to nationals with advanced degrees who wish to return to their home countries.

The National University of Singapore awards Research Scholarships for research leading to a Master's or Doctorate degree in various disciplines. The scholarships are for one year and possibly renewable for another two years. The Career Services Office has a few application forms which are due by Oct 31.

Internships

The following is the list of internships received this week. For more information please see the Internship Information notebook in the Office of Career Services, Rm 12-170.

Volunteer internships:

The Governor Michael S. Dukakis' Campaign Committee is accepting applications for interns for the fall and spring

The Commonwealth of Massachusetts, MA Correctional Institute, Norfolk, has an opportunity for a student to design a fir ing range for training of correctional personnel.

The United States Dept of State has sent us information on their 1986 Summer Intern Program and their Work-Study Internships during the academic year. The deadline for receipt of applications for summer is November 1. Please visit our office for more information and a brochure.

Student Jobs

There are more job listings available at the Student Employment Office, Rm 5-119.

Several full/part-time data entry positions, involving telephone coverage and data entry on terminal system, available immediately. Previous experience preferred, but will train. Salary negotiable. Contact Emilia Pacheco, First Data Resources, Inc. Kendall Sq, 576-4101/2.

IBM PC business consultant to lawyers and banks. No computer experience necessary. Logical person wanted. 10-20 hrs/wk, flexible. Salary: \$6.25/hr. Contact: David Lambert, Mortgage Network, Inc, 72 Hollis St, Sherborn, MA 01770 (near Framingham, MA), 653-7274.

Computer programmer position for professor at Boston University. Experience in graphics and "C" programming language, preferrably IBM PC hardware, and knowledge in video graphics helpful. 10 hrs/wk, \$7+/hr, negotiable upon experience. Contact: Dr. Eldred, Boston University, 2 Cummington St, Boston, MA, 25, 3,429.

Pool attendant needed for Hyatt Regency Hotel in Cambridge. CPR certification, Advanced Lifesaving, or WSI, and health club or related experience helpful. Must be able to interact with guests. Applicant must be able to lift 40 lbs. Please apply MTW (9am-noon) in person. Hours are full or part-time, (16-20 hrs/wk), and flexible between 7:30am and 10:30pm. Salary: \$6.25/hr. Contact Deborah Fultz, Hyatt Regency Hotel, Memorial Dr,

Applications programmer/analyst to work with project studying drug and alcohol addiction by assuming responsibility for managing data analysis. Duties include developing adjunctive software as needed, performing analyses, overseeing data entry, and various computer assistance to other members on the project. MS degree required, or equivalent. Also, good working knowledge of at least one social science statistical package such as SAS of SPSS. Must have understanding of statistical techniques and ability managing and analyzing large data sets. Experience with MS-DOS, UNIX and C or FORTRAN. Salary is commensurate with experience, and hours are 20/wk. Contact Susan. Santangelo/Elizabeth Magnuson, Harvard School of Public Health, Dept of Behavioral Sciences, 677 Huntington Ave, Boston 02115, 732-2033.

Secretarial work. Some knowledge of high-tech terminology is helpful. 5-10 hrs/wk, at \$5.50/hr. Contact Wendy Martin, Technology and Strategy Group, Harvard Sq, 497-1111.

UROP

MIT and Wellesley undergraduates are invited to join with faculty members in pursuit of research projects of mutual fast-nation. Undergraduates are also urged to check the Undergrad-uate Research Opportunities Program's bulletin boards located in the main corridor of the Institute and in the UROP Office. Faculty supervisors wishing to have projects listed should send project descriptions to the UROP Office. Questions? Contact us. x3-5049, Rm 20B-141.

Joel M. Orloff Undergraduate Research Prize, New Joel M. Oriott Undergraduate Research Frize, two Deadline: November 12. Nominations from faculty are invited for an award of \$1,000, presented to the undergraduate who has demonstrated the most outstanding ability and creativity in physics-related research during the past summer and/or academ-ic year. Nominations should be sent to the UROP Office.

Immune Mechanisms Related to the Development of Autommune mecnanisms related to the Development of Autoroll of arachidonic acid metabolites as they affect macrophages
and subsets of lymphocytes. Lab's previous studies show that
prostaglandin E (PGE) can modulate autoimmune disease expression in our mouse systems. During this year, the lab will be analyzing the relationship of PGE in the interaction of macroanalyzing the relationship of PGE in the interaction of macro-phages and lymphocyte subpopulation and their influence on a variety of autoimmune parameters. These studies will be con-cerned with the mechanism in which PGE affects macrophage cell surface antigens and lymphocyte cell cycle kinetics. Techniques involved in these sutdies will include: radio-immun assays, flow cytofluorometric measurements, (using a single ar niques involved in these studies will include read-influence assays, flow cytofluorometric measurements, (using a single and dual beam system), cell culture and fluorescence microscopic ues. Contact: Michelle Lamarre, UROP, x3-5049, Rm

Sloan. Student needed to work on two projects evaluating the effect of government regulations on the economy. The first project examines the effect of the 1933 National Recovery Administration on creating monopoly in US industries. The second looks at the effect of trucking regulation on trucking firms and the Teamsters Union. Assistance with data collection and estimation is required. Some experience with statistical packages (TSP or SAS) is desirable, but not essential. Contact: Prof Nancy Rose, x3-8956, Rm E52-446.

Behavior. In the project the interrelation between microstru ture of ceramic compacts and their sintering behavior should be investigated. The compacts were prepared by different forming processes. To that the 1)Characterization of the green microstructure, green density, SEM, porestructure, and 2)Character-ization of sintering behavior, dilatometrie, density, SEM, micro-graphs have to be done. It is desired that all interested applicants have some degree of laboratory experience utilizing physical characterization principles (preferably material science). Faculty supervisor: H.K. Bowen. Contact: Dr. Wendell Rhine, x3-5034, Rm 12-043.

TECH TALK



October 23, 1985 Volume 30 Number 9

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Page 2, Tech Talk, October 23, 1985



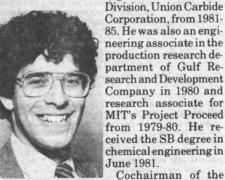
The MIT Museum has long wanted to improve its visibility at 265 Massachusetts Avenue. A new sign, installed last week, should accomplish that task. Part of the School of Architecture and Planning also inhabits space in the building.

Five are appointed II

Dr. James Utterback, director of Industrial Liaison Program (ILP), has announced the appointment of five new Industrial Liaison

The officers, four of whom are MIT graduates, are engineers or scientists whose education and professional experience closely parallel the principal interests of the ILP member companies to which each officer is assigned. Appointed are:

-Marc J. Chelemer of Pittsburgh, Pa., a former assistant staff engineer with the Linde



Mr. Chelemer MIT Alumni Association Class of 1981 Gift Committee, Mr. Chelemer previously organized and chaired promotional events for the Friends of the Buffalo Philharmonic. He coordinated special events

for the American Heart Association; chaired the Jewish Center of Greater Buffalo's drama committee, and directed programs for the

Buffalo Ornithological Society. -Diana V. Garcia-Martinez, of Mexico, was responsible for start-up and general operating procedures of a 100 liter fermentation pilot plant at du Pont New England Nuclear Products in Massachusetts from 1981-85. She was also a research associate at the New England Enzyme Center, Tufts University, from 1980-81; quality assurance manager of Enmex S.A. de C.V., Mexico City, Mexico; staff engineer at the Dynatech Company, Cambridge, from 1978-79; and lecturer in in-dustrial microbiology from 1974-76 at the Instituto Politecnico Nacional, Mexico City.

She also conducted research on the microbial elimination of pectic substances from agave leaves during 1975-76, at the Universidad Nacional Autonoma de Mexico; was liaison staff member of Consejo Nacional de Ciencia Y Tecnologia, and laboratory assistant for the Fermentation Technology course from 1970-71.

Ms. Garcia-Martinez, who has published in various journals, is fluent in Spanish, English and French. She is a member of the Society for

Industrial Microbiology, American Society of Microbiology She received the BS degree in biochemical

engineering in 1974 from the Instituto Politecnico Nacional, Mexico City, and the SM in biochemical engineering (fermentation technology) from MIT in 1978. She was also a special research student at Osaka University, Osaka, Japan from 1972-73.



Ms. Garcia-Martinez

Mr. Lonnie

-Kevin E. Lonnie of Alberton, N.Y., former strategic planner for the Petroleum Product Department, Exxon Corporation, where he also served in various divisions as a senior international auditor of Esso Eastern, Inc., Southeast Asian affiliate of Exxon; senior analyst of strategic planning and evaluation; and financial reporting manager.

In addition, he was a staff assistant at the MIT Office of Personnel and Labor Relations from 1980-81; and credit analyst/assistant treasurer, Chase Manhattan Bank, New York

Mr. Lonnie received a bachelor's degree in economics from Princeton University and a master's degree in management science from the Sloan School of Management in 1981. He also attended New York University Graduate School of Business Administration from 1977-78, where he studied corporate finance, accounting, and quantitative and statistical methods.

-Laura Mary Robinson, of Cambridge, was formerly employed by Merck, Sharp and Dohme (MSD), West Point, Pa., os a marketing research analyst from 1983-85, and a professional sales representative from 1982-83. She also performed initial financial and marketing analysis there for acquisition candidates during summer 1981

Earlier she was a production supervisor at Procter and Gamble, research assistant at Monsanto Company and a technician in scientific and engineering research, Ford Motor Company.

Ms. Robinson was graduated from MIT in 1980 with an SB degree in materials science and engineering, and from the Wharton School of Business in 1982 with an MBA in marketing. She was a National Merit Scholar, National Fund for Minority Engineering Students Scholar and a recipient of the MIT Albert G. Hill Award for contributions to minority community life. She was a member of the MIT junior varsity volleyball team and Choral

She is a member of the Wharton Club of Philadelphia, Black Alumni Society of the University of Pennsylvania and the American Association of University Women.





Ms. Robinson

Ms. Vander Sande

-Marie-Teresa Vander Sande of Newbury is a former market research consultant. Since November 1982 she has been president of Vander Sande Associates, Inc., a corporation she founded with her husband, Professor John Vander Sande of the Department of Materials Science and Engineering.

Ms. Vander Sande received the BS materials science and engineering from Cornell University and an MS degree in Materials Science and Engineering from Northwestern University.

Before forming the consulting company, she had managed the market research function at Millipore Corporation. She was also a member of the materials group at Arthur D. Little, Cambridge, from 1973-78 and had been a materials engineer in the Aircraft Engine Division at General Electric, Lynn.

Ms. Vander Sande is a past chairman of the Boston Chapter of the American Institute of Mining, Metallurgical and Petroleum Engineers. She is now a member of the 1986 Antiques Show Committee for the Newburyport Custom House Maritime

She and her husband have two children aged four and five, and live in a 300-year-old house furnished with the 17th and 18th century American antiques they actively collect.

Since its founding in 1948, the Industrial Liaison Program has helped its members stay at the leading edge of advances in science, engineering and management, allowing them to assess the potential of emerging technologies for the marketplace. In the rapidly changing world of business, the Program is a particularly valuable resource to tap in making crucial business and technical decisions.

New professorships at Sloan

Dean Abraham J. Siegel of the Sloan School of Management has announced the appointment of three faculty members—Thomas J. Allen, Thomas W. Malone and Thomas L. Magnanti-to three new professorships at the

In addition, Arnoldo C. Hax has been named to succeed Eli Shapiro as the Alfred P. Sloan Professor of Management, and Paul A. Samuelson has become the Sloan School's first Gordon Y Billard Fellow.

Dr. Allen has been appointed to a three-year term as Gordon Y Billard Fund Professor of Management, which is the third Billard professorship at the Sloan School. The others are in finance and in management and economics. All have been provided by the late Mr. Billard, who received the SB in management from MIT in 1924.

Dr. Allen, who has been professor of organizational psychology and management, has focused on the management of research and development. Dean Siegel said his work has involved "a painstaking tracking of the flow of technical information in a system and the occurrence of innovation as a result of it.'

Professor Allen was appointed assistant professor at the Sloan School in 1966 after receiving the BS in physics in 1954 from Upsala College, and both the SM in electrical engineering and management and PhD in management from MIT, in 1963 and 1966.



Dr. Malone

Dr. Malone has been named to a three-year term as the first Douglas Drane Career Development Professor in Information Technology and Management. The chair will give support to promising, outstanding scholars working at the frontiers of management

Dr. Malone works in the field of management information systems. "Trained as a psychologist," Dean Siegel said, "his research has been directed at a number of topics related to human problem solving and has emphasized a wide range of theoretical and methodological approaches.

Dr. Malone, who has been associate professor of management science, received the BA in mathematical sciences in 1974 from Rice University and three degrees from Stanford University, the MA in psychology in 1977, the MS in engineering-economic systems in 1979 and the PhD in psychology in 1980. Before joining the MIT faculty in 1983, he was a research scientist at the Xerox Palo Alto

Research Center. Dr. Magnanti has been named to the newly established George Eastman Professorship of Management Science, made possible by contributions from the Eastman Kodak Company and from two donors who prefer to remain anonymous. The naming of the chair continues a relationship that has linked Kodak and MIT since early this century when George Eastman anonymously made a major personal gift to the Institute. In addition, a number of the Eastman Kodak Company's key officers have received part of their education at the Sloan

School. Dean Siegel said that Dr. Magnanti's wideranging research "has covered a mix of theoretical and applied studies involving mathematical programming. His theoretical interests in combinatorial and network optimization, in nonlinear programming and in large-scale systems has considered such diverse topics as matroids, duality and convex analysis and efficient computer implementation of optimization algorithms. His focus on applications has been addressed for the most part to various aspects of distribution and transportation planning.'

Dr. Magnanti, who has been professor of operations research and management, re-

Aussie poet to visit

Les Murray, widely regarded as one of the most significant poets to emerge from Australia in the past two decades, will offer a reading of his work on Wednesday, Oct. 30, in the MIT Student Center's Mezzanine Lounge

Winner of the 1984 Canada-Australia Literary Prize, Mr. Murray's poetry collections (The People's Otherworld, The Weatherboard Cathedral, Poems Against Economics, Lunch & Counter Lunch, Ethnic Radio) have been praised as having "immediate impact," "emotional force," "generosity, and vision." He is also a lively, unconventional and provocative critic (The Peasant Mandarin: Prose Pieces by Les A. Murray), most noted for his proposal that poets ought to be paid a living wage for writing the same poetry that literature and writing professors are paid to teach.

In addition to the evening reading which is free to the public, Mr. Murray will visit poetry classes in the Writing Program on October 31.

ceived the BS in chemical engineering from Syracuse University in 1967, and three degrees from Stanford University, the MS in statistics in 1969, the MS in mathematics in 1971 and the PhD in operations research in 1972. He came to MIT in 1971 and has headed the Sloan School's Management Science Area



Dr. Magnanti

Dr. Hax, the new Alfred P. Sloan Professor of Management, has been professor of management science. He is widely known for his research and writing in the fields of strategic business planning, management control, operations management and operations research. He has made important contributions to management science through the application of operations research methods to a wide variety of industrial and business prob-

A native of Chile, he received his undergraduate degree in industrial engineering from Catholic University in Chile in 1960, the MS in industrial engineering from the University of Michigan in 1963 and the PhD in operations research from the University of California, Berkeley, in 1967. He joined the MIT faculty in 1972 after spending two years as a lecturer at the Harvard Business School. Earlier he had been a management consultant in operations research for Arthur D. Little, Inc., and a specialist at the Operations Research Center at the University of California, Berkeley. He also had been a member of the faculty at Catholic University in Chile.

Dr. Samuelson, Institute Professor and professor of economics emeritus, is one of the

world's most renowned economists. Among his many awards and honors was the Alfred Nobel Memorial Prize in Economic Science for 1970. The Nobel citation noted that he had "done more than any other contemporary economist to raise the level of scientific analysis in economic theory

Dr. Samuelson

In announcing Dr. Samuelson's appointment as Billard Fellow,

Dean Siegel said, "we are honored indeed that he will continue at the Institute as an active colleague for two more years at least, and I am personally gratified that he will grace the Sloan School's roster through this appoint-

Who would you like to hear at commencement?

The Commencement Committee invites recommendations for speakers and/or topic areas from all members of the MIT community for a speaker at MIT's Commencement, Monday, June 2, 1986. The Commencement speaker should be one who will be able to address topics of relevance to MIT. Written nominations and topic areas may be dropped off at the following locations:

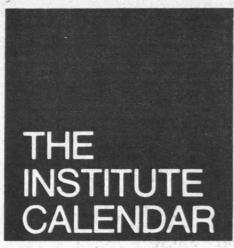
-The Undergraduate Association Office, Rm W20-401.

-The Graduate Student Council Office, Rm 50-222.

The Information Center, Rm 7-121. Deadline for nominations and sug-

gestions is November 6. In addition to the locations above,

suggestions may be filed with any member of the speaker subcommittee of the Commencement Committee. They are: John H. Slater, chairman; Donald R. F. Harleman, ex-officio and chairman of the Commencement Committee; William J. Hecht, executive vice president of the MIT Alumni Association; Vivienne Lee, senior class president; Walter L. Milne, assistant to the chairman of the Corporation and assistant to the president; Mary L. Morrissey, executive officer for Commencement; and Janine M. Nell, president of the Graduate Student Council. The speaker subcommittee will review all suggestions and make a short list for submission to President Gray. The list will not be made public nor will it be rank ordered. The responsibility and authority for selecting a Commencement speaker and issuing an invitation will rest with Dr. Gray.



October23-November 3

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

MISS THE TECH TALK DEADLINE?

Put your announcement on the MIT Cable System. "Today at the Institute" runs 24 hours a day and can be viewed in Lobby 7, Lobby 10 and anywhere the cable is connected.

Simply submit announcement in writing to Rm 9-030. We prefer a day's warning, but faster action may be possible. Useful also for correcting errors, notifying about cancellations, and dealing with emergencies.

cancellations, and dealing with emergencies.

Note: If you have met the Tech Talk deadline, your announcement is automatically put on cable (except for exhibits and some multimeetings programs).

Events of Special Interest

Humanities Convocation at MIT* — Celebrating the first 30 years of Course XXI at MIT: Learning Foreign Languages: Getting Around Vocabulary and a Vocabulary for Getting Around — Prof Catherine Chvany, Russian; Gilberte Furstenberg, lecturer, French; Claire Kramsch, associate head, Foreign Languages and Literatures; Douglas Morgenstern, lecturer, Spanish, Oct 25, 45:30pm, Student Ctr Mezzanine Lounge. How the Middle East Sees America — Philip S. Khoury, associate professor of history looks at the Arab/Islamic viewpoint; Bernard Avishai, associate professor of writing presents the Israeli perspective; Tina Bahadori '84 comments as an Iranian educted at MIT, Oct 26, 9:10:15am, Student Ctr Mezzanine Lounge. Is the Theatre Dead — Again? — discussion with Prof A.R. Gurney, Jr, playwright; Robert N. Scanlan '71, director, MIT Dramashop; Derek Campbell, director, MIT Shakespeare Ensemble; Theo C. Theoharis, assistant professor, literature, Oct 26, 10:45am-12noon, Student Ctr Mezzanine Lounge. How Many Cultures Now? What an Educated Person Should Know — Panel discussion with Peter Buck, associate professor; Isabelle de Courtivron, associate professor; Prof John Harbison, composer; Prof Anthony P. French, physics; Prof Jerome Lettvin, electrical & bioengineering & communication physiology; George McQuilken '65, president, Language Technology Inc; Prof Travis Merritt, director, Course XXI; Roslyn Romanowski '82, MD candidate at SUNY-Buffalo; Lauren Seeley, MIT senior & humanities major; Prof Irene Tayler, literature; Prof Leon Trilling, aeronautics/astronautics, Oct 26, 2-3:30pm, Rm 9-150. Music, Wine and Retrospect — Performances by several MIT musical ensembles, wines by California, Oct 26, 3:30-4:30pm, Bldg 14 Hayden Music Space.

Linguistic Theory and Second Language Acquisition Working Conference* - Foreign Languages and Literatures Section/Dept of Linguistics and Philosophy Conference, funded by a grant from the NSF, Oct 25-27. Conference director: Prof Suzanne Flynn. Oct 25: Introductory Remarks, Conference Overview, Overview Perspectives, Syntax, Overview: L2 Acquisition, 9:30am-5:45pm, Rm 34-401. Oct 26: Syntax 2, Overview, Morphology and Phonology, Code-switching and Creole, 9am-6:35pm, Rm E51-329. Oct 27: Additional Perspectives, Considerations in L2 Acquisition, Conclusions and Summary, 9am-2:50pm, Rm E51-329. Info: S. Flynn, W. O'Neil, Rm 14N-229C.

Seminars and Lectures Wednesday, October 23

Nonlinear Optics and Electro-optics in Quantum Well Structures** - D.A.B. Miller, AT&T Bell Laboratories, EECS/RLE Seminar on Optics and Quantum Electronics, 11-12noon, Rm 36-428.

Cabbeling, the Thermobaric Effect and Neutral Surfaces*

- Trevor McDougall, Woods Hole Oceanographic Institute, Oceanography Sack Lunch Seminar, 12:10pm, Rm

Natural Convection in Building Enclosures* - Helene Ferm, Energy Planning, Inc, Joint Program for Energy Efficient Buildings and Systems Seminar, 1-2pm, Rm 1-214. Bag lunches welcome.

State and Market: The Economic Conditions of a Democratic Policy** - Robert Kuttner, economic correspondent, The New Republic, MIT Political Science Dept Forum on the American Political Economy, 3pm, Rm E53-482.

Health Effects of Exposure to Low-Level Ionizing Radiation* – Dr. Donnell Boardman, director, The Center for Atomic Radiation Studies, Boston; Atty Cooper Brown, director, National Committee of Radiation Victims; Dr. Dorothy Legaretta, coordinator, National Association of Radiation Survivors; Glenn Alcalay, member, National Committee of Radiation Victims and Association for a Nuclear Free and Independent Pacific; Dr. David Bradley, MD, PhD, Professor Emeritus, Dartmouth College, author of No Place to Hide, MIT Museum Symposium in connection with the exhibition "Living in the Shadow; American Atomic Veterans," 2pm, MIT Museum Bldg. Reception immediately following for Jim Lerager, photographer of the exhibition,

New Methods of Hybrid Simulation of Reactor Systems**

- Peter Laughton, Seminar in Nuclear Engineering, 3-4pm, Rm 24-213.

Dielectronic Satellite Transitions in Highly Stripped Ions*
- Dr. Ulyana Safranova, Academy of Sciences, Moscow,
USSR, Plasma Fusion Center Seminar, 4pm, Rm NW16-213.
Refreshments served, 3:45pm.

Wave Propagation and Scattering Problems** - Dr. Vijay Varadan, Dept of Engineering Science, Pennsylvania State University, Dept of Earth, Atmospheric, and Planetary Sciences Colloquium, 4-5pm, Rm 54-915. Tea served, 3pm, Rm 54-923.

Auditory Studies in Cats Utilizing Positron Emission Tomography** - Cindy Paschal, Radiation Science and Technology Doctoral Seminar, 4pm, Rm 24-121.

Myocardial Blood Flow Quantitation Using Positron Computed Tomography, Gordon Warren, Radiation Science and Technology Doctoral Seminar, 4pm, Rm 24-121.

Constitutive Modeling of Sea Ice with Applications to Indentation Problems* – Seng-Kiong Ting, grad student, Constructed Facilities Division PhD Thesis Defense, 4-5pm, Rm 1-350. Refreshments served, 3:30pm. Inter-religious Dating: Second of Three Sessions for Jews with Non-Jewish Partners** – Dr. Sally Bock, outreach staff, Hillel Council of Greater Boston, MIT Hillel seminar, Oct 23, 30, 78:30pm, Baker House Master Suite Lounge. Registration by Oct 11; \$5.

Thursday, October 24

The Air Transport System: Structure and Infrastructure Beyond 1990* – Honorable Secor D. Browne, president, Secor D. Browne Associates, Inc, Washington, DC; former chairman, US Civil Aeronautics Board; former Asst Secretary of Transportation, Dept of Aero and Astro Flight Transportation Lab Seminar, 2-3:30pm, Rm 33-319.

A New Research Organization for a Disintegrated Telecommunications System* - Alan G. Chynoweth, Bell Communications Research, Communications Forum Seminar, 4-6pm, Rm E15-070.

Understanding International Migration: The Case of Mexico* - Prof Douglas S. Massey, University of Pennsylvania, MIT/Harvard Research Seminar on Migration and Development, 4-6pm, Harvard Center for Population Studies, 9 Bow St. Prof Myron Weiner, MIT and Prof Oded Stark, Harvard, will chair.

Strange Matter in the Universe** - Prof Charles Alcock, MIT, Physics Colloquium, 4pm, Rm 26-100. Refreshments served, 3:30pm, Rm 26-110.

Once Around the Critical Care Patient** - Ronald S. Newbower, PhD, director, Dept of Biomedical Engineering, Mass General Hospital, MIT Division of Health Sciences and Technology Seminar, 4:10-5:30pm, Rm E25-117. Refreshments served, 4pm.

Karmarkar's Algorithm as a Generalization of Simplex**

- Richard Stone, Harvard University, Operations Research Center Seminar, 4:30pm, Rm E40-298.

Sentences: Simple to Complex** - Writing and Communication Center English as a Second Language workshop, 4:15-5:15pm, Rm 14N-317.

Friday, October 25

Polymerized Vesicles and Some of Their "Ghosts" - Prof Steven L. Regen, Dept of Chemistry, Lehigh University, Program in Polymer Science and Technology Special Seminar, 11am, Rm 66-360. Refreshments served at 10:30pm. For more information, contact R. Allen, x3-3115.

Torah and Chocolate Class* - Rabbi Dan Shevitz, Hillel director, Hillel study of weekly torah portion and sampling of gourmet chocolates, 12-1pm, Hillel W2a.

Active Control of Unstable Systems* - Prof J.E. Ffowcs Williams, Cambridge University Engineering Dept, Gas Turbine Laboratory Seminar, 4pm, Rm 33-225. Refreshments served.

Functional Electrical Stimulation for Return of Motor Function** – Prof William K. Durfee, MIT Mechanical Engineering Dept, 2.78 Rehabilitation Engineering Seminar, 4.5pm, Rm 1.114.

Trends in Commercial VLSI Microprocessor Design** – Nick Tredennick, IBM T.J. Watson Research Center, Yorktown Heights, NY, VLSI Seminar, 4pm, Rm 34-101. Refreshments served at 3:30pm.

Wednesday, October 30

New Directions in Optical Information Processing** - C. Warde, MIT, EECS/RLE Seminar on Optics and Quantum Electronics, 11-12noon, Rm 36-428.

Thermocline Similarity Theory Revisited* - William R. Young, MIT, Oceanography Sack Lunch Seminar, 12:10pm, Rm 54.915

Application of Supernodal Methods to Closed-Loop Reactor Control** - Alex Parlos, Seminar in Nuclear Engineering, 3-4pm, Rm 24-213.

Early Evolution of the Earth and the Terrestrial Planets: Accretion, Atmosphere Formation and Thermal History** - Dr. Takafumi Matsui, Geophysical Institute, University of Tokyo, Dept of Earth, Atmospheric, and Planetary Sciences Colloquium, 4-5pm, Rm 54-915. Tea served, 3pm, Rm 54-923.

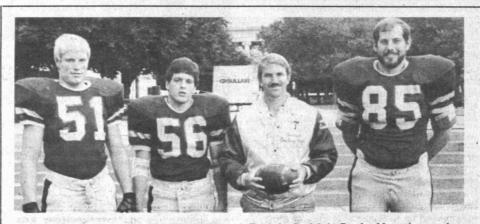
Inter-religious Dating: Third of Three-Session-Discussion for Jews with Non-Jewish Partners** - Dr. Sally Bock, outreach staff, Hillel Council of Greater Boston, MIT Hillel seminar, 7-8:30pm, Baker House Master Suite Lounge, Preregistration required; \$5.

Thursday, October 31

The Impact of US Liability Suits on Air Carriers, Domestic and Foreign* – James E. Landry, senior vice president and general counsel, Air Transport Association of America, Inc, Washington, DC, Flight Transportation Lab Seminar, 2-3:30pm, Rm 33-319.

The Economic Value of Resource Flexibility** - Lode Li, MIT, Operations Research Seminar, 4pm, Rm E40-298.

Electron-Positron Co. sions at High Energy** - Prof James Branson, MIT, Ph. sics Colloquium, 4pm, Rm 26-100. Refreshments served, 3:30pm, Rm 26-110.



AUTUMN WEEKEND—MIT football coach Dwight Smith is flanked by tri-captains Art Gregory '87 (51), Nick Nowak '86 (56) and Larry Monroe G (85), who, along with the rest of the Engineers, will host Bentley College at 2pm Saturday, Oct. 26 in the annual Autumn Weekend game at Steinbrenner Stadium. In other home sports, the women's field hockey team will host Clark at 3:30pm Friday, while the men's soccer team will meet Coast Guard at 11am Saturday. The pistol team opens its season against Army at 9am Saturday, when the varsity sailing team holds the Schell Trophy Saturday and continuing Sunday on the Charles.

—Photo by Ken Cerino

Microfabrication Using Focused Ion Beams* - Kenji Gamo, faculty, Engineering Science, Osaka University, Toyonaka, Osaka Japan, Center for Materials Science and Engineering Colloquium, 12:15pm, Rm 12-132. Lunch provided 12noon.

Fluid Sheer Effects in Microcarrier Cell Cultures** - Matthew Croughan, Chemical Engineering Seminar, 2pm, Rm 66-110.

Integrated Circuit Fabrication: The Etching of Polysilicon in a Chlorine Plasma** – Albert Richards, Chemical Engineering Seminar, 3pm, Rm 66-110.

Ion Acceleration in the Magnetosphere by Lower-Hybrid Waves* – Dr. Tom Chang, MIT Center for Space Research, Plasma Fusion Center Seminar, 4pm, Rm NW17-218.

Refreshments served, 3:45pm.

Why Intensionalists Ought Not be Fregeans* - Prof Jerrold Katz, CUNY, Dept of Philosophy Seminar, 4pm, Rm

Imps, Demons and Other Jewish Hobgoblins* – Rabbi Dan Shevitz, MIT Hillel director, Hillel Seminar, 9pm, Ashdown House Dining Room, Community Shabbat dinner preceeds at 6:45pm.

Monday, October 28

37-212.

Evaluating Your Readers** - Writing and Communications Center Writing a Paper mini-session, 12:30-1pm, Rm 14N-317.

The Revolution in Cryptography* - Prof Ronald L. Rivest, MIT, Electrical Engineering and Computer Science Colloquium, 4pm, Rm 34-101. Refreshments served, 3:30pm.

Tuesday, October 29

The Helical Screw Rheometer** - Andrew M. Kraynik, Sandia National Laboratories, Albuquerque, NM, Chemical Engineering Seminar, 10:30-12noon, Rm 66-360.

Crossed Beam Parity Violation Measurement in Cesium*

- Carl Wieman, JILA, University of Colorado, Laser Research Center/George R. Harrison Spectroscopy Laboratory/Research Laboratory of Electronics Seminar on Modern Optics and Spectroscopy, 11-12noon, Rm 37-252. Refreshments served following seminar.

Glial Cell Lineages and Differentiation** - Dr. Martin Raff, University College London, Whitaker College of Health Sciences, Technology, and Management Seminar, 2pm, Rm E25-111.

A Method for Removing Irregular Frequencies in Wave-Body Interactions** - Chang-Ho Lee, ocean engineering, Civil Engineering/Ocean Engineering Informal Hydrodynamics Seminar, 3:30pm, Rm 5-314.

Trends in Commercial VLSI Microprocessor Design** - Nick Tredennick, IBM T.J. Watson Research Center, Yorktown Heights, NY, VLSI Seminar, 4pm, Rm 34-101. Refreshments served 3:30pm.

LIDS Seminar* - speaker TBA, Laboratory for Information and Decisions Systems Seminar, 4pm, Rm 37-212, , +

Making Electronic Mail More Intelligent* - Kenneth Mayers, Digital Equipment Corp; Thomas Malone, MIT Sloan School, MIT Communications Forum Seminar, 4-6pm, Rm E15-070.

The Making of Sense: Was de Beauvoir Right About the Authentic Self in Women?* - Caroline Whitbeck, Center for Technology, Policy and Industrial Development, Women's Studies Program Seminar, 4pm, Rm E51-322.

Sentences: Contingencies and Conditionals** - Writing and Communication Center English as a Second Language workshop, 4:15-5:15pm, Rm 14N-317.

Friday, November 1

PAH From a Bituminous Coal: Secondary Pyrolytic Reactions and Subsequent Interactions with Soot** – M. Judy Wornat, Chemical Engineering Seminar, 3pm, Rm 66-110.

TBA** - Dr. Edward Jefferson, Chief Executive Officer, E.I. Dupont de Nemours, Warren K. Lewis Lecturer, Chemical Engineering Seminar, 4pm, Rm 66-110.

Community Meetings

Al-Anon** – Meetings every Fri, noon-Ipm, Health Education Conference Rm E23-297. The only requirement for membership is that there be a problem of alcoholism in a relative or friend. Call Ann, x3-4911.

Alcohol Support Group** - Meetings every Wednesday, 7:30-9am, sponsored by MIT Social Work Service. For info call Ann, x3-4911.

Narcotics Anonymous* - Meetings at MIT, every Mon, 1-2pm, Rm E23-364 (MIT Medical Dept). Call 569-8792.

Health Care Plans Open Enrollment** - Benefits Office meetings for current personnel, MIT, Wed, Nov 13, 11-1:30pm, Rm 10-105; Lincoln Lab, Thurs, Nov 14, 11-2pm, Rm A-166; Haystack, Fri, Nov 15, 10-11am; Bates Linac, Fri, Nov 15, 1:30-2:30pm.

Special Health Insurance Meetings for Retired Personnel 65 and over or whose spouses are 65 or over, Compensation Office meeting, Tues, Nov 12, 10am-12noon, Rm 10-105; Wed, Nov 13, 2:30-3:30, Linč Cafeteria A. New Medicare/health maintenance organizations now offered at MIT will be explained.

FRAP Meetings** - Compensation Office meetings on the Flexible Reimbursement Account Program, Wed, Nov 6, 9-10am & 10:30-11:30am, Linc L-277; Thurs, Nov 7, 10:30-11:30 & 12-1pm, Rm 10-105; Fri, Nov 8, 10-11am, Haystack Observatory; Fri, Nov 8, 1:30-2:30pm, Bates Linear Accelerator; Wed, Nov 20, 10:30-11:30am & 12-1pm, Rm 10-105; Thurs, Nov 21, 9-10am & 10:30-11:30am, Linc L-277.

MIT Faculty Club** - The Club is open Mon-Fri. Luncheon hours: noon-2pm; dinner hours: 5:30-8pm. For dinner and private party reservations, call x3-4896 9am-5pm daily.

Commodore Users Group** - meets monthly at noon time For more info, call Gil, x8-3186 Draper. Winter Crafts Fair – Tech Community Women will accept applications for those wishing to sell at the Winter Crafts Fair, Dec 10-11, through Nov 22. For info, call Mary Helen Miller, x3-5225 or 494-5217 eves.

When Parents Disagree** - Dr. Margaret Ross, psychiatrist, MIT Mental Health Dept, Child Care Office discussion, Oct 25, 12-1pm, Rm 4-144. Bring a brown bag lunch; we provide heverages.

Wives' Group** - Morning Group: Oct 23, Beacon Hill - info: Amanda Lamond, 523-1913; Oct 30, Fanueil Hall (Quincy) Marketplace - info: Caterina Bacos, 723-3449 or Rhonda Thomson, 924-3848. For all trips, meet at 9:15am, Eastgate (60 Wadsworth St). Children welcome. Afternoon Group: Oct 23, Touring New England - Greta Uhlig, former teacher, English Conversation Classes; Oct 30, The History of Boston's Development - slide show presentation by Christine Cousineau, doctoral candidate. All meetings, 3-5pm, Student Ctr Rm 491. Babysitting provided in Student Ctr Rm 407.

Craft Group.** - sponsored by Wives' Group, meets every Thurs, 2-4pm, Student Ctr Center Lounge or Student Ctr Rm 407. Please call x3-1614 to check on location of meetings.

The Language Conversation Exchange** – sponsored by the Wives' Group, seeks persons interested in practicing languages with a partner. Many international students and spouses wish to practice English with a native speaker. If you are willing to help an international visitor practice English and/or interested in practicing or learning a foreign language with a native speaker, call the secretary to the Wives' Group, x3-1614.

MIT Women's League Informal Needlework Group** — Wednesday lunchtime gatherings, 9:30am:1:30pm, Rm 10-340. Bring sack lunch, projects, swap ideas. Coffee & tea served. Meeting dates: Oct 30, Nov 13, 27, Dec 11, Jan 8, 22, Feb 12, 26, March 12, 26, April 9, 23, May 14, 28. For more info, call Lillian Alberty (491-3689), Nancy Whitman (x3-6040) or Beth Harling (749-4055).

Alumni Activities

Systems Dynamics, Education, and Economic Behavior* – Prof Jay W. Forrester, EE'45, director, Systems Dynamics Program, Sloan School of Management, Alumni Coucil dinner meeting, Oct 28, 6:15pm, MIT Faculty Club. Cocktails served, 5:30pm. Cost: \$12.50/pp; "Sponsor a Student": \$10/student Info: Ms. Pnina Levermore, Rm 10-110.

Career Planning Seminar* — experts from placement agencies as well as managers from industry, MIT Club of Boston seminar, Nov 2. Admission: \$20/Club members & guests; \$25/non-members. Send check make out to the MIT Club of Boston to: MIT Club of Boston, PO Box 6622, Water & Broad Sts, Boston, MA 02102. Info: x3-2000.

MIT Activities Committee

MITAC, the MIT Activities Committee offers discount movie tickets for General Cinema (\$2.50), Showcase and Sack Theaters (\$3.00). Tickets are good 7 days a week, any performance.

(\$3.00). Tickets are good 7 days a week, any performance. Tickets may be purchased at MITAC Office, Rm 20A-023 (x3-7990), 10am-3pm. Mon through Fri and Lobbies 10 and E18 on Fri, 12-1pm. Lincoln Lab employees may purchase tickets in Rm A-270 from 1-2pm, Tuesday through Friday only, Check out our table of discounts for camping, dining, musical and cultural events available to you through MITAC and MARES (Mass Assoc of Recreation and Employee Services).

Portland, Maine Day Trip. Sat, Nov 9. Explore the Old Port Exchange, offering great shopping and fantastic eating in the newly renovated warehouse district along Casco Bay, the Portland Art Museum, and some historic homes. Bus leaves West Garage, 8am; returns approx 6pm. Wear walking shoes and have a great day. Cost. \$10.50/pp. Reservations made in Rm 20A-023.

4th Annual Fall River Factory Outlet Shopping Spree. Sat, Nov 16. Stop #1: "The heart" of the district — 51 outlets for shopping madness; this is also our lunch stop (bring your own or stand in line at the cafeteria). Stop #2: Vanity Fair with nearly 2 dozen outlets. Bus leaves West Garage, 8:30am; returns approx 6pm. Tickets \$7/pp, available in Rm 20A-023.

Council for the Arts Museum Passes. On campus, there are 10 passes employees may borrow for free admission to the Museum of Fine Arts. To check on availability, call x3-5651. At Lincoln Lab, passes are available in the Lincoln Lab Library, Rm A-150.

Museum of Science Tickets. Available for only \$1. (To see just the museum, pay another \$1 at the door, for a total savings of \$3/person - reg. \$5/person admission). For the China Exhibit, pay another \$5/adults, \$3/children at the Museum, for a total savings of \$1/pp (reg \$7/adults, \$5/children).

City Books are here! Only \$.75 ea.

Important! To avoid disappointment, purchase tickets and make reservations early as we are limited by ticket availability and transportation. All MITAC events and ticket purchases are non-refundable due to the non-profit nature of our organization.

Social Activities

Tea for Women of MIT** - MIT Women's League Annual Tea hosted by Honorary Chairman, Priscilla Gray, Wed, Oct 23, 3:30-6pm, the President's House, 111 Memorial Dr.

Table Francaise** – sponsored by Foreign Languages & Literatures Section. Venez dejeuner avec nous et parler francais! Votre hote: Christophe Lecuyer. Tous les Lundis, de 12:15 a 13:45, Muddy Charles Room a Walker Dining Hall.

GAMIT Sunday Discussion Meeting* - Gays at MIT, Suns, 5pm, GAMIT Lounge, Walker Memorial Rm 50-306. Dinner served at 6:30pm.

GAMIT Study Break* - Gays at MIT, Thurs, 9pm, GAMIT Lounge, Walker Memorial Rm 50-306.

Movies

Gaza Ghetto* – with filmmaker Joan Mandell, MIT Committee on the Middle East movie, Oct 24, 4pm, Rm 10-240.

Suspicion* - LSC Classic Movie, Oct 25, 7:30pm, Rm 10-250. \$1/MIT.Wellesley ID.

The Killing Fields** - LSC Movie, Oct 25, 6:30&10pm, Kresge Auditorium. \$1/MIT-Wellesley ID.

Eating Raoul** - LSC Movie, Oct 26, 7&9:30pm, Rm 26-100. \$1/MIT-Wellesley ID.

Watership Down** - LSC Movie, Oct 27, 6:30&9pm, Rm 26-100. \$1/MIT-Wellesley ID.

The Cabinet of Dr. Caligari* - LSC Classic Movie, Nov 1, 7:30pm, Rm 10:250. \$1/MIT-Wellesley ID.

Starman** - LSC Movie, Nov 1, 7&10pm, Rm 26:100. \$1/MIT-

Wellesley ID.

Gandhi** - LSC Movie, Nov 2, 8pm, Kresge Auditorium.

\$1/MIT-Wellesley ID.

Animal Farm** - LSC Movie, Nov 3, 6:30&9pm, Rm 26-100.

\$1/MIT-Wellesley ID.

Music

Noon Hour Chapel Series* - Glorianne Collver-Jacobson, guitar performs Latin American guitar music, Thurs, Oct 24, 12:05pm, MIT Chapel. Free.

Music, Wine, and Retrospect* - An event of the Course XXI 30th Aniversary Convocation. Performances by members of the MIT Chamber Music Society, Marcus Thompson, director; the MIT Brass Ensemble, Gregory Hopkins, director; the MIT Fes-tival Jazz Ensemble, Jamshied Sharifi, director. Sat, Oct 26, 3:30pm, the old Hayden Gallery (Bldg 14).

MIT Symphony Orchestra* - David Epstein, music director Sat, Oct 26, 8:30pm, Kresge Auditorium. Admission \$1.

Noon Hour Chapel Series* - M. Arnaud Dumond, lute, from France, Thurs, Oct 31, 12:05pm, MIT Chapel. Free

MIT Concert Band Halloween Concert* - John Corley, ctor, with all 80 musicians dressed in costumes, Thurs, Oct 31, 6pm, Lobby 7. Free

Orchestre de la Suisse Romande** – perform Ravel and Dukas, Thurs, Oct 31, 8pm, Kresge Auditorium. Free. Tickets available from 14N-427; send self-addressed interdepartmental envelope. Broadcast live on WGBH-FM.

Chinese Intercollegiate Choral Society* - Meets Suns, 3-5pm, Rm W20-491. Currently rehearsing Chinese folk songs. Free voice lessons and music theory class, 1pm.

MIT Women's Chorale* - sponsored by MIT Women's League, Thurs, 7:45-10pm, Rm 10-340. Get in the "sing" of things. Join us to sing a variety of music from medieval through contemporary. Open to MIT & Harvard community. New members welcome until Oct 31.

MIT Gospel Choir* - Rehearsals: Oct 26, Kresge Rehearsal Rm A; Nov 2, Student Ctr Center Lounge; Nov 9, Student Ctr Center Lounge; Nov 16, Student Ctr Center Lounge; Nov 23, Student Ctr Rm 491; Dec 7, Student Ctr Rm 491; Dec 14, Student Ctr Rm 491, All rehearsals, 11-1:30pm. Info, x5-8563 dorm.

Theater

Brigadoon* - MIT Musical Theatre Guild production, Oct 24-26, 8pm; Oct 26, 3pm; Oct 27, 7pm, Kresge Little Theatre. Tickets: \$6; \$5/MIT faculty & staff; \$4/students & senior citizens; \$3 MIT students. Reservations: x3-6294.

Much Ado About Nothing* - MIT Shakespeare Ensemble, Oct 24-29, 8pm, Student Center Sala de Puerto Rico. Informa-

MIT Dramashop Auditions** - For an Evening of One Act Plays: The Apollo of Bellag by Jean Giraudoux — 9M, 3W; Half Time at Halcyon Days, by Carol K. Mack — 5W, Mon, Oct 28, 7:30pm, Kresge Little Theatre. All levels of experience welcome.

Dance

MIT Ballroom Dance Club Workshops* - Oct 27: Beginning Samba, 12:30-1pm; Intermediate Tango, 1:30-2:30pm; Advanced Swing, 4-5pm, Burton Dining Hall. Nov 3: Beginning Quickstep, 12:30-1pm; Intermediate Samba, 1:30-2:30pm; Advanced Tango, 4-5pm, Student Ctr Sala de Puerto Rico. Admission: Beginning - \$.25/members; \$.50/non-members; Intermediate - \$.50/members, \$1/non-members; Advanced - \$2/ members, \$3/non-members. Info: x5-9171 dorm.

Western Square Dancing* – Tech Squares 10-week class now in progress, Tues, 8-11pm, Student Ctr 2nd Floor. Combined club/class level dancing. Dennis Marsh, club caller & instructor; Veronica McClure, club cuer. Modern Dance Workshop** - Beth Soll, director. Workshop,

Regular meetings: Beginning Technique, M/W, 3-5pm, DuPont Ctr T-Club Lounge; Composition/Improvisation, Thurs, 3-5pm, T-Club Lounge; Intermediate Technique, T/Th, 5:30-7pm, Walker 201.

MIT Folk Dance Club* – weekly dancing Sundays, Interna-tional Dancing, 7:30pm, Student Center Sala de Puerto Rico; Tuesdays, Balkan and Western European Dancing, 7:30pm, Rm 407 Student Center; Wednesday, Israeli Dancing, 7:30pm Sala

Yoga* – ongoing classes in traditional Hatha and Iyengar style. Beginners: Mon, 7:20pm; Intermediates: Mon, 5:45pm. For information call Ei Turchinetz, 862-2613.

Exhibits

COMMITTEE ON THE VISUAL ARTS Albert and Vera List Visual Arts Center Jerome & Laya Wiesner Building

Hayden Gallery - Private Works by Public Artists: Scott Burton, Richard Fleischner, Kenneth Noland. Examines each of these artist's studio-produced work, for displaying more private environments than their collaborative efforts with architect I.M. Pei in MIT's new Wiesner Building. A major publication will document the pioneering process of this collaboration, through Nov 24.

Sculpture Archives Gallery - Henry Moore: Figures and Forms. Examines one of the most important topics in the British sculptor's work: the figure in relation to the natural set-

The Reference Gallery** - Ping Chong: "Kindness." As artist-in-residence, Ping Chong will make an environment contrasting primal spiritual experience with the contemporary technological world. Resulting installation on view, through Oct 27. Hours, M-F, 10-4; Weekends, 1-5pm.

THE MIT MUSEUM

MIT Museum Bldg - High Tech Art: Hanna Zawa-Cywinska, Richly colored graphic prints and three-dimensional wall prints combining language, artifacts and technology of electronics with work in natural fibers, through Oct 31. Living in the Shadow: American Atomic Weapons, Photographs and thoughts of American military men exposed to radiation from atomic testing, through Oct 31. Berenice Abbott: Vision of the 20th Century. Five decades of photographs by Berenice Abbot, including portraits from the '20s, images of a vanishing NY City from the '30s and scientific photos illustrating waves and light refraction, through Dec 27. I.M. Pei: Selected Projects, through December. Gjon Mili '27: A Tribute, Born in Rumania, world famous photographer Gjon Mili studied electrical engineering at MIT and pioneered in the use of electronic flash and multiple exposure photographs. In 1938 he began doing stories for Life magazine, ongoing. Of Aerostatic Machines: Early Ballooning in France and Britain, Prints from MIT's Vail Collection illustrate the development of ballooming as a science and sport including fanciful inventions for steering balloons, and aerial views of Paris and other cities, on-going. Physics at the Laboratory for Nuclear Science: 35 Years at LNS, ongoing. Hours: Weekdays 9am-5pm, Saturdays 10am-4pm. from MIT's Vail Collection illustrate the development of bal-

Compton Gallery -

Hart Nautical Gallery

Ongoing exhibits: Currier & Ives Prints From the Hart Nautical Collections - Colored lithographs of sailboats, steamboats, clipper ships and whalers. George Owen '94: Yacht Designer - Line drawings and half-models designed by one of the early professors of naval architecture at MIT. MIT Seagrant - A review of MIT ocean research; Collection of Ship Models - Half-models and drawings. Historical view of the design and construction of ships.

Edgerton's Strobe Alley - Exhibits of high speed photography. Main corridor, 4th floor.

Corridor Exhibits: Building 1 & 5, 2nd floor: John Ripley Freeman Lobby, Building 4: Rogers Building, Norbert Wiener, Karl Taylor Compton. Community Service Fund, Ellen Swallow Richards. Women at MIT. An overview of the admission of women at MIT. Five photographic panels with text documenting the circumstances that increased the number of omen in the classroom since Ellen Swallow Richards. Building: Laboratory for Physical Chemistry. Building 8: Solar Energy, Society of the Sigma XI. Building 14N, across from Rm 14N-118.

OTHER EXHIBITS

Humanities Retrospective - Memorial Gallery, Hayden Library Bldg, Documentation of the Humanities at MIT: 1865-1985 and the first 30 years of Course XXI (the humanities major): 1955-1985, Oct 25 through Nov 30.

The Communications Graphics Show – Memorial Gallery, Hayden Library Bldg, 190 pieces including posters, annual reports, packaging, stationery, catalogs, logos, etc., from the 1985 Communications Graphics competition of the American Institute of Graphic Arts, through October 25.

Institute Archives and Special Collections - Planning the New Technology. Part Two: Constant Desire Despradelle. Part two of a three-part series about the relocation of MIT from Copley Square to Cambridge portrays the impressive design of architect and teacher Despradelle. Though he died before the project began, several of his ideas were incorporated into the

ultimate plan by his successor, William Welles Bosworth. Hall exhibit case across from 14N-118.

Monhegan Landscapes — Architecture & Planning Computer Resource Laboratory sequential exhibit of photographs by S. Leland Smith, teacher of filmmaking and photographic dark-room skills at the MIT Student Art Association, through Nov. Hours: M·F, 9am-5pm, Rm 9-514.

Jerome B. Wiesner Student Art Gallery – for 1985 scheduling, any MIT student or student group interested in showing or performing art in the Gallery, call Andy Eisenmann, x3-7019 in Rm W20-429, M-F, 9-5.

Sports

HOME EVENTS: Oct 23: W's Volleyball vs Northeastern. HOME EVENTS: Oct 23: Ws Volleyball vs Northeastern, 7:45pm. Oct 24: Ws Field Hockey vs Wellealey, 3:30pm. Oct 25: Ws Field Hockey vs Clark, 3:30pm. Oct 26: M's Soccer vs Coast Guard, 11am; Football vs Bentley, 1:30pm. Oct 26:27: Sailing, Schell Trophy, 9:30am. Oct 29: W's Tennis vs Babson College, 4pm; W's Volleyball vs Springfield, 7pm. Nov 2: W's Volleyball Mass AIAW Tournament, all day; Football vs UMass Boston, 1pm. Nov 2: Sailing, MT Invitational 9:30am. 1pm. Nov 3: Sailing, MIT Invitational, 9:30am

Wellesley Events

Jewett Arts Center* – Isla Negra Tapestries, Chilean genre scnes, organized in collaboration with Wellesley Spanish Dept, Oct 26 through Dec 1. Paintings, Drawings and Sculpture from the Permanent Collection, opens November 2,

Women Under Apartheid* - Barbara Brown, Wellesley College; Florence Ladd, visiting scholar, W.E.B. DuBois Institute, Harvard University, South Africa Action Series Discussion, Oct 24, 7:30pm, Library Lecture Rm.

The Politics of the Gender Gap* – Dr. Carol Mueller, visiting research scholar, Wellesley College Center for Research on Women Luncheon Seminar, Oct 24, 12:30-1:30pm, 828 Washington St, Wellesley.

Authors on Stage* - 3 authors discuss their works, Roger Hale, moderator, Oct 28, 10am, Jewett Auditorium. Admis-

Ezra Pound's Brilliant Appreciation of Henry James* – Arthur Gold, William R. Kenan Professor of English, Wed, Oct 30, 4pm, Margaret Clapp Library

Gender, Prisons, and Prison History* - Dr. Nicole Rafter, visiting research scholar, Wellesley College Ctr for Research on Women Luncheon Seminar, 12:30-1:30pm, 828 Washington

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

Send notices for Wednesday, October 30 through Sunday, November 10 to Calendar Editor Rm 5-111, before noon, Friday,

XXI marks three decades of liberal learning

(continued from page 1)

ambitious experimentation with common humanities "core" subjects for all undergraduates in their first two years—an idea which eventually gave way to the humanities distribution system now in effect. The other thrust was toward a set of new degree programs which would embody the aims of liberal education on a larger scale and in a way suited to the realities of the modern age, combining substantial humanistic studies with a sustained sequence of work in a specific engineering or science curriculum. These joint degrees, first designated XXI-A, Humanities and Engineering, and XXI-B, Humanities and Science, have proved quite durable.

At first, Course XXI was directed by one of its principal architects, Professor of History John Morton Blum (now of the Yale history faculty), and from 1958 to 1973 by Professor of Literature Roy Lamson. During the 1960's, Professor Lamson developed, as the culminating experience of intellectual integration for Course XXI, the Humanities Senior Seminar and Colloquia, which brought together the major-

ing students, faculty from several parts of the Institute, and distinguished visitors such as Aldous Huxley, Howard Mumford Jones, and Erich Heller to explore such interdisciplinary topics as Time, Structure, or the Morality of Knowledge.

From the outset, the Course XXI curricula were regarded as particularly apt preparation for students heading into medicine, law, journalism and business. Many graduates moved on to doctoral studies in their chosen humanities fields-literature, languages, history, philosophy, music-or advanced degrees in engineering or science. In 1966, responding to student demand and faculty pressures for more specialized and intensive work in the individual humanities fields, Course XXI introduced a full major accompanied by a complementary minor in an associated discipline. With the growth and subdivision of the original faculty groups, the roster of available humanistic fields has been lengthened by the addition of anthropology/archaeology, writing (including recently strengthened programs in science writing and technical communication), American studies,

Russian studies, Latin American studies, and the Program in Science, Technology, and Society.

In the late 1970s and early 1980s, codirectors Travis Merritt (of literature) and Louis L. Bucciarelli Jr. (of STS and Engineering) worked to strengthen the joint major programs-now designated XXI-E and XXI-S-increasing by 50 per cent the amount of required study on the engineering/science side and experimenting with relational studies designed to integrate the humanistic and technical components more

Since the first graduating class in 1958, about 900 men and women have received degrees in XXI, roughly two-thirds in one of the joint programs, the rest in the full major. Many of these graduates have simultaneously earned separate degrees in specific engineering or science disciplines. At present, nearly 40 per cent of all active XXIers—there will be close to a hundred of them by year's end-are candidates for another SB. This "double-majoring" pattern comes naturally, if late, to students who enter MIT with a quiet passion for

humanistic learning or develop such a passion after arrival. Few such students consciously intend, when applying for admission, to major in Course XXI. By the time the possibility becomes real for them, they may already be well along in their sophomore or even their junior year and moving nicely through the degree requirements in, say, mechanical engineering or physics. Picking up the degree in literature, writing, or music means either adding it on or switching out of the original major. Today's undergraduates are increasingly inclined to add, not switch. One possible and desirable outcome of the current examination of MIT's undergraduate educational practices might be such a shift in institutional "image," in the balancing of priorities, and in the definition of what constitutes the best professional education for engineers and scientists in the long run, that more students like these will be attracted to MIT in the first place and that, once here, they will be encouraged to pursue, from the start, a truly liberal education founded on solid intellectual competence in each of "the two cultures."

Rowe appointed to Sloan faculty

Dr. Mary P. Rowe has been appointed adjunct professor at the Sloan School of

Management. Announcement of her appointment was made by Dean Abraham J. Siegel and President Paul E. Gray.

Dr. Rowe has been special assistant to the president for the past 13 years. She and Dr. Clarence Williams have served in this capacity as MIT's ombudspersons and have been

available, as a part of MIT's nonunion grievance procedure, to hear concerns and advise anyone who feels unjustly treated.

In making the announcement of the adjunct professor appointment, Dean Siegel said that Dr. Rowe enjoys national recognition as a scholar and practitioner in mediation. She will teach courses in management and resolution of conflict on a part-time basis and will participate in the research and other activities of the faculty at the Sloan School.

In the context of her new appointment, Dr. Rowe commented on the possibility of conflict of interest if she were to continue to serve the

Tennis hours

There is still indoor tennis time available this winter for members of the community. Times remaining: Mondays, 8am-2pm and 10-11pm; Tuesdays, 9-11am, 1-2pm and 10-11pm; Wednesdays, 8am-2pm and 9-11pm; Thursdays 8am-2pm and 10-11pm; Fridays, 9am-2pm and 7-11pm; Saturdays, noon-2pm, and Sundays, 9-10am and 7-9pm.

For further information, call Pat Ferrara,

x3-2914.

Sloan School in grievance areas.

"I hope the people at Sloan will continue to seek me out as a friend and colleague," she said. "Formally, however, anyone at Sloan who wants to talk with an ombudsperson, should approach Dr. Williams, since I would have a potential conflict of interest regarding any complaint in my own School. Indeed, one of the reasons MIT has had two special assistants to the president is to provide members of the community with options."

President Gray said Dr. Rowe will continue her responsibilities in the President's Office and will continue to be available for consultation to individuals and to managers throughout the community. "Mary's services have been very valuable to MIT and we look forward to her continued work with us and as a member of the faculty of the Sloan School," Dr. Grav said.

A graduate of Swarthmore College in history and international relations, Dr. Rowe received the PhD in economics from Columbia University. Before joining MIT in 1973 she had extensive experience in economic development and the impact of child care programs both domestically and abroad. In recent years, Dr. Rowe has helped build

the ombudsman profession. She chairs the Ombudsman Committee of the Society of Professionals in Dispute Resolution, is president of the Corporate Ombudsman Association, a member of the editorial board of the Negotiation Journal and head of the newly formed ombudsman sub-program of the Interuniversity Program on Negotiation.

She is particularly noted for encouraging research and writing by fellow practitioners in her field, for joint papers with research and practitioner colleagues, and for helping to start and support ombudsman programs in corporations and universities in the US and

Symphony season to open Saturday

The MIT Symphony Orchestra with piano soloist Abbott Ruskin will perform works by Mozart, Scriabin, and Tchaikovsky in Kresge Auditorium Saturday, Oct. 26, at 8:30 pm. Admission is \$1, or free to members of the MIT and Wellesley communities.

The program includes Mozart's Overture to "The Impresario," K. 486, Scriabin's Piano Concerto in F minor, Op. 20, and Tchaikovsky's Symphony No. 4 in F minor, Op. 36.

This year marks the return of Abbott Ruskin to the concert stage after a seven-year absence as a result of an injury to his right hand. Before his injury, Ruskin performed with major orchestras throughout the US. His appearance with distinguished Soviet composer, Dmitri Kabalevsky, a guest conductor at the National Symphony in Washington, D.C., evoked Washington Post critic Paul Hume to declare the performance "one of the most exciting evenings in the history of Constitution Hall."

The concerto that Ruskin will be performing was composed by Scriabin while he was in his twenties. This composition shows the influence that Chopin and Liszt and the heightened romanticism of the late 19th century had on Scriabin's early works. Later in life, Scriabin's approach to art was to undergo a transformation towards more mystical and trans-

Epstein notes that past performances of Tchaikovsky's Symphony No. 4 have exaggerated its emotional content and thus distorted its musical structure. The MIT Symphony's performance will focus on the intricate and overlapping structure of this piece as the key to realizing its strength.

Meeting set on 2nd language acquisition

The faculties of foreign languages and literatures and of linguistics will host a conference on Linguistics and Second Lan-

MITAC reminder

The MIT Activities Committee (MITAC) still has a limited number of seats available for MITAC's motortrip to Quebec City Nov. 8-11. Accommodations are at the Chateau Frontenac, overlooking the St. Lawrence River. The bus leaves West Garage at 7am, Friday, Nov. 8. The rate is \$116 per person, double occupancy. Only two tickets are allowed per person. On October 31, MITAC will sponsor an

unusual Halloween Party from 7-10pm in the Mezzanine Lounge, Student Center, with an evening of live whodunit theater provided by the Murder with a Twist cast. Tickets are \$15.

guage Acquisition here Friday-Sunday, Oct. 25-27.

The conference will be the first of its kind to explore applications of Professor Noam Chomsky's theories of universal grammar to the field of second language acquisition.

Professors Suzanne Flynn and Wayne O'Neil are directors of the conference. They believe the event will play a major role in accelerating developments in the field.

"Thus far," Professor Flynn said, "work on second language acquisition has been fairly descriptive-there are no theories explaining the underlying factors responsible for the learning. This conference will explore the workings of such parameters and how they determine second language acquisition. I think it holds promise for the entire field," she said.

Tech Talk, October 23, 1985, Page 5

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INSTRUCTIONS: Ads are limited to one (of approximately 30 words) per per-son per issue and may not be repeated in successive issues. All must be accom panied by full name and extension. Persons who have no extensions or who wish to list only their home telephones, must come in person to Rm 5-111 to present In-stitute identification. Ads using extensions may be sent via Institute mail. Ads are not accepted over the telephone.

Deadline is noon Friday before

For Sale

Contec mdl 8822A 2-bnd dbl cass rcrdr, AM/FM stereo radio w/2-way, 4-spkr auto stop sys, \$150; New Balance tennis shoe (CT 450), sz 9, \$30; StopBilt coaching shoe, wh, sz 9, \$20; Dexter hiking shoe, sz 9, \$50. Ken, x3-7946 or 326-8258

Mirror, 6x3', bordrless, exc cond, mst be bst offr. Othello, x3-4971 or

2 Goodyear snws, sz P155/80D13, wsw usd 1 seasn, on Pinto whls, \$50. Doug, x3394 Linc.

phony tix, 11/12, 11/26, 1/14, \$27/pr John, x8-2001 Draper.

re dshwshr, 18" prtbl, exc cond, \$125. Call x3-3706 or x3-2968.

Oak kneehole dsk, 60x33½x31" cond, \$150; genuine lrg Flexible Flyer slds, nw cond, \$40 ea. Call 864-0616.

K/Q-sz wtrbeds, complt w/pedstl frm, linr, htr, mttrss & sheets, keep wrm this wntr, \$150 ea. Kim, x3-1740 or 242-0804.

150cm skis & bindngs, ski boots, sz 51/2 & 6%N, all in exc cond. Ray, x8-2918

Guitr, '76 Martin D-18 w/case, \$425. Paul,

x3-6908 or 321-4654. Boy's Columbia 18" 3-spd bike, racing handlbars, exc cond, \$50. x3-5493/6733 or 566-4690 eves. \$50. Ingrid,

Girl's Fr Provencial dsk, no chr & canopy bed frm, Sears Bonnet Line, \$75 Heather, x3-0801 or 861-1531 eves.

Girl's wh Oberhamer fig skts, exc cond, sz 21/2, \$30; fuzzy skt covrs, fit up to girl's sz 13, \$2. Call 484-0802, 1-9pm.

Txtbook: Biological Chemistry, 2nd ed. 71, by H. Mahler & E. Cordes, \$20. Call

969-5701. New Moon futon w/covr, 1 yr old, gd co

\$125 nw, now \$85 or bst, no renbl offr refusd. Tom, 437-7470, lv mssg 80 watt/chnnls Kenwood rcvr, grt AM/FM

rcptn, inputs for 2 tape dcks, outputs for 2 spkrs, exc cond, lsts \$350, will sell for \$180. Carey, x3-6902 or x5-6380 dorm.

Alpine-7263 car stereo, 6 present 16w/chnnl, \$250; Alpine-6209 6x9 car stereo spkrs w/grills, \$100; Proton 5" car stereo spkrs w/grills, \$50, all exc cond. Stuart, x5-8989 dorm.

26' sloop, Balboa, swing keel, 15HP Johnson, nw main, VHF, nw toilet, sleeps 5, pulpits & life lines, trailr + xtras, \$13,300. Ed, x3-8683 or 665-7020.

Zenith 19" colr tv, exc wrkng ordr, \$150 or bst. Peter, x3-8092.

DEC Rainbow 100B, 512 mem, dual 400K dsk drys. VT102 ambr mntr. MS-DOS 2.11, CP/m-80/86 2.0, cbls, mnls, etc, diagnstes, tutorial, sftwr, IBM formttr, prntr & comm ports, sftwr & hrdwr ref guides, built-in multi-national charctr set, \$1,700; same w/LA50 dot matrx prntr, \$2,000, bth exc cond. John, 495-6929 or

endws 52×50 40×49 50×36 (6), 50x20 (4), 38x36. Call x8-3945 Draper

Lyng twn, mst sell: complt BR set, antq Italn framd tapstry, dsk & chr, misc. Call

2 Sears SuperGuard snw trs, sz E78-14, 4 ply thread, usd 2 wntrs, \$50 or bst. Thea, x3-3864 or Paul, x3-3449 or 494-4882

Sears Kenmore apt-sz wshr & dryr, like nw. Paul, x3-4824.

K-sz mttrss, bx spr & frm, Serta's bst, \$600 nw, \$150. Call x7905 Linc.

Pr M's sz 10 Cordovan lthr loafrs, wrn 1X, \$10; M's lind wool jackt, tan w/zip-out hood, exc cond, \$20. John, x3-8117 or

Violin, 1/4-sz w/bow & case, exc sound & cond, \$125. Call x3-7500 or 646-7190.

x5-9757 dorm.

Panasonic prtbl cass stereo, 1 vr old, exc cond, loaded w/featrs, \$300 whn nw, \$200; Sears b&w tv, hrdly usd, 1 yr old, \$60. Amanda, x5-8684 dorm.

Sony stereo cass dck w/Dlby, 3-postn bias, top featr, \$75 or bst. Call x3-2774.

Mtchng sofa, love seat & chr, v gd cond 4½ yrs old, orig cst \$1,000, askg \$400 Alfonso, x3-8966 or 661-4852 eves.

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Kenmore elec dryr, exc cond, \$85; side thl w/drwr, mag, \$25; lrg ceramic tbl lmp, \$25; Elec lux vac, pwr nozzl, \$65; Ken-more vac, \$25; stereos w/2 spkrs, AM/FM, \$45 & \$65; SMC typwrtrs, mnl, \$25; elec, Samsonite 45; attache cases, nw cond, \$30; Tourister, \$25; bedsprds, nw, twn & K-sz. \$8-25; twn mttrss, \$5; easy chr. gd cond, \$45. Call x3-6081 or 332-8251.

'80 & '81 snwmobiles + trailr, all tuned up, \$2,500. Pat, x8-3944 Draper.

6 Firestone rad trs, 2 nvr mntd, sz 155. Jim/Chris, 491-2154, lv mssg.

VT 100% pure maple syrp, frm '85 seasn, \$4/pt; \$6/qt; \$11/1/2 gal; \$20/gal. Donald, x8-2647 Draper or 848-2723.

Antq movie-makng eqpmnt: Bell & Howell 8mm camra, Keystone prjctr, editor-splicr, all in wrkng ordr, vintage ca 1939, all for \$30. Call 484-0802 1-8pm.

Concept 108 trmnl, v gd cond, lots of featrs, \$400 or bst. Call x5-9415 dorm or

Wine rck w/rmvbl tray, hlds ovr 12 bttls cmplt w/wine glsses, \$15; big lmp, \$5; 5-shlf emponent ctr, hndsme snap-in panls, rch wdgrain finsh, 58" Wx60' Hx17" D, \$30. Ito, x3-1833.

Sears apt-sz wshr/dryr, w/stnd, \$200 for all. Joyce, x3-8105 or 438-3045.

IBM/PC grphcs prntr, less than 1 yr old, \$200. Robert, x3-7129 or 275-9397.

Air hcky tbl, complt; dwn sleepng bag for chld; 3/4-sz violin; L'd lng wool wntr coat; 1 sz 12; genuine lthr jckt w/lining, M's sz 36; rsnbl prices. Call x4187 Linc.

Ovr-the-range hood for ventd or ventlssinstlltn, all s-s, pwrful varbl-spd fan, lghts, 30" w, v gd cond, \$30. Len, x8-2714 Draper.

Hotpoint no frst 17.2 c.f. 5 mo old fridge, \$450 or bst; Hotpoint wshr, avoc, 2 yrs old, \$175 or bst; GE a/c, 4,000BTU, nw \$200 or bst; Whirlpool humidfr, nw, \$150 or bst; K-sz sofa bed, lv seat & arm chr, \$350 or bst; Q Ann wing chr, nw, \$150 or bst, mving, mst sell. Susan, 371-1645.

X-cntry skis, sz 205, boots, W's sz 9½, poles, all for \$65; Fabiano hiking boots, W's sz 9½, usd 1X, \$25. Janet, 876-2851.

Dbl bed w/mttrss & 2 side tbls, \$100; rnd tbl w/4 chrs. \$25. Bill Card. 589-7630 or

Sony XR-45 AM/FM cass, nvr usd, PLL tunr, 10 presets, sep bass & treb, fadr, auto rev. \$170. Chang, .x3-3357.

JVC LE-22 linear tracking blt-dry trntbl. \$110; Panasonic 19" b&w tv, \$65, bth in exc cond, bst offrs. Roger, 497-5122.

Hotpoint gas dryr, almnd, top-of-line, 3 yrs old, exc cond, mvng, mst sell (no gas nw hse), \$200. Paul, x4499 Linc.

Agrium set-up w/suppls: 29 gas lng w/irn stnd & 10 gal, ovr \$200 nw, now \$60; plnt stnd w/4 dbl grow-lux lght, 4 adjstbl glss shlvs, wd base, add lght & O2 for \$30 Cynthia, x3-8982.

Boat: 14' Willis mahog w/fibrglss hull, 30 horse elec strt Johnson mtr, Shoreline trailr, fine shape, \$1,050. Darryl, x7505 Line or 692-6650 (Westford).

2 Renoir tckts, Thurs, 11/7, 6pm, why stnd in line? Phyllis, x3-2689 or Jeanne, x3-4869.

2 rugs, celery green, 9x12, \$40 ea. Carole x3-5376 or 331-8115.

Televideo 924 trmnl, prog fxn & edit keys, ergo desgn, expndbl mem, 2 ports, \$450 or bst. John, x3-8087 or 244-1593.

Wh & gld trim Provncl drssr, 6 drwrs w/lrg mirror, 171/2x501/2, exc cond, \$125. Call 893-0299.

Monochrome video card w/prntr adptr for IBM or cmptbl PC, \$100. Beth, x3-6805 or John, 924-7342 eves.

GE colr tv, 12", \$140; Toshiba AM/FM/cass stereo, \$35; bkcase, \$10; squash & reqtbll reqts, \$6; X-entry skis, 195cm, sz 9, \$30. Jill, x3-6706, 5-6pm only.

Radar detctr, Whistler 2 superhet, 1 mo old, \$49. David, x3-4682.

TI 56 prgrmmbl calcitr w/prntr/safety cradl, like nw, stll in bx, \$200 or bst; Hart, Shaffner & Marx M's wool sprtscoat, sz 44, like nw, \$75; 6-persn infltbl boat, usd 1X, \$175. Jim, x3-8941 or 547-3590

Apple II+ Sys, 1 drv, 64K, askg \$425; sftwr avlbl also. Ray, x5-8771 dorm or 494-5201.

GE tstr ovn, \$40 (orig \$55); 8x4' exrcs mat, collspsbl for easy storage, \$80 (orig \$120), bth practelly br nw; trntbl w/8-trk cass playr, \$25 or bst. Jeff, 491-6861, 491-6396, lv mssg if not hm.

1/2 gal, qts & pts. Call x3-7235.

Bos Symphny Orch rehrsl tckts for 2/5/86, \$14/pr. Marty, x2846 Linc.

Singer sewng mach, exc cond; Fendi luggage, exc cond; begnnrs guitr & case; rllr skts, indr/outdr. Call x3-1784 12-3pm

Vehicles

'69 BMW, exc cond, askg \$6,000 or bst. Call 497-1590

'69 Austin-Healey Sprite cnvrtbl, 4 cyl, v gd cond, nd to sell, \$1,400. Bob, 735-4565

'69 VW Bug, blown cltch, mch rst but othrws decnt bdy & eng, for prts/rpr, \$150. Bernard, x3-4990 or 497-5122.

'71 Saab 96, 115K, orig lovng ownr, inc hop mnl & assrtd xtra prts, trs, \$900. Call x3-6261.

'71 Mercury Comet, 2-dr, gd rnning cond \$200. Jim, 628-6084.

'71 17' "fan" travl trailr, sleeps 6, slfcntaind, exc cond, askg \$2,700. Call 344-8892 aftr 6pm.

'72 Olds Cutlass w/75K orig, grn w/wh top, wh int, rns exc, spoke wht cvrs, \$1,400 or bst. Glenn, 5738 Linc or 263-0143 aftr 6pm.

'72 Chevy Chevette, 4-dr, 125K, stereo auto, ps, pb, some rst but rns well, v rlbl, snw trs, \$300 or bst. Call x7014 Linc or 862-1935.

'72 Volvo sta wgn, locatd in Milton, 1 ownr, rns well, askg \$600. Call 696-0894.

73 Saab 99, gd mech cond, fair bdy, inspetn stekr, drv it away, \$500 or bst. Veronique, x3-8147 or Thierry, x3-1941 or 721-1319 eves.

auto, nw trs, alt & exh, \$1,100. Call 494-1652.

'75 Plymouth Valiant, slnt 6 eng, 93K, rlbl, some bdy rst, avlbl Nov, \$500 or bst. Scott, x3245 Linc.

'76 Toyota Corolla, 2-dr, brwn, 4 cyl, rear wndw dfrst, AM, hi-bck frnt buckt reclin-ing seats, carptd, std trans, orig ownr,

'76 Toyota Corolla prts car, gd bdy, v hi mi eng, mny nw prts, \$200 or bst. Russ, x3864 Linc or 894-1334.

'76 Honda Civic, 4-spd, mnl trans, 116K, starts & rns well, doesn't lose oil, 30mpg, gd elctrcl, grt trs, \$400. Call x3-6856 or x4179 Linc or 484-8932.

'76 Chevy Monza cpe, 62K, 2-dr, 4 cyl, rnning gd, nw exh, trs (so/wi), coils, shcks & muff, askg \$325. Eric, 666-8554. '76 Renault LeCar, nw batt, snw trs

muff, 35mpg, mnl trans, rns well, \$400. Kiyoshi, x3-6389. '77 Honda Accord, a/c, 8-trk, rblt eng, 1st w/maint rcrd, \$1,400. Call x3-6997

'77, Dodge Aspen sta wgn, fair cond, \$1,000. Alfonso, x3-8966 or 661-4852 eves.

reg gas, 4-spd, AM/FM, 57K, v gd cond, \$1,000. Call x3-6640. '77 VW Rabbit (Germn-md), nw cltch, shcks, tune-up, v gd rnning cond, AM/FM/cass dk, \$800. Ruth, x3-4722 or

777 VW Rabbit (Germn-md), 2-dr htchbck

78 Toyota Corolla, auto, 86K, snw trs, nv exh & brks, mnt cond, grt cty car, \$1,500 nego. Call x3-1772 or 489-3855.

641-1711.

78 VW Rabbit, nw eng, sunrf, AM/FM, gd cond, \$1,800 or bst. Jim, x3-6712 or 354-6267.

'78 Chevy 1/2-ton pick-up, 8 cyl, fltside, AM, 1 ownr, 74K, 1,100. Kitty, x3-6166. '79 Fiat X1-9, 5-spd, a/c, 40K, AM/FM

'79 Subaru 6F cpe, 5-spd, lo mi, gd rpr rcrd, gd eng, well cared for, \$2,500 or bst. Dan, 484-8546, lv mssg.

'80 AMC Spirit DL, 4 cyl, 4-spd, 80K, ps pb, AM/FM stereo, v well maint, mny opts, \$1,850. Karem, 876-8148.

'80 Chevy Monza, less than 49K, 4 br nw trs, vnyl rf, 2-dr, gd rnning cond, \$1,800 or bst. Pat, x2092 Linc or 389-8137 aftr 5pm.

'80 VW Rabbit, 4-spd, 4-dr, exc cond, no rst, no dnts, lux AM/FM/cass, a/c, \$2,100 or bst. Call x3-8932 or 391-1240.

'80 Renault LeCar, \$700 or bst. Lorenzo.

'80 Datsun 310GX, exc rnning cond, AM/FM/cass stereo, nw trs & fuel pmp, no rst, book valu \$2,900, askg \$1,900 or bst.

'81 Ford Escort htchbck, gld, AM/FM stereo, tape dck, exc cond, 82K, a/c, rad trs, \$2,000 or bst. Call x3-7117 or

auto, no rst, exc cond, \$2,400 or bst. Paul, x8-4596 Draper or 444-4532.

bth 45K, \$5,000 & \$7,000 or bst. Call x8-4290 Draper or 577-8922 eves.

x5004 Linc or 334-4341. '82 Camaro Berlinetta, 305 V-8 4bbl, a/c,

AM/FM/cass, ps, pb, pw, p seat, p lcks, crs cntrl, tlt whl, silvr, perf cond, \$7,250. Glen, 494-9132 eves.

'82 Chevy Chevette, exc cond, only 23K, looks & rns like nw. \$3,800 or bst. Alvaro. x3-7128 or 497-9129 eves.

'83 Ford F150 pick-up, 8' bed, 6 cyl, 3-spd, ps, pb, slid rear wind, step bumpr, hiddn AM/FM/cass, well maint, Sept insp, 38K, \$6,400 or bst. Tom, 926-9158 eves.

'83 Chevy Cavalier, 18K, AM/FM/tape, 5-spd, full yr GM warr, Rusty Jones, exc shape, \$5,600. Andy, x3-3613 or 497-6215

clth int, 35-45mpg, a/c, AMI/FM/cass, mst sell, \$5,900 or bst. Howie M. x3-6137 or

661-4111. 84 Pontiac Sunbird, 2-dr htchbck, s, po defog, 18K+, 35mpg hiway, askg \$6,200.

price, exc cond, evry avlbl opt, a/c, AM/FM/cass/eqlizr, extnded warr, 30mpg. Chuck, x8-3361 Draper or 774-2045 aftr

Housing

Everett, lrg 5 rm apt, quiet st, w-w, mod K&B, prchs, nr trans, \$575+ utils, sec dep & refs reqd. Sharon, x8-3956 Draper or 387-3390 aftr 5pm.

Ski 93: fully accomdtd twnhse, sleeps 6-8, 2 full baths, mins to Waterville Valley, Loon & Cannon Mts, rec facits & more

twnhse, sleeps 8, 2 baths, 2 mi frm At-titash Ski Area, rnt nw for fall & wntr vactn wks/wkends, rsnbl rates. Eileen, x8-2806 Draper or 395-9154. Rm for rnt in lrg hse on xprss bus line to

Cambridge, 1BR apt, \$525/mo inc ht. Joan, x3-1973 or 491-9073.

Somerville sublt avlbl 1/1/-8/31/86, 2BR, dshwshr, w-w carpt, a/c, wshr/dryr on ea fir, off-st sheltrd prkg, 1/2 mi frm Davis or Porter T, on 88 bus line, cats ok, \$600/mo inch ht. Tina, x3-3993 or 628-6092 eves.

Animals

2 teen-aged orange & wh kttns, 1M, 1F. nd gd hm(s), littr-traind, fradly. Anne, x3-4416 or Laura, 776-2839.

Orange & wh 6 mo old cat, free to gd hm, "Gucci" is frndly, lvabl, & gives gd massages when happy. Call 577-1790 aftr

Wanted

Hithy 65+ yr old M voluntrs for NIA funded study on eating pttrns & the effect of food on mood, recv \$200. Sharon/Teri.

East/Albany stckr in exch for Hayward

Lot (Medical). Alfred, x3-2916.

Sublet, 1/2BR furn/unfurn apt, for spring or spring/summr sessins. Ashraf, x3-3075. Married cpl sk 1BR apt to rnt in Cambridge or nrby, now thru Jan, range \$450-550. David, x3-2163.

Viola for impecunious but promising stdnt. Alfred, x3-2916.

Rm/apt nded by frndly, considerate, quiet 40's guy, writr, MIT emp, nr MIT or on bus or T line. Hank, x3-7380.

Prof sks 2BR condo, or partnr to split 2/3-fmly hse in N Camb area. Call 491-1738 ams or eves. To borrow VHS tape of seasn premiere of

Miami Vice, aired 9/27, will pay. Bob,

Roommates

Waltham, quiet hse nr stores, T, gas ht, applncs, w/d, shr w/MIT emp thru 6/1/86, no smkrs/furry pets. Oded, x3-8598 or 899-2428

Carpool

Rdrs wntd to/frm Brookline, 9-5. Helen, x3-1467

Vanpool rdrs wntd, Manomet-MIT, 7:30-4:30. Edwina, x3-4073.

Lost and Found

Missing, borrwd/misplcd, # of 2x2 slides, some in colr, on human rehab eng, inc braille & mobility aids for the blind, artifel limbs, the BOSTON & UTAH arms, the MIT knee & on orthopaedic bio-mechnes, may be in Carousel prictr tray. R.W. Mann, Rm 3-144, x3-2220

Found: sweatr, Oct 8, in Bldg 1 bsmnt, id it & it's yours. Bernard, x3-8114.

Miscellaneous

Pro typng, any area, 10 yrs exp. Marie,

Exp'd typst, v accurate & prmpt, rsnbl rates. Diane, x3-5646.

Club exp'd DJ avlbl for any party, rsnbl

rates. Call x5-6611 dorm.

Wrd pressng of theses, paprs, etc, rsnbl rates. Andrea, 232-8523.

Surplus Property

The Property Office has the following ex-cess MIT equipment for transfer within MIT. Unless noted, items are at the Equip-ment Exchange, 224 Albany St, open Tues & Thurs, 11am-3pm. After 30 days, items are sold to individuals. Where noted, bids and offers go to Tom Donnelly, Property Disposal Officer, E19429, x3-2779, with envelope so marked. Always reference case number on envelope. MIT reserves the right to reject any and all bids.

Case 1537 – For sale by sealed bid. Bids to be recieved by 3pm EST, Oct 30, 1985. To inspect call Sharon Feldstein, x3-7762: Diablo daisy wheel printer, mdl 1345A. Case 1589 - Transfer of funds required To inspect call Deirdre Dow-Chase, x3-6841: Siemens electron microscope,

Case 1517: Versitec printer plotter, mdl 1100A; Grass Inst Co ac pre-amplifier,

mdl P5R; Lambda regulated power supp-ly, mdl 32M; Polytechnic Research spec-trum analyzer; EG&G laser capacitor, mdl 520; Esterline-Angus graphic am-

meter; High Vacuum Equip evaporator; Honeywell tape drive, mdl 7600; Savant laser diode, pulser, mdl LDP3; SKL

variable electronic filter, mdl 302; EAL X-Y plotter, mdl 1100; Airco electrode ARC welder, mdl HF15; Wollensak tape re-

corder, mdl T-1500; H.P. microwave

power meter; Honeywell digital multi-meter, mdl 850; Singer spectrum ana-lyzer, mdl SPA-3/25; H.P. digital recorder;

L.H. Marshall Co testing furnace; Non Linear Systems digital voltmeter.

Case 1582: Beseler Co Vu-Lite III

Case 1584: Pelouze Co postal scale, mdl

Y5; Sanyo telephone answering machine;

Ford Industries telephone answering

Case 1536 - For sale by sealed bid. Bids to be recieved by 3pm ESF, Oct 30, 1985. To inspect call Ed Cruz, x3-5778: South Bend machine lathe, mdl A.

Cse 1585: Mosler Safe Co combi safe.

projector

mdl 101. Case 1590 - Transfer of funds required

To inspect call Bob Kaynor, x3-5831: DEC Rainbow-software; Graphic Plan-86 and Micro Plan-86.

Case 1586 - Transfer of funds required To inspect call Trudy Zakin, x3-4971: Viking acoustic hood for word processor.

the Institute's volunteer leadership; and

work with Institute Faculty and central

administration to develop initiatives

Previous fund-raising experience, in-cluding solicitation of capital gifts, ex-cellent oral, written and interpersonal skills, as well as some travel and eve-

ning/weekend work required. Familiarity with and/or experience at MIT is desirable, although experience at a large research Institute would be considered. Bachelor's degree or higher essential A85-621 Sponsored Research

Technical Assistant, Applied Biological Sciences, to participate in a basic research program in microbial pathogenesis. Indi-vidual will work with a senior investigator on a research problem involv ing DNA cloning and sequencing, protein secretion studies, and mutagenesis. The assistant will also be responsible for maintenance of bacterial stocks, routine maintenance of equipment, and minor laboratory duties. A BA in Biology or a related field is required and a MA in Biology or related field is preferred. Laboratory experience in molecular biology and/or genetics is essential. R85-840

Technical Assistant-Molecular Bio-logy, Applied Biological Sciences, to participate in a basic research program on poliovirus pathogenesis. Duties volve maintaining and carrying standard cell lines within the laboratory, growing virus and viral mutants, and a small amount of general laboratory tasks. The assistant will be expected to spend the majority of the research time working with a senior investigator on a research problem involving cloning, sequencing and immunologic characterization of viral mutants. A BS in Chemistry, Biochemistry, Biology or Microbiology is required and a MS in Biochemistry or Molecular Biology is preferred. In addi-tion, research laboratory experience in RNA or DNA cloning and sequencing or in mammalian tissue culture is highly desirable but not essential. R85-832,

Research Specialist (temporary-one year), Materials Science & Engineering, to perform ultrapurification and synthesis of inorganic compounds to be used in the development of state-of-the art optical devices. A BS in Chemistry is required. Ex-perience in inorganic synthesis and knowledge of colorimetric analysis and general laboratory techniques desirable. R85-831

nical Assistant, Biology, to work on DNA repair processes and genetic recombination with bacterial viruses. A variety of genetic and biochemical techniques are employed. A BS in Chemistry or Biology, and prior experience working with bac-teria and bacterial viruses with a focus on genetics and biochemistry is required.

Registered Nurse, Clinical Research of the Head Nurse, research physicians and investigators. Will be responsible for general and specialized nursing procedures and medications for adolesc adult patients on a twelve-bed, well-pa-tient research unit. While working close-ly with laboratory, dietary and outpatient departments, individual will have complete knowledge of all the patients' conditions and studies being performed. Will be required to become familiar with requisitioning and test-updating patient data in computer. Accurate observation and charting is necessary. Must be a graduate of an accredited nursing program, Massa-chusetts registered and have a minimum of two years recent clinical nursing experience. Must be able to assume res bility and to work with a team approach to patient care. R85-828

Fiscal Officer, Laboratory of Architecture and Planning, will provide assistance to the Administrative Director of the Aga Khan Program for Islamic Architecture in fiscal planning and supervision of finan-cial matters for all aspects of the program. Responsibilities will include the de velopment and maintenance of a financial management plan, preparation of all fiscal reporting statements, reports and budgets, establishment of control systems for cost effectiveness, and management of computer-based accounting system to be implemented in the future. The fiscal of-

POSITIONS AVAILABLE

It is Institute policy not to discriminate against individuals on the basis of race, color, sex, sexual orientation, religion, handicap, age, or national or ethnic origin in the administration of its programs and activities.

This list includes all nonacademic jobs currently available on the MIT campus. Duplicate lists are posted on the Women's Kiosk in Building 7, outside the offices of the Special Assistants (10-215, 10-211) and in the Personnel Office (E19-239).

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

Persons who are NOT MIT employees should call the Personnel Office on extension 3-4251. Employees at the Institute should continue to contact their Personnel Of-

ficers to apply for positions for which they feel they qualify.

Oveta Perry 3-1594 Dick Higham Virginia Bishop Appointments: Therese McConnell

Ken Hewitt Kenneth W. Chin 3-4269 Sally Hansen 3-4275 Appointments:

Administrative and

Academic Staff

Kim Bonfiglioli

Appointments: Nancy McSweeney

Assistant Director, Resource Development Office, to supervise a group of four engaged in the direct support of the fundraising efforts of Resource Development personnel, deans and faculty members. Will complete background reports, pros pect evaluation, preparation of prospect lists, inquiries of computerized data bases, and maintenance of records and files. In addition, will prepare background memoranda recounting interaction with and suggesting strategies for future contact with prospects and donors, corporations, foundations and individuals. Frequent contact with development staff and academic personnel on fundraising matters necessary. Three years cons experience in fundraising and/or adminis tration, preferably in a university environment. Effective writing and munication skills, appropriate background in development research and direct supervisory experience are essen-tial. A Bachelor's degree is required.

Sr. Editor, Alumni Association, to perform general editorial and writing a ments for Technology Review, including covering conferences and seminars, and analyzing current issues in technology as reported in other magazines and through interviews. Additional duties will include researching and writing short contributions, commissioning and editing articles written by professional writers, scientists, and engineers and helping commission material and selecting from submitted manuscripts from scientists and engineers. The understanding of issues in science, engineering, and technology policy is required along with writing and editing skills appropriate to a general au-dience. In addition two or three years experience in journalism and/or exposure either academic or practical - to science,

Assistant Acquisitions Librarian I,

The Libraries, will perform under the direction of the Head of the department to manage the Libraries' exchange and gift rograms. Within the framework of the Libraries' collections philosophy and policies, will develop and maintain exchanges with foreign and domestic part-ners, will arrange for final dispersal of discarded materials, and will coordinate acceptance of major gifts with the Associate Director for Collection Management and Technical Services and division al librarians. In addition, under the direc-tion of Serials Acquisitions Librarian, will carry out problem-solving related to ordering, receipt, invoicing, and physical processing of serials and documents, will participate in Department and system wide committee work for policy/procedure formulation, as well as in special projects and will participate in the planning for and implementation of an online serials and implementation of an online serials control and acquisitions system. MLS from an ALA accredited library school and substantive preprofessional technical services or collection management experience is required. Reading knowledge of one or more foreign languages is pre-ferred. Well-developed interpersonal skills and oral and written communication skills are required as well. A85-628

Administrative Officer, Physics, to be responsible for the general administration of a large academic department. Duties will include the preparation and submis-sion of the departmental budget, long-range planning for faculty and finances, administration of fund and research ac counts, and preparation of payroll reports.
Will be expected to support and participate in departmental advisory committees and perform special assignments as re-quired. Ability to work with a large and quired. Ability to work with a large and diverse faculty is essential. Must have experience with accounting and budget data, and familiarity with the maintenance and operation of database programs. A Bachelor's degree and five years experience required. C85-162

Analyst Programmer II, Alumni Asso ciation, to assist database users through consultation and diagnosis of application problems; assist in development of exter nal system specifications and compute programs; create programs using NATURAL, PL1 or other languages for user applications, data update, entry analytical studies or reporting; test and document programs for operational use and future maintenance; prepare and/or review documentation for existing and new programs; assist in program imple-mentation and maintenance; prepare and conduct training programs for users; maintain a high level of knowledge of computers and computer systems; establish and maintain technical relationship with staff of Administrative Systems, Alumni Information Manageme ni Association and other users of Alumni/Gifts database. Good oral, written and interpersonal skills essential. Two to three years in computer programming and some experience in computer related customer support necessary. A85-624

Assistant Dean for Development, Dean's Office, School of Architecture and Planning, will develop all phases of a ma-jor fund-raising effort to expand endow ment and operating support for the scho and will participate in planned future Institute campaigns. Specific duties will in clude preparing a plan of action for fund raising and playing a central role in the identifying and soliciting major prospects for support including alumni/ae, friends, corporations, and foundations. A Bachelor's or advanced degree is required. Excellent interpersonal and organizational skills are necessary as well as demon-strated experience in effective fund raising. Familiarity with and/or experience at MIT is desirable, although equivalent experience at large research or cultural in stitutions would be considered. Some fa miliarity with the fields of architecture and planning is also desirable. A85-622 Assistant Dean for Development,

School of Humanities and Social Science to develop existing fund-raising activities within the School, and to participate in planned future campaigns. Will work with the Dean and Development Office to solicit likely major prospects for school support including alumni, friends, corporations, and foundations; coordinate school activities with MIT's Development Office; work with Alumni Association and

Bruins tix, 11/10, vs MN, \$25/pr; Symstereo, exc cond, \$2,700 or bst, mst sell. Call 926-8472.

Mohi, x3-5806/5069 or 244-7596

'81 Chevy Chevette, 4-dr htchbck, 34K,

'82 Toyota Starlet htchbck, red, AM/FM, 5-spd, snws, \$3,900. Alison Weaver,

'84 Honda CRX, 44K, 5-spd, frnt whl dry,

Paul, x3-0246 or 926-5835, lv mssg '85 Grand-AM Le, willing to sell below bk

ne, x8-2608 Draper or 599-0463 eves. N Conway area: mins frm dwntwn.

Kendall Sq. garg space or off-st prkg avlbl no xtra charge, \$375/mo inc all utils. Nathaniel, x3-2534 or 648-7425.

engineering, or policy making is necessary. A85-631, A85-630

ficer will report to the Administrative Director of the Aga Khan Program and will be responsible for communication and technical coordination with appropriate financial officers at MIT and Harvard University. A Bachelor's degree or equivalent combination of education and experience, and at least two years' administrative financial experience are re-quired. Familiarity with Harvard Univer-sity and/or MIT is desirable. In addition, a familiarity will electronic spread sheets is preferred. R85-827

Sponsored Research Technical Staff-Physicist, Laboratory for Nuclear Science, to participate in the design, construction and operation of polarized targets and sources for the AGS high energy accelerator at Brookhaven Na-tional Laboratory, Upton, Long Island, New York, A PhD or Master's degree in physics and experience with polarized pro-ton targets and with dilution refrigerators is required. This position is at Brookhaven National Laboratory, New York R85-826

Sponsored Research Technical Staff, Laboratory for Nuclear Science (located at the Bates Linear Accelerator Center – 21 miles north of the MIT campus), to work extensively on the maintenance, design, and fabrication of vacuum systems assoc-isted with a linear accelerator. Must be iated with a linear accelerator. Must be familiar with high and low vacuum tech-niques, including their design criteria associated instrumentation, and pumping systems up to the 10-11mm level. Diag nostic experience utilizing the mass spec trometer and the ability to train person trometer and the ability to train person-nel in these techniques is required. Fam-iliarity with cryogenic equipment and ap-plications of this discipline at the 20 k level is highly desirable. Must have BS degree in Engineering or Physics, with at least five years of experience. R85-824

Research Scientist, Plasma Fusion Center, to develop hot plasma diagnostics for the TARA mirror experiment and participate in physics experiments aimed at understanding tandem mirrors, including MHD and energetic particle diagnostics. A PhD in Plasma Physics or equivalent required. Experience in experimental plasma physics, diagnostics and data analysis desired. Demonstrated ability to do detailed plasma physics experiment, including plasma diagnostics and computer based data acquisition and analysis and a working knowledge of kinetic theory, MHD, wave properties and transport associated with plasma fluctuations, as well as knowledge of mirror physics desirable. R85-681.

Library Support

Library Assistant III, Hayden Circula tion (evenings, temporary), to perform general stacking routines on all levels of the Hayden Library. Will shelfread in Science Library and participate in shift of material, searches for missing materials and be responsible for closing. Primary responsibilities will include the circula-tion desk on designated evenings, including all circulation desk functions registering and issuing Consortium cards, taking applications for cards, training and monitoring evening students, providing directional assistance to library users, im-plementing an automated circulation sys-tem in process and performing additional duties as assigned by the Circulation Li-brarian. Some typing required. Minimum 1 year direct/related experience required. Previous library experience preferred. Physical stamina for stacking and good interpersonal skills essential. This is a full-time temporary position until 3/31/86, effective 4/1/86 this position becomes part-time (17.5 hr/week). The person filling this position will have the option of working through 3/31/86 only, or continuing on a part-time basis. Will work Monday-Thursday 4pm-12pm and Friday 11am-7pm. L85-994

Secretary/Staff Assistant

Administrative Secretary, Biology, to provide secretarial, accounting and administrative support for one professor and his large research group. Will do heavy typing and editing of manuscripts, proposals and correspondence, on DEC word processor and VAX computers. Will mon-itor and forecast several research grants, and will assist professor in preparation of budgets for proposals. Will work with de-partment headquarters to prepare forms for appointments, terminations and visas for lab personnel. Will answer phones and serve as information source for de partment and Institute procedures with special responsibility for orientation of new lab personnel. Will mail large volume of reprints, make travel and meeting arrangements, and perform other secretarial and administrative functions as required. Will allocate spending both for personnel and materials. Excellent typing (65+ wpm), use of dictaphone, accurate proofreading, and attention to detail essential. Familiarity with MIT's accounting and administrative systems is Background in science especially biology or chemistry helpful Must be well-organized, able to set priorities, and work well under pressure. Good interpersonal skills essential. with VAX/VMS. Scribe (or Familiarity FinalWord), and computer spreadsheet programs helpful. Minimum 4.5 years direct/related experience required. NON-SMOKING OFFICE B85-004

Administrative Secretary, Office of the Dean for Student Affairs, to maintain all records, statistics on end-of-term grade results, recruitment data, and dence associated with the freshman and undesignated sophomore advisory programs. Will work closely with Executive Officer and student staff in coordinating summer preparations for incoming classes. Additional duties will include monitoring budgets, financial disburse ments, and transfer and special student programs. Will also assist with editing and proofreading of "The Freshman Handbook." Good interpersonal and typ-ing skills required. Knowledge and/or willingness to learn word processing ned sary. Familiarity with MIT desirable Minimum 4.5 years direct/related experience required. B85-891

Sr. Secretary, Treasurer's Office, to per form secretarial duties related to the management of investment real estate in-cluding letter and report preparation, fil-ing, billing and processing of rent and mortgage payments. In addition, in-dividual will prepare real estate property status reports and mortgage reports, and will monitor the fraternity mortgage prowill monitor the fraternity mortgage program. Excellent typing, organizational, and interpersonal skills are required. A knowledge of and/or willingness to learn word processing is necessary. Familiarity with real estate business helpful but not required. Applicants with a Business School degree are preferred. In addition, 2.5 years direct/related experience is required. B85-024 quired. B85-024

Sr. Secretary (part-time), Biology, to work for two professors and associated laboratories. Varied duties will include typing scientific manuscripts and correspondence, assisting in preparation of new research and fellowship proposals, monitoring spending of research grants and other accounts and preparing monthly forecasts. The ability to handle frequent interruptions and to set priorities is necessary. Good typing, organizational, and editorial skills are essential. Prior experience with a word processor and willingness to learn new programs is desired. NON-SMOKER preferred. B85-022

Sr. Staff Assistant/Assistant Produc tion Manager, Center for Advanced Ention Manager, Center for Advanced En-gineering Study, will provide direct sup-port and assistance to the Production Manager in two major specialized areas— Professional Video Productions and Publications Production. Specific duties will include participating in concept development, including selection of subject/author for videotape course, managing development of visuals to be used in video productions, including working with authors and vendors, organizing all mate-rials to be included in publications and managing designs and layouts, using ven-dors and free-lance personnel. In addition, will perform photography, both for use in publications and for advertising purposes, will hire and supervise work of temporary and free-lance personnel and will schedand free-lance personnel and will sched-ule and manage all video editing, in-cluding the development of program open-ings. An undergraduate degree with a minimum of one year of related Video Production experience and one year of publication experience preferred. At least 2 years of supervisory/management is 2 years of supervisory/management is desired. In addition, excellent interpersonal and organization skills are required

Sr. Staff Assistant, Sloan School of Management, to be part of a team responsible for Executive Education Programs at the Sloan School of Management. Duties will include answering and placing phone calls, taking messages and responding to routine inquiries independently, receiving visitors; typing correspondence and other materials; maintaining files; processing applications for programs and responding to routine requests for information; pre-paring requisitions; ordering supplies, and performing additional duties as nec-essary. Flexibility and good interpersonal skills are important. Accurate typing, proofreading skills and attention to detail essential. Familiarity with and/or willingness to learn word processing ned essary. Minimum 2.5 years direct/related experience required. MIT experience preferred but not essential. NON-SMOKING OFFICE B85-001

Sr. Secretary, Materials Processing Center/Ceramics Processing Research Laboratory, to provide secretarial support for one faculty member, several staff, and ceramics processing laboratory communi-ty including visiting scientists and engineers from industry. Duties will include typing correspondence, memos and forms, and assisting editors in preparing reports and proposals. Will assist in preparations for Consortium research review meetings, including contacting individuals from sponsor organizations, answering phones, scheduling appointments, filing, and performing other related secretarial duties. Will monitor monthly accounts, keep records of purchase orders, process invoices for payment, and bill facility usage by Ceramics group and other Institute users of Laboratory equipment and services. Good interpersonal and organizational skills essential. Ability to work independently and as part of a team necessary. Good typing and familiarity with word processing preferred. Minimum 2.5 years direct/related experience required. NON-SMOKING OFFICE B85-996

Sr. Secretary, Office of the Dean for Student Affairs, for the Undergraduate Seminar Program and to the Associate Dean and the Executive Officer of the Undergraduate Academic Support Office. Duties will include responding to questions from students, faculty and staff, helping with new student orientation programs, and general secretarial support in areas of responsibility. Position involves a great deal of interaction with the MIT community both in person and over the phone. Fam-iliarity with MIT helpful. Excellent internal and organizational skills essential. Experience with and/or willing word processing necessary. NON-**SMOKING OFFICE B85-964**

Sr. Medical Secretary, Psychiatric Services, to perform detailed confidential sec-retarial duties including making appoint ents both in person and via telephone, serving as a liaison with outside hospitals, and typing correspondence. Will also work with clinical sociologist in coordinating Institute activities for mer of the international community. Duties will include arranging weekly meetings, preparing and distributing notices, and sisting with volunteer activities. Good interpersonal and organizational skills essential. Minimum 2.5 years direct related experience required. B85-849

Sr. Secretary, Center for Information Systems Research, to provide secretarial support to CISR Associate Director. Will perform secretarial and administrative duties to support seminars, special pro-jects, and accounting activities. Will infrequent contact with managers from private and public sector organizations as well as with faculty, students and administrators at MIT. Will type and proofread correspondence and reports from rough draft or dictaphone often us ing word processor; answer phones; make travel arrangements; arrange seminars and meetings involving CISR's corporate sponsors; process, and assist in account ing-related tasks, such as preparing re quisitions and reconciling monthly statements. Excellent secretarial skills re

quired. Word processing experience essential. Good interpersonal skills and some bookkeeping experience helpful. Minimum 2.5 years direct/related experience required. NON-SMOKING OFFICE B85-862

Sr. Secretary, Plasma Fusion Center, to be responsible for extensive travel arrangements, processing mail, general typing, proofreading, photocopying, and answering phones for the Director's office. Schedule conference rooms and assist in logistics details for seminars and meetings. Perform occasional technical typing (Greek equations) and assist in other areas as needed. Requires 2.5 years secretarial experience and excellent typ-ing, proofreading and interpersonal skills. Familiarity with or willingness to learn technical typing and word processing essential. Flexibility, attention to detail tant. (40 hrs/wk) B84-172

Secretary (part-time), Applied Biological Sciences, to type correspondence, mascripts and research for two faculty m bers. Must have excellent organizational and proofreading skills and be able to spell. Will perform clerical duties as as-signed. Must be willing to learn and use CPT word processor. A high school degree with one year direct/related experience is the minimum requirement. B85-026

Secretary, Office of Sponsored Programs to perform secretarial duties for two contract administrators who are responsible for submission of research proposals, ne gotiation of grants, contracts, and post-award administration for various depart-ments within MIT. Work will include typing correspondence, maintenance of filing system, and telephone coverage. Good or-ganizational skills, willingness to work in a team, and confidentiality important. Good typing necessary. Minimum 1 year direct/related experience required.

Office Assistant

Administrative Assistant, Biology, to provide administrative and office support to the Biology's Finance Office. Duties will include serving as coordinator of pro-posal submissions, preparing payroll reports, serving as primary facilitator for resolution of payroll problems, maintain-ing information systems concerning departmental and research activities, as well as participating in special projects. In addition individual will provide limited assistance with support tasks associated with grant administration and will share office support tasks. Job is heavily finan-cial and requires ability to handle detail ed work with accuracy. Applicant must be willing to learn use of an IBM personal computer for routine activities within the first six weeks on the job. Excellent interpersonal and organizational skills are essential. The ideal candidate will have demonstrated good judgment in previous employment and a flair for coordination.

Accounting Assistant V, Comptroller's Accounting Office, to perform internal cost audits of research contracts and grants; coordinate accounting, audit and cash flow functions with Office of Spon sored Programs, MIT departments and schools. General business education with 3-5 years of accounting experience or BA in Accounting or equivalent combination of formal education and experience re quired. Good interpersonal skills essen

Administrative Assistant (Research Analyst), Resource Development Office, to perform screening and research functions to identify new prospects for support of MIT. Will assist in the design of a Volunteer Control System, research and write background reports for visits by Leader-ship Gifts staff and volunteers, and write programs in NATURAL, supporting vari-ous offices in Resource Development. Specific duties will include screening lists against Alumni Database and reference sources to determine potential new pro-spects for support of MIT, research and evaluate prospects' potential on a case basis, develop and run programs on elec-tronic databases to track MIT affiliates and stock prices, and develop research procedures for screening such references as Going Public and the IPO Reporter. Will work with the Volunteer Control area to design files and fields needed, and define communication links for maintaining current data. Will train and generally supervise one Sr. Office Assistant. Min-imum 4.5 years direct/related experience required. Post high school education can count towards experience. Experience in Development Office desirable. Ability to analyze file materials and reference data, and to organize assignments and work in-dependently essential. Accuracy with dedependently essential. Actuacy with de-tails and ability to work under pressure and functional typing preferred. Knowl-edge of CMS/NATURAL, or a willingness to learn necessary. NON-SMOKING OF-FICE S85-009

Administrative Assistant (Research Analyst), Resource Development Office, to track Institute interaction with 700+ maors and prospects by review of rec ords and incoming information and in fre quent consultation with Resource Devel-opment fundraising officers, faculty and deans; prepare action lists, agendas, and follow-up reviews regarding major cultiva-tion and solicitation situations; and main-tain up-to-date on-line records of all such activities. Will review files and daily mail flow to log proposals, pledges, gift pay ments and all fundraising contact bet ween the Institute donors and prospective donors considered to have potential for major gift support. Will participate in regular prospect review sessions v director and associate director an Resource Development staff. Maintain electronic database, including input and backup, sorting, proofing of records, and monthly printout of Prospect control re-ports for corporation, foundations and in-dividuals. Minimum 4.5 years direct/related experience required. Post high school education can count towards experience. Analytical skills, ability to orga nize assignments, ability to meet dead-lines and the ability to work independently after training period essential. Good communication, typing, word pro-cessing and list processing experience, ofreading skills desirable, NON-SMOKING OFFICE S85-008

Account Representative, Operations and Systems, to ensure the quality and

Ceramics may provide answer to radioactive waste disposal

(continued from page 1)

changed," Professor Hobbs explains. "Then you alter the rock slightly so that it can absorb and neutralize the radionuclides-the radioactive particles released by waste.

Professor Hobbs was describing the work of ceramics scientist Ted Ringwood at the Australian National University, who developed a ceramic known as SYNROC, the future wasteform of choice for the permanent encapsulation of radioactive wastes left over when reactor fuel elements are reprocessed to reclaim unspent fuel.

SYNROC stands for synthetic rock. Because it is a composite of different types of ceramics, SYNROC-more specifically a later form called SYNROC-C developed especially for reprocessing wastes-will absorb radioactive particles that emit radioactivity across the radioactive spectrum.

'A large absorptive spectrum is necessary for disposal of commercial radioactive waste, Professor Hobbs said, "because in a nuclear reactor you are burning the fuel until you get all of the energy out. This leaves a mixture of waste material that emits radioactive particles that differ widely across the spectrum.

"This is is entirely different from waste left over from the making of nuclear bombs. There, bomb makers throw out everything that is not

The present wasteform for defense waste is glass, which works well, Professor Hobbs

But, as yet, there is no acceptable wasteform for radioactive wastes from nuclear reactors. All national storage dumps are full and nuclear power reactor operators are simply storing astes on their reactor sites.

The reactor waste storage problem is not unique to the United States.

Reprocessing forms the waste into small, solid particles. If ceramics such as SYNROC C prove suitable, these small particles would be mixed with particles of SYNROC and then brought to very high temperatures, fusing the aggregate into a solid mass.

Solidified waste is easy to transport and has a small surface area which prevents exposure of the decaying radioactive waste to the environment.

"A major potential source of degradation is self-irradiation damage," Hobbs points out, which can induce significant structural damage in a ceramic material.'

Swelling may result when ceramics, upon irradiation, lose their crystalline, or highly structured, order and transform into glassy, unordered materials. Additionally, the different materials in composite ceramics may have unequal behavior in radioactive environ-

Swelling in one material and not the others can lead to microcracking, which subsequently

timeliness of production commitments

within the Production Services/Opera-

tions facility. Will monitor preparation of input/jobs for processing, review outputs

to ensure that production runs meet the

clients' production schedules and neces-sary requirements, receive job orders,

report on the status of production runs.

coordinate and control input and file flow to the computer, analyze all production

problems and confer with the appropriate areas of responsibility to resolve problems. Will initiate recovery action to

complete or rerun jobs, notify client offices

of operational processing problems and corrective action taken. Will fulfill ad-

ministrative reporting requirements, maintain daily log of all problems and their resolution. High school education or

equivalent is necessary. Minimum 2.5 years direct related experience required.

Experience in data processing, some of which must be in operations. Shift leader skills, knowledge of hardware concepts,

data processing, operating systems, job control language, production control and analytical ability necessary. S85-013

Sr. Account Representative, Opera

tions and Systems, to ensure the quality and timeliness of production com-mitments within the Production Ser-

vices/Operations facility. Will supervise and assign tasks to Jr. and Sr. Account Representatives, maintain attendance

and vacation log, monitor preparation of

input/jobs for processing, review outputs to ensure that production runs meet the

clients' requirements and specifications

Will meet occasionally with clients to establish production schedules and neces-

sary requirements, receive job orders, and

flow to the computer, analyze all produc

tion problems and confer with the appro

priate areas of responsibility to resolve

problems. Will initiate recovery action to complete or rerun jobs, notifying client of

fices of operational processing problems

and corrective action taken; fulfill ad

ministrative reporting requirements

maintain daily log of all problems and

their resolution. High school diploma or

equivalent is necessary, and a minimum 4.5 years direct/related experience re-

quired. Previous experience in data pro-cessing and operations preferred in

cluding supervisory skills, knowledge of

hardware concepts, operating systems, job control language, production control and

Sr. Office Assistant (Sr. Research Assis

tant), Resource Development Office, to as

sist in research of financial reports and

projects. Proofread material generated by Resource Development. Produce docu-

ments and maintain files. Will assist in

preparation of reports including analyzing

Treasurer's Office records, compiling data

analytical ability necessary. S85-012

rt on the status of production ru Will coordinate and control input and file

jects as necessary. Will maintain Develop-ment Office project files and library of documents and file monthly printouts generated by Treasurer's Office, Minimum 2.5 years direct/experience required Post high school education can count toward experience. Ability to handle details in both financial and written reports, meet deadlines and communicate well with others essential. Accurate typing (40 wpm) as well as analytical skills and discretion regarding confidential in-formation necessary. Familiarity with and/or willingness to learn word processing essential. Some experience with accounting preferred. NON-SMOKING OF-FICE S85-007

Sr. Office Assistant (Sr. Research Assis tant), Resource Development Office, to assist in the compilation and maintenance of background information on gift pros of background information on gift pros-pects and donors. Will maintain donor relations files and tickler system. Will compile giving histories of prospects through a close review of Development Office files and reference books as well as Treasurer's Office printouts and data base. Will assist in the computation of an individual's known wealth, particularly stockholdings, and compose written re ports as needed. Will maintain donor rela tions tickler file system, assist in notify ing faculty, staff and others when a report is due to a donor. Respond to miscellanus written and teleph staff and faculty about corporations, foundations and individuals through files, reference books, electronic databases. the alumni/treasurer's database. Mini mum 2.5 years direct/related experience required. Post high school education may count toward experience. Strong organiza-tional skills and knowledge of grammar and spelling important, Typing (40 wpm) and willingness to learn word processing important. Analytical skills desirable Good interpersonal skills essential. NON-SMOKING OFFICE S85-006

Sr. Office Assistant (Sr. Research Assis tant), Resource Development Office, to perform screening and research functions to identify new prospects and assist in as-sembling and dissemination of data; input data to a Volunteer Control system: search and write background reports for ership Gifts staff and volunteers; run NATURAL programs on the Alumni/Gifts database, Will perform checks to verify information, and assist in running and disseminating regular management reports. Minimum 2.5 years direct/related experience required. Attention to detail, ability to follow through on projects and meet deadlines necessary. Good typing skills (40wpm) and familiarity with word processors or willingness to learn essential. Good interpersonal skills desirable. NON-SMOKING OFFICE S85-005

Office Assistant (part-time), Energy Laboratory, to provide clerical support in financial office of the Laboratory. Duties will include processing invoices, prepar ing vouchers, typing forms and requisi

increases the surface area of the fused solid. Increased surface areas increase the chances that radioactive elements might be carried away, for instance, by groundwater-a process known as leaching.

Professor Hobbs is "trying to understand why transformation should occur in some materials and not others and as a result of different conditions." He and his coworkers are testing the ceramics contained in SYNROC for radiation damage and damage recovery in the hope of understanding and predicting their behavior under disposal conditions.

Professor Hobbs' efforts are part of a collaborative research program being carried out by materials scientists and geologists throughout the US.

Professor Hobbs organized the first meeting of the group at Oak Ridge National Laboratory in Tennessee last year.

'By collaborating instead of duplicating each other's experiments we hope to hasten our understanding of how a radiation environment affects these materials and the eco-system," Professor Hobbs said. "Our objective is to develop intelligent recommendations on how best to handle radioactive waste disposal

South Africa

(continued from page 1)

-A panel discussion on "What Can and Should Americans Do about South Africa?" November 7, 2:30-5pm in Kresge Auditorium, moderated by Professor Rotberg. Panelists at present include Shirley Chisholm, professor of political science at Mount Holyoke College and former member of Congress; Willard Johnson, professor of political science at MIT; Dr. Motlana; John Reed, chairman of Citicorp and a member of the MIT Corporation; Gretchen Ritter, a graduate student in political science, and Oliver Tambo, president of the African National Conference of South Africa.

Mr. Tambo will give a closing address the evening of November 7.

Other members of the planning subcommittee are: Travis Merritt of Humanities; Louis Memnand III of Political Science; Carl Kaysen of the Program in Science, Technology and Society; Marilyn Richardson of the Writing Program; Scott Paradise of the Technology and Culture Seminar; Ms. Ritter and Scott Saleska, a senior in physics.

The Institute Colloquium Committee, recently appointed by the Provost, hopes to bring students, faculty and staff together to consider important issues of our times. All interested members of the community are invited to suggest topics to Professor Frank Morgan, chairman of the committee, x 3-3665, or Dallas Slawter, x3-6776.

> S85-016 Jr. Computer Operator, Information Systems, to handle output from peripher al computer equipment including separat ing and filing printouts; must be able to recognize and report or fix malfunctions on all peripherals. High School diploma or

equivalent education required. S85-995

tions, and assisting others in maintaining

records of accounts. High school gradua

tion with some office experience, accurate typing, facility with figures, and ability to

apply general instructions to specific pro-blems desirable. One year direct/related experience is the minimum requirement.

Service Staff

Electrical M/S (Sr.), Francis Bitter National Magnet Laboratory, will work as part of a 4-man crew responsible for the maintenance of the high magnetic field facility. Within the crew, individual will be one of the two electrical specialists who are charged with the primary responsibil-ity for those jobs involving electrical circuits, machines, and devices. In addition, individual must be a licensed journeyman electrician and should be able to perform with only a minimum of staff supervision. Graduation from a two-day technical school or its equivalent and five years of applicable experience is required.

Sr. Technician (electronic), Laboratory for Manufacturing and Productivity, to assist in laboratory research, or analytical work under direction or supervision of sci-entific personnel. Will operate highly technical experimental apparatus. May direct and train technicians of a grade. Has understanding of the theoretical aspects of the experiments, demonstrated outstanding skill and performance in the particular field of activiand requires little or no supervision Must operate, monitor, and record data on various experiments using oscillosco computers, numerically controlled systems, and other electronic devices. Will select, install, troubleshoot, maintain and air equipment and electronic parts Will interact with computer data acquisition devices collecting test data. Work re quires assembly of computers and related electronic and mechanical instrumenta tion performing modifications as needed support scientific personnel undergraduate and graduate students and visiting scientists in conducting their ex periments. Occasional handling of toxic substances required. Graduation from a 2 year day technical school or its equivalent and a minimum of 5 years of applicable experience are required. Must be familiar with a variety of personal computers and associated hardware. H85-241

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and reading files. Assist in preparation of status reports on key Institute fundraising priorities, and perform additional pro-

A 'day of days' for Franco Modigliani

(continued from page 1)

wife of 46 years, Serena.

There were brief remarks by President Paul E. Gray, Sloan School Dean Abraham J. Siegel and another Nobel laureate in economics from MIT, Professor Paul A. Samuelson, who greeted his close friend with the words, "Hail, Caesar." And if Professor Modigliani's silvery hair was in place—it isn't always—it was because he had borrowed Dr. Samuelson's comb moments before.

Professor Samuelson, in 1970, was the first American to receive the Nobel economics prize. The announcement of Dr. Modigliani's award marked the 13th time in the 17 years the prize has been given that an American has won or shared it. Dr. Modigliani told the press of his unusual wakeup call from Sweden, proclaiming it "the best alarm clock I've had in a long time." He also said he hadn't seen a copy of the citation, but presumed the award was primarily for his theories of savings and corporate finance, which proved to be correct.

Actually, the citation had drawn particular attention to the practical applications of Dr. Modigliani's work. His analysis of savings, the five-member selection committee said, had been "extremely important" in determining the effects of different types of national pension programs. And his work in the area of financial markets, they said, had helped lay the foundation for the entire field of corporate

The committee also noted that his theory of corporate finance, now so routinely accepted, had flown in the face of traditional wisdom. 'That is the true test of a brilliant theory, said a committee member. "What first is thought to be wrong is later shown to be

Dr. Modigliani's basic research in savings, called the "life-cycle" theory, was published in 1954. He was helped in his research by a student, Richard Brumberg, who died of a brain tumor when he was 25. The theory explains household saving by linking it to individual behavior, economic growth and demography. It holds that people save for their retirement-but only for their own old age and not their descendants.

In his work with financial markets, Dr. Modigliani analyzed the effect of any company's financial structure on the stock market's view of its value. He and an associate, Merton Miller, concluded that the market value of a company had no genuine relationship to the size and structure of its debt. Instead, they found, stock market values are determined mainly by what enterprises are expected to earn in the future.

Before the cameras and bright lights in the Sloan School's Schell Room, Professor Modigliani praised "the great institution of MIT—a marvelous place where everything is done to make your work a success." An unabashed MIT rooter, Professor Modigliani had begun the day wearing his MIT tie (early photographs show it), but discovered a spot on it and switched to another tie of con-

ventional design.

Soon after he began speaking, he laced into President Ronald Reagan. "I think one of the biggest surprises of our life. . . is how a man like the president could have. . . gotten elected on the grounds that the deficit was the greatest curse that ever occurred and caused all kinds of harm... Then this man has suddenly turned around and. . .somehow his administration explains that the deficit does not reduce savings," Dr. Modigliani said.



Accompanying Professor Modigliani at the news conference were his wife, Serena, at left, and Dean Abraham J. Siegel of the Sloan School. -Photos by Calvin Campbell

Looking at some of the assembled students, he charged that the administration's fiscal policies were ruining their future. He added, We are ruining the rest of the world, and all of that because the president says that the last thing we're going to do is raise taxes. Well, hell!"

When the press conference ended, Professor Modigliani returned to his office on the fourth floor of the Sloan Building to begin a nonstop series of in-person and telephone interviews that left him little time to savor his latest honor. His lunch was to be a takeout cup of coffee and a turkey sandwich that he gulped down from time to time.

Newspaper and magazine photographers took pictures of him at his desk against a backdrop of a dozen brightly-colored balloons. One photographer convinced him to go downstairs for a shot with the Boston skyline at his back. When another took picture after picture after picture, Dr. Modigliani wryly wondered why it was necessary to work so hard to get an attractive picture. "I think I should be insulted," he joked.

In the eye of the storm stood Dr. Modigliani's administrative assistant, Judy Mason.

As messages piled on his desk, and interviewers crowded in on him, the besieged professor showed remarkable calm and patience, talking to reporters in English, Italian and French, as the situation demanded.

He talked about economics-and other things. No, he is not related to the painter of the same name. Yes, he has two sons, Andre, 45, a professor of sociology at the University of Michigan, and Sergio, 39, of Brookline, an architect. How is his name pronounced? "Modeel-YAH-nee." Yes, he likes to ski and play tennis, and he intends to use some of his \$225,000 prize money to upgrade his laserclass sailboat. No, he won't splurge, but will follow his own theories and spread out his

In his native Italy, Professor Modigliani is even better known than he is in the United States. Italian television, newspaper, magazine and radio reporters vied for his timeand he seemed to recharge himself when talking to them. "It's their warmth and enthusiasm," Mrs. Modigliani suggested.

Bologna, told her the people there were celebrating his achievement and that some were even crying with joy.

Dr. Modigliani, who is Jewish, fled Italy in 1938 to escape the fascist regime, but he openly expresses his warmth for the country and has kept in close touch with the Italian political and economic scene. He came to the United States from France, where he and Serena were married, in 1939. He has degrees from the University of Rome and the New School for Social Research in New York City. He taught and did research at several universities before joining the faculty at the Carnegie Institute of Technology in 1952. He came to MIT 10 years later as a professor of economics and finance and was named an

ever to be elected president of both the American Economic Association and the

Finally, as his day wound down and he emerged from his office, colleagues who had not been able to see him earlier came to him with embraces and warm words. He is greatly admired among economists for his personal qualities as well as his intellectual rigor, as several newspaper writers were to note the

up early the following morning for an appearance on the "Good Morning America" television show) was an interview on the MacNeil/Lehrer Newshour on public tele vision, to be done via remote broadcast from the Channel 2 studios in Allston.

it was a "once in a lifetime" situation. Yes, he said, it certainly was that.

As he sank into the back seat of a cab, he commented on what an incredible year it had been. He was selected to receive the 1985-86 James R. Killian Jr. Faculty Achievement Award last May (he will deliver the traditional Killian lectures April 2 and 9). In September, about 50 former students and colleagues honored him by conducting a conference on his work in Martha's Vineyard, where he has his vacation home. And now he had become the sixth Nobel laureate on the MIT faculty and will go to Stockholm with his family to receive the prize on December 10.

On the news program, he again insisted ne administration should ing the deficit immediately by making cuts in military and civilian expenditures and raising taxes. On this subject, he was stern, even

On a different note, he said he intended to continue what he has been doing, particularly

After the broadcast, he stopped to chat with another guest, a Filipino exile who spoke in Spanish, not a language Dr. Modigliani speaks, but one he understands. And in the darkened lobby, waiting for a cab, he talked with a woman holding a child, mentioning his own four grandchildren. She said she had seen him on television earlier that day and that it was a great honor to meet him in person.

Then he got into his cab and went home.

One caller, a friend at a university in

The congratulatory telegrams that poured in included one from the president of Italy.

Institute Professor in 1970.

As a mark of his stature, he is the only man American Finance Association.

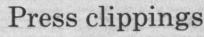
His last responsibility this day (he had to be

A slight, normally feisty man, he was showing the effects of the nonstop activity. A companion tried to give him a boost by saying

because he enjoys his students so much.

Talbot House available

Talbot House, MIT's retreat in Woodstock, Vt., has December weekends available. Any MIT group of 15-27 people may apply to enjoy a relaxing, informal weekend there. Applications for December must be made by October 31. For further information and applications, see Sharon Shea, Rm 7-103, x3-4158.



Here is what some newspapers said about

Professor Franco Modigliani:

The choice of Franco Modigliani as winner of the Nobel Memorial Prize in Economics is a popular one among economists, a tribe often given to highly refined and sometimes vocal dispute. . "Economists all over the world are students, admirers and friends of Franco Modigliani," said Paul A. Samuelson of

Associates describe Professor Modigliani as a man who quickly grasps complex issues and cuts to the core, pinpointing the assumptions upon which an academic argument is made. . .[He is also] a team player, someone who shows no hesitation about working in a group or sharing research ideas. .

'His hair is usually in disarray, and his clothes are always out of control," an acquaintance said. "He is forgetful and his office is stacked with, books, articles and journals."

-Eric Berg, The New York Times

The award to Modigliani, an extremely well-liked man, was applauded across the spectrum of professional economics. Said Samuelson, "With many people with respect to the Nobel Prize, it's a question of 'if'; with Franco, it was only a question of 'when'.

[At a gathering of economists last month near Modigliani's summer home in Martha's Vineyard], MIT's Robert Solow cracked that he had discovered that Modigliani's name was not Italian, but rather Wampanoag Indian. "It means either 'great creator' or 'great destroyer,' but it's not clear which," he said. The point was that while Modigliani's career exhibited both remarkable versatility and unusual duration—four decades since his first important paper-his most striking gift was an ability to remain in nearly constant connection with views of those around him. Whether creating new ways of seeing or combatting them, Modigliani has led a rich, dense life in economics.

...an unreconstructed Keynesian of liberal views [he] has nevertheless managed to keep up with the changing times in an era of surging technical sophistication...

Nor has he been in any sense an ivory-tower economist. Peter Diamond, chairman of MIT's economics department, pointed out that it was Modigliani who took five years to build the large-scale model of the US economy that the Federal Reserve System still uses to gauge the expected effects of policy

Throughout his career, Modigliani remained in close touch with the Italian political scene, where he enjoys a popular celebrity far beyond his American fame. He writes for a leading news magazine, advises politicians and the central bank, and has brought a series of remarkable Italian students to MIT, causing the magnetic pole of Italian economics to switch from Cambridge, England. . .to Cambridge, Mass. .

.it[is] his personal style, not his theoretical achievements, to which economists return again and again. For example, John Bossons of the University of Toronto, an early collaborator, said, "He is a very enthusiastic

advocate and has inspired a lot of people. -David Warsh, The Boston Globe

"There's something central about his work," said Robert Heilbroner, an economist at the New School for Social Research, where Mr. Modigliani received his doctorate in economics in 1944. "He has a sense of what really

In the mid-1970s, Mr. Modigliani predicted that the stock market would appreciate greatly because it hadn't properly accounted for the effects of inflation. He said that he still considers the stock market undervalued, "but not by much." Lately, he said, he has invested in long-term bonds because he believes interest rates will come down over the next few years..

He said he hadn't decided what to do with the \$225,000 Nobel Prize money, but he added that his wife takes care of family finances. "She asks my advice and then does what she thinks best," he said. "She does better than me at it."

-Bob Davis, Wall Street Journal

If Professor Modigliani soothed this listener, it was not because of what he said about current national deficit-spending: "a disastrous policy which is going to be very costlynot to me, because I am old, but to you who are very young." It was, rather, his description of individual economic life. He made the people, if not the government, sound as if we are behaving quite rationally.

-Ellen Goodman, The Boston Globe

Back program set

The Medical Department will offer its "Take Care of Your Back" program beginning Tuesday, Nov. 5, for three consecutive weeks. Led by Adele Smity, physical therapist in the Athletic Department, the program will meet noon-1pm in the Medical Department conference room (E23-297).

The program is focused on preventing back pain. Slides will be shown illustrating proper body mechanics and exercises to strengthen the back. Wear slacks or comfortable clothing to do exercises.

Preregistration is required. The fee is \$20 for students and MIT Health Plan members; \$30 for others. Call the Health Education Service, x3-1316, for further information or to

Peace Prize pleases physician

When the Norwegian Nobel Committee gave its Nobel Peace Prize for 1985 earlier this month to the International Physicians for the Prevention of Nuclear War, it honored an organization with 135,000 members in 41 countries. But the award had special signifi-cance for Dr. Eric S. Chivian, an MIT staff psychiatrist since 1980.

Dr. Chivian, who has documented children's fears of nuclear war in this country, the Soviet Union, Britain and Hungary, is one of the founders of the worldwide organization of physicians cited by the Nobel committee. As such, he plans to be present in Oslo in December when the prize is accepted by Professor Bernard Lown of the Harvard School of Public Health and Dr. Yevgeny Chazov of the Soviet Union on behalf of the organization. The two men, both cardiologists, founded the organization along with Dr. Chivian and four other physicians-two American and two Soviet-and share the title of president.

Dr. Lown, with other Boston-area physicians, formed a group in 1961 called the Physicians for Social Responsibility, focusing its attention primarily on the nuclear war issue. That group lost its momentum in the late 1960s, overwhelmed by such causes as the Civil Rights movement and the Vietnam war. It was revived in 1978 by Dr. Chivian along with Drs. Helen Caldicott and Ira Helfand. Dr. Lown again became involved in the

with Dr. Chazov, out of which grew the present international organization. Dr. Chivian said last week he expects the Nobel award to give new impetus to the work of the physicians' group. "If you look at what happened to Desmond Tutu (the South African

group and arranged a 1980 meeting in Geneva

Anglican bishop and anti-apartheid campaigner who received the peace prize in 1984), it's clear the prize was given to him both to recognize his past achievements and to assist in his future work."

As his latest project with young people, Dr. Chivian is in the process of designing a large questionnaire survey on the attitudes of American and Soviet youth toward the future. The project is under the auspices of the Nuclear Psychology Program at Harvard Medical School and has been endorsed by UNICER and the World Health Organization.



Dr. Chivian in the Medical Department