Massachusetts Institute of Technology

TECH TALK

April 3, 1985
Volume 29, Number 29

Rape program

Cheryl Vossmer, a new member of the Campus Police Crime Prevention Unit, will conduct a special seminar on rape prevention at the Women's Forum Monday, April 8, at noon in the Bush Room (10-105).

The seminar will cover myths and facts surrounding the crime of rape, current MIT, local and national statistics, the psychological makeup of rapists, how to recognize potentially dangerous situations, what to do if you are raped and rape crisis intervention treatment programs. Ofcr. Vossmer recently came to MIT from Brandeis University where she conducted similar programs. Other women members of the Campus Police also will be present.

Another chance

Because of the low turnout at the regular Spring Blood Drive, the Technology Community Association will sponsor a supplemental Blood Drive next Monday and Tuesday, April 8 and 9, noon-6pm in Rm 66-201. No appointments are necessary.

Only 950 pints were collected at the Spring Drive—250 pints short of the goal. The coincident measles vaccination program prevented many regular donors from giving, but blood drive organizers noted that there was also very low participation by faculty and staff.

"It is hoped the Landau Building site will prove more convenient for those on the east side of the campus," they said. For further information, call TCA, x3-4885.

Gray hours

President Paul E. Gray will hold open office hours Thursday, April 4, 3-5pm. Office hours provide an opportunity for Dr. Gray to speak directly with individual members of the community on issues of interest or concern. Fifteen-minute appointments may be made on April 4, by stopping by the reception area, Rm 3-108, or calling x3-4665.

Awards reminder

Friday, April 5, is the deadline for submission of nominations for most Institute-wide awards that will be presented to members of the community at the Awards Convocation Wednesday, May 8. Copies of the awards descriptions and nomination procedures are available in the Undergraduate Academic Support Office, Rm 7-104.

No Tech Talk

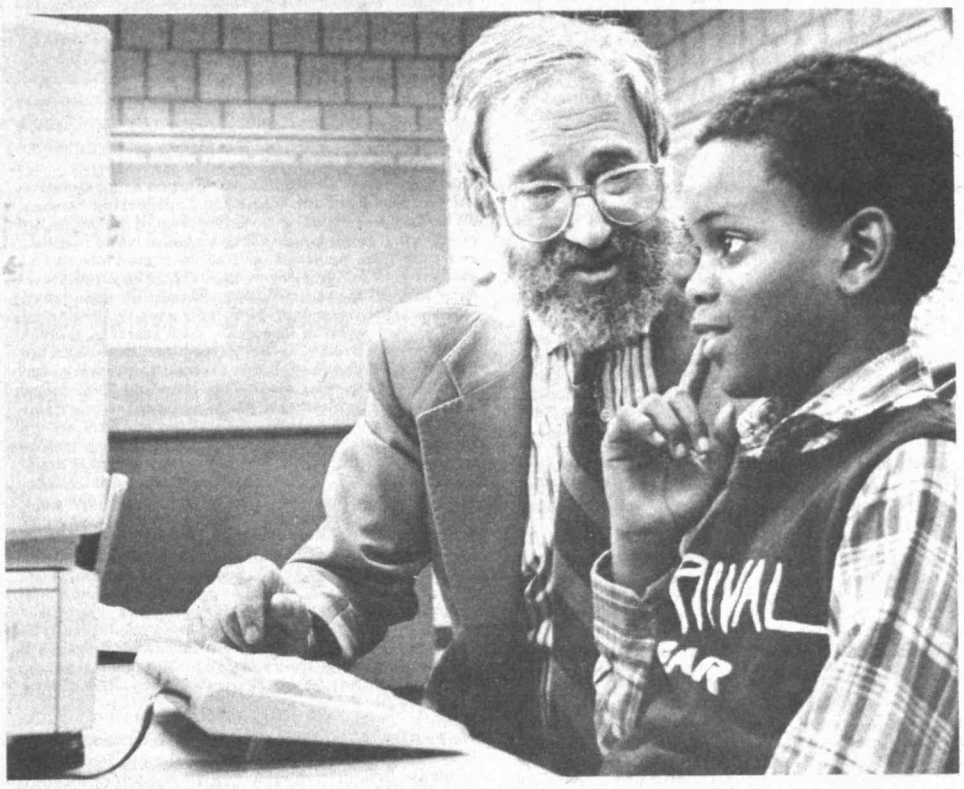
Because of the observance of the Patriot's Day holiday on April 15, Tech Talk will not be published April 17. The Calendar in next week's paper will cover the period from April 10-28. Deadline for listings in Notices, the Institute Calendar and Classified Ads will be **noon Thursday, April 4.**

Snackers wanted

Volunteers are wanted for a snack study to see how snacks affect moods. The only qualifications for the study are that participants must routinely eat three meals a day and not be on medications.

Snacks—two different kinds of candy bars—and questionnaires will be delivered to participants and they will be informed as to how they did when the study is completed. Snacks may be eaten wherever and whenever the participant prefers.

Those interested should send their name and MIT address to Lori Avirett, Rm E25-604.



Shawn Sheppard, fourth grader at Boston's Hennigan School, gets some help in the ways of computers from Dr. Seymour A. Papert, who heads an MIT program that will develop the school as a model of the schools of the future. *—Photo by Calvin Campbell*

MIT, Hennigan School join to work on 'School of the Future'

MIT and the Boston School Department are collaborating in a program that will lead to the development of a model of "the school of the future" at the James W. Hennigan Elementary School in Jamaica Plain.

Dr. Seymour A. Papert, professor of media technology, and School Committee President John A. Nucci announced the five-year project March 22 at a news conference held at the Hennigan School's computer room. The cost, estimated at $1 million, will be met through a grant from IBM to Professor Papert.

Dr. Papert, recognized internationally as an authority in the use of computers in education, heads the Epistemology and Learning Group at the MIT Media Technology Group. The Hennigan project will be part of the work of that group. A Boston Globe article on the new program quoted Dr. Papert as saying that computers will be used to make education at the Hennigan School "more open,

(continued on page 8)

Civil Engineering anniversary to explore diversity of field

By ROBERT C. Di IORIO
Staff Writer

The program for the April 19-20 Alumni Colloquium that will mark the Department of Civil Engineering's 120th anniversary makes it clear that Webster's definition of "civil engineer" is wanting.

"An engineer whose training or occupation is in the designing and construction of public works (as roads or harbors) and of various private works," says the dictionary entry, dealing tersely with a discipline that is talking these days about productivity in engineered systems, robotics and automation, computer-aided design, rebuilding the nation's infrastucture, environmental engineering and extraction technologies.

Professor Joseph M. Sussman, head of the department, says that the fundamental stategic issue facing the civil engineering profession and the construction industry today "is the integration and utilization of new technologies and methodologies in the solution of the critical problems of modern society."

The social side of the colloquium will begin

(continued on page 5)

Wurtman calls for better labels

An MIT physician-researcher who has studied how the artificial sweetener aspartame affects brain chemicals told a Senate committee Tuesday (April 2) that soft-drink labels should contain information on aspartame content. Current regulations require only that the presence of aspartame be noted.

"I doubt that one consumer or physician in a thousand now realizes, for example, that a can of Tab provides less than one-fourth as much aspartame as a can of Diet-Pepsi or Diet-Coke," said Richard J. Wurtman, MD, professor of neuroendocrinology and neuropharmacology at MIT, in testimony presented to the Senate Committee on Labor and Human Resources.

"The unavailability of this information causes countless people to worry about aspartame who should not because they consume only tiny amounts of it. Moreover, it deprives consumers or their physicians of the ability to calculate how much aspartame they have drunk on days when they think the sweetener might have caused side-effects; and it deprives them of the opportunity to set reasonable

(continued on page 3)

David to give Bueche talk on April 8

For the second year, MIT will be host to the annual Arthur M. Bueche Award Lecture when Dr. Edward E. David, Jr., president of Exxon Research and Engineering Company, speaks at the Institute on Monday, April 8.

The National Academy of Engineering established the Arthur M. Bueche Medal in 1984 to honor a prominent statesman in science and technology each year. As part of the honor, the award recipient is given the opportunity to lecture at any university. The first recipient of the award, Dr. Simon Ramo, cofounder and director of TRW Inc., also chose MIT.

Dr. David, an MIT alumnus and a Life Member of the MIT Corporation, will deliver his talk, "New Strategies in Industrial Science and Engineering," at 9am in Kresge Auditorium. His lecture will be part of a program on "Technology and Risk" that will begin with welcoming remarks by MIT President Paul E. Gray and an introduction of Dr. David by Dr. Robert White, president of the National Academy of Engineering. The program is open to the MIT community.

Other speakers will be R.J. Kruizenga, vice president for corporate planning of Exxon Corporation, on the topic, "The Outlook for New Energy Technologies," and Edwin C. Holmer, president of the Exxon Chemical Co., on the subject, "Agenda for the Chemical Industry: New Safeguards for Health and Safety."

Dr. David, former science advisor to President Richard M. Nixon, was chosen to receive the Bueche Medal because of his "seminal influence on engineering and science policy and in recognition of his outstanding accomplishments stemming from his various roles as advisor to Presidents, leader of industrial research, upholder of engineering

(continued on page 8)

Computer thefts boost crime rate

By CHARLES H. BALL
Staff Writer

Computer thefts—a relatively new category of crime at MIT—contributed to a large increase in 1984 in Institute property losses, according to the annual report of the Campus Police.

The computer losses, combined with a major larceny of funds from the Student Center Committee, drove the year's dollar loss figure to $91,368, compared to $43,947 in 1983.

A total of 14 computers or components—individually valued between $1,000 and $9,000—were reported stolen in 1984, a problem that led to a major crime alert by the Campus Police last summer urging offices with computers to become more security conscious. As a result, more than 80 inquiries were received by the Campus Police about computer anti-theft devices.

"They used to take typewriters, but now they're likely to take a computer," said Campus Police Lt. Anne P. Glavin, who com-

(continued on page 3)

Gray calls for caution on research restrictions

Research universities and the federal government—recently at odds over actions to restrict the flow of scientific information and technology to other countries—can reach agreement through compromise, MIT President Paul E. Gray said today (Wednesday, April 3).

"There need be no conflict between the national interest, broadly and properly construed, and the interests of the research universities of the nation," Dr. Gray told the National Security Industrial Association Conference in Washington, D.C.

"It is important for us as a nation to try and strike a balance between objectives that appear to be in conflict, Dr. Gray said. "The national interest lies not in either extreme but in setting goals and policies which serve both the cause of national security and the larger process of science and technology on which so much of this nation's strength depends."

"As we think about the development of controls, particularly as they bear on technical data," he added, "it is crucially important that there be sensitivity to the subtleties that are involved."

"There is a need for balance, a need for tailoring solutions which fit the problem," he continued. "It is not a question of balancing off the national interests against academic freedom. Indeed, the national interest is served neither by excessive openness to unfriendly nations nor by excessive controls that would have an untoward effect on the production of new ideas, on innovation."

An important step in the right direction, President Gray said, was the decision of the Department of Defense, taken about ten months ago, "to rely on the traditional methods of classification to protect sensitive information rather than to develop a new domain of controls for 'grey areas,' and to

(continued on page 3)

INSTITUTE NOTICES

*—Open to public
**—Open to MIT Community only
***—Open to members only

Announcements

Extra Blood Drive* — Tech Community Association drive, April 8-9, 12-6pm, Rm 66-201. No appointment necessary.

Graduate Student Council Departmental Teaching Awards—The GSC annually presents an award to a faculty member in each department for excellence in graduate student teaching and education. To nominate your favorite professor, see your GSC representative for a nomination form or call the GSC office, x3-2195. Deadline: April 5, 1985.

John Asinari Award for Undergraduate Research in the Life Sciences** — For undergraduates in Course VII, VII-A and VII-B. Deadline, April 19, 1985. For details see Tom Lynch, Rm 56-524, x3-4711.

Examination Schdules—All students should obtain examination schedules at Information Center, Rm 7-121. Examinations not listed or a conflict in examinations (two exams in the same period) must be reported to the Schedules Office, Rm E19-338, Friday, April 19, 1985.

Graduate Student Council Nomination Interviews—For the committee being formed to study the impact at MIT of military support for research and education, April 9-10, GSC Office (Walker 50-222), 5-7pm. Interested graduate students should contact Anne St. Onge, x3-2195 for an appointment, and must also submit a resume and statement of interest to the GSC by Monday, April 8.

R/O Week '85 Volunteers Needed—Student volunteers needed to help plan and run Residence/Orientation Week '85. Pick up an application at the UASO, Rm 7-104.

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. x3-7840.

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 technical work. Contact Eli Polonsky, x3-4000. Leave name and phone number.

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

Tool & Die*—Humor magazine meets Wednesdays, 7pm, Walker 309. No experience necessary.

MIT Student Duplicate Bridge Club*—Bridge games every 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.

MIT/DL Bridge Club*—Duplicate bridge, Tues, 6pm, Student Center Rm 349. ACBL masterpoints awarded; come with or without partner, newcomers always welcome. Special tournaments monthly. Info call Gary Schwartz, x8-2459 Draper, or Mark Dulcey, 576-3745. Admission: $.75/students, $1.50/non-students.

Tech Sports Car Club**—returns to New England Grand Prix! April 17, 5:30pm, Rm 31-161. Track size limited to 40 drivers, so come early for your chance to drive a real race car! Tickets go on sale April 11, Lobby 10.

Tech Model Railroad Club Spring Open House*—Sat, April 13, 2-5:30pm & 7:30-10pm, TMRC Clubroom, Rm 20E-214. For more info, call x3-3269.

MIT Rugby Football Club**—**Men:** practice T/Th, 5-7pm, Field 8. Contact Mike Murphy, x3-8118 or Rich Selesnick, x3-2401. **Women:** practice M/Th, 5-7pm, Field 8. Contact Caroline Richardson, x3-3191. No experience necessary.

MIT Go Club*—Players of all strengths, boards & stones provided, M & Th, 5-8pm, 3rd floor playroom in NE43, Tech Sq. For more info contact Michael Greenwald, x3-6061, or Steve Berlin, x3-6018.

MIT Table Tennis Club*—Round robin tournament competition for all levels, April 27, 9am, DuPont Gymnasium. For info call David 492-4317.

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

MIT Wonhwa-do Club*—meets M-W-F, 7:30pm, DuPont Exercise Rm. Wonhwa-do is a Korean unified martial art. Beginners welcome.

MIT Hobby Shop**—Complete supervised facilities for wood working and metal working. Hours: M-F, 10am-6pm; W, 10am-9pm. Fee $15/per term students; $25/per term MIT community. For info call or visit W31-031, x3-4343.

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 Student Pugwash**—is interested in social responsibility in science and technology. For info call Robin, x3-6466 or 494-8822 (msgs). Also, **Appropriate Technology Discussion Group,** every 2nd Friday, 3pm. For more info, call Carolyn, x3-0484 or Atsushi, x5-8863 dorm.

Women's Ice Hockey Club**—Practices: M/T/Th eves. Club is open to all women of the MIT Community. Beginners welcome. For more info, call Sparky x3-3887.

MIT Women's Rugby Club**—Practices, M/Th, 5-7pm. For info, call Angela Lowrey, president, x5-7370 dorm; Caroline Richardson, captain, x5-6194 dorm or x3-3191 (msg only); or Cindy Woolworth, treasurer, 254-0863.

Lesbians at MIT (LAMIT)*—Weekly study breaks with topics for discussion scheduled regularly, Tuesdays, 7-10pm, Rm 50-306.

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, 262-5090.

Boston Wu-Tang Chinese Martial Arts Association**—Praying Mantis class, Mon, 8-10pm, Lobby 13, Thurs, 8-10pm, T-Club Lounge. Beginners welcome. For more info, call x5-8841 dorm or 497-4459.

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 Eric Brosius, Rm 2-270, x3-3773 for more information.

Religious Activities

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

MIT Hillel Community Seder*—led by Rabbi Dan Shevitz, Fri, April 5, 6pm, Kosher Kitchen, Walker Hall Rm 007. Paid reservations should already have been made.

MIT Hillel Special Passover Lunches and Dinners*—April 6-13, lunch—12-1:30pm, dinner—5-6:30pm, Kosher Kitchen, Walker Hall Rm 007. All food is strictly Kosher L'Pesach.

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

Tech Catholic Community*—Roman Catholic Masses: Holy Thursday, April 4, 8pm; Good Friday, April 5, 3pm; Easter Vigil on Holy Saturday, April 6, 11:30pm; Easter Sunday Masses, 9am and 12noon. Weekday masses: T/Th, 5:05pm, Fri, 12:05pm (except Holy Thursday and Good Friday). Regular Sunday Mass schedule at 9am, 12 & 5pm resumes April 14. All Masses and Services in MIT Chapel. Morning Prayer: M-F, 8:15am, Chapel Basement. Charismatic Prayer Group, Mon, 6:45pm, Rm 1-114. Prayer through Scripture Group, Mon, 8pm, Chaplaincy Library. Bible Study, Wed 7:30pm, Chaplaincy Office. 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 x3-2325/2983.

Meditation and Discourse on the Bhagavad Gita*—**Swami Sarvagatananda, MIT Chaplaincy, head of Ramakrishna Vedanta Society of Boston.** Sponsored by MIT Vedanta Society. Fridays, 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. Viola Sanchez, x3-7141 or 577-1722 or Frank Camacho, x3-8642 or 494-1932.

MIT Baha'i Association*—weekly discussions on the Bahai Faith and the vision of a new world order. For info call Brian Aull, x3-2112 or Roy Steiner, 868-0444.

Islamic Society*—Daily prayers, Ashdown House (basement), 5 times a day. Call 5-9749 dorm, for schedule. Friday prayer, Ashdown House 1-1:45pm, Khutba starts at 1pm, congregation at 1:25pm.

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.

United Christian Fellowship**—(MIT chapter of Inter-Varsity Christian Fellowship), Campus fellowship meeting, Fridays, 7pm, Rm 18-290. Call Ray, x5-7560 dorm.

Campus Prayer Meeting**—United Christian Fellowship meetings, M-F, 4pm, Rm 4-402. All faiths and fellowships welcome to pray for God's work on campus and in the world.

Campus Crusade for Christ**—Family time, 7:15pm, Fri, eves, Rm 37-252, (Marlar Lounge). 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, x3456 Linc.

Noon Bible Study*—Every Wed, Rm E17-438, bring lunch. Ralph Burgess, x3-8121. (Since 1965).

Edgar Cayce Study Group*—Tuesdays, 6:30-9pm, Ashdown House First Floor Lounge. Edgar Cayce's Search for God material will be used as the basis for group discussion & meditation. For info: Dave Rosenblitt, 267-7693, Douglas McCarroll, 497-5539 or Scott Greenwald, 494-8530.

The Church of Christ in Cambridge—Christians meet for worship, study, discussions, fellowship, Tang Hall, 1st & 3rd Sunday each month, 6:30pm. Robert Randolph, x3-4861/3-5085 or Claudia Lewis, 494-1326 (Ashdown).

Graduate Studies

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

American Indian Scholarships, Inc (AIS), Albuquerque, NM, Graduate Assistance Program. Applicant must be of at least one-fourth Indian or Alaska native ancestry; be a member of a federally recognized tribe; and require financial assistance after all other funding sources have been explored. All applicants must complete an application form; and in order to receive this form, a coupon (available from Jackie Sciacca, Rm 3-134) must be completed and mailed to AIS. Deadlines for sending AID Applications Forms are April 30, 1985 for the next summer session, and May 31, 1985 for the next fall-winter academic year.

John D. and Catherine T. MacArthur Foundation, Social Science and Research Council Dissertation Fellowships in International Peace and Security Studies, 1985-86. Candidates for PhD or its equivalent in the physical and biological sciences or the social/behavioral sciences, including all requirements for the degree, except for the dissertation, before the award commences (all fellowships must begin within 12 months of the announcement of the award). Students who already have specialized in the study of international peace and security are not eligible. Competition open to candidates of any nationality and from any country. Fellowships add one year of training to the normal graduate program. During this year, fellows have an opportunity to combine their previous disciplinary skills with specialized training in international peace and security. The training may occur at an institution of the applicant's choice and may consist of formal course work, tutorials, or supervised study with relevant faculty. A second year of support is provided for dissertation research. This research should reflect the broadened scientific perspectives acquired during the training year. Students who wish to conduct research abroad may request additional support for six months to one year. Each award consists of $15,000/year to cover living expenses, travel, and research costs. Additional funds are available for payment of tuition and fees at institutions which host the respective fellow. There will be a fall 1985 deadline for awards commencing in 1986. Postdoctoral Fellowships, which provide a stipend of $30,000/year for two years, are also available. For further information and application materials on both Dissertation and Postdoctoral Fellowships, write (specify which fellowship) to: Social Science and Research Council, Fellowship Program in International Peace and Security Studies, 605 Third Ave, New York, NY 10158 (212/661-0280). Deadline: July 31, 1985 (award announcments Oct 1, 1985).

Improvement in Long Term Disability Coverage

The Compensation Office has announced that retroactive to July 1, 1984, the following improvements are being made to MIT's Long Term Disability Plans for all payrolls not covered by collective bargaining agreements.

The payment formula has been improved to provide payment of 60% of the first $1,000 of monthly salary plus 50% of salary above $1,000, to a maximum of $4,000 per month. The benefit is reduced by:

—The primary monthly Social Security disability benefit an individual is receiving or would be entitled to receive if he or she applied;

—benefits from any workers' compensation law or act;

—the monthly benefit from any other employee benefit program provided by MIT, and

—any disability benefits an individual is receiving for pre-existing conditions at the time of employment by the Institute.

The service requirement is reduced from three years to two years for support staff, creating a uniform two-year service requirement for faculty, staff and support staff members.

The two-year service requirement is waived for disability resulting from accidental injury after employment has begun.

If you have any questions regarding these changes, please contact the Compensation Office, x3-4271 between 9am and 3pm, or your administrative officer.

Other Opportunities

Business and Professional Women's Foundation (BPW) Loan Fund for Women in Engineering Studies. To assist women in their final two years of any accredited engineering program, including undergraduate, refresher, and conversion programs, as well as in graduate studies. Study may be full-time or part-time, but the applicants must carry at least six semester hours during each semester for which a loan is requested. Applicants must be US citizens; have written notice of acceptance for a course of study in engineering accredited by the Accreditation Board for Engineering and Technology; have academic and/or work experience records showing career motivation and the technical ability to complete course of study; and demonstrate financial need. The amount to be loaned to any one recipient will not exceed $5,000/academic year. Additional loans may be applied for up to $10,000 if a satisfactory record is maintained. Interest of 7% per annum begins immediately after program completion. Loans are to be repaid in five equal installments, one each year, for five years commencing 12 months after completion of the educational program. Deadline: May 1, 1985 (all completed applications, statements of acceptance, transcripts, and reference forms). Announcement of loans: July 1, 1985. For applications, send a self-addressed, business-size envelope with two First-Class stamps to BPW Foundation, 2012 Massachusetts Ave, NW, Washington, DC 20036. Please allow at least two weeks for a reply. A sample of the application requirements can be viewed in the Dean of the Graduate School Office/Jackie Sciacca, 3-134.

Public Service Careers Summer Institute for Minority Students at the University of California, Berkeley's Graduate School of Public Policy. Seven-week summer program in communications and quantitative skills for minority college juniors who are interested in admission to top graduate school in Public Policy/Management. Students receive stipends covering room and board in a student housing facility on campus and all those who complete the Institute and go on to enroll in a graduate professional school in public policy will receive generous fellowships. Students can earn five units of course credit for the summer program. Applications and brochures available in the Office of Minority Education (12-185) or in the Career Services Office (12-170; ask for Elizabeth Reed or Diane Wilhoite). Deadline: April 5.

Internships

The following is a list of selected internships. For more information on these and others, please see the Internship Information notebook in the Office of Career Services, Rm 12-170.

Congress of the United States, House of Representatives, Washington, DC. Summer and Fall internships available in Boston and Washington for students interested in government or communications. Unpaid.

The Ford Foundation, New York. Summer intern position assisting members of the Native American Task Force in researching economic development strategies on reservations. Requires graduate training in economic development, business or planning; good research skills; and writing ability. Deadline: April 15, 1985.

International Data Corporation, Framingham, MA. Summer research internships available in marketing research serving the information processing industry. Duties include basic library research, telephone and mail surveys, data analysis and assistance in the creation of written research reports. Pay is $6/hr. Deadline: April 5.

National Building Museum, Washington, DC. Internship Program with positions in the following areas: Exhibitions, Education and Public Programs, Information Center, Historical Documentation and Research Collections, Public Relations and Development, and Publications. Program operates on a continuing enrollment with the length determined by student's availability. Unpaid.

Student Jobs

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

Student needed to work on project which involves the development of new, compatible articulate composite which can be used for structural reinforcement of bone defects and temporary stabilazation of total joint replacement. Research opportunities exist for in-vitro biomechanical optimization experiments and in-vivo biocompatibility studies. Available for UROP, senior thesis, or graduate student research assistantships. Demonstrated productivity in experimental research required. Experience in materials characterization desirable. If interested, send brief resume to: Prof Wilson Hayes, Orthopedics Biomechanical Lab, Beth-Israel Hospital, 33 Brookline Ave, Boston, MA 02215.

Student needed for telephone soliciting (code calling) for stock brokerage and assisting broker in contacting clients. Hours: full or part-time. Contact: Andrea Wolley, Bear Stearns, 1 Ferland St, Boston, MA 02110 or call 654-2400.

Chemistry Dept Research group seeks someone to type seminar reports and correspondence, order office supplies, maintain reprint files, xerox and do other related duties. Hours: to be arranged. Salary: $5.25/hr. Contact Elina, x3-1871, Rm 18-511.

Students needed to work in the Alumni Association's administrative office. Hours available are M-F 9-10, 10-11, 2-3, 3-4, 4-5. Job consists of sorting, distributing and processing incoming and outgoing mail, messenger assignments and other clerical tasks. Wage is $5.50/hr. contact Kathy Finklestein, x3-8264.

Messenger for small graphic arts company needed. Responsible person, familiar with Cambridge ares and parts of Boston wanted. Duties include delivering envelopes to customers, and some light cleaning. Most deliveries made by car, so should be able to drive standard. Some made by foot, or bike, or public transportation. Hours are Thursdays, 1-5 and Fridays, 9am-5pm (possibly more). Wage is negotiable. Contact Jane or Lanadis, Xanadu Graphics, 143 Albany St, Cambridge, 661-6975.

Experienced person needed to do scientific programming in Fortran on VAX system. Prefer applied math, chemistry or physics majors. Hours are 10/wk, flexible schedule. Salary is $6/hr. Contact Dr. Jeff Hoch, Rowland Institute, 100 Cambridge Parkway, Cambridge, 497-4678.

UROP

For information on UROP opportunities, MIT and Wellesley undergraduates should call or visit the Undergraduate Research Opportunities Office, Rm 20B-141, x3-5049. Undergraduates are also urged to check the UROP bulletin boards in the main corridor of the Institute for notices, project listings, summer guidelines, and other information.

Summer UROP—Call for Proposals. *Proposals for summer UROP support are now being accepted. As usual, proposals are reviewed on a first-come, first-served basis, so prompt submission is encouraged. We often begin to discourage requests for UROP dollars after mid-April because of the large volume of money requests. Proposals requesting overhead waiver on wages paid wholly by faculty are welcome as late as May.*

Summer UROP is expected to be a continuation of research already begun; it is an intense, full time commitment for 12 weeks of the summer and is not appropriately undertaken as a part-time activity. Summer funding (including granting or overhead waiver) is contingent upon UROP's receiving evaluations from student and faculty supervisor relating to previous or current UROP projects. M&S requests (including travel) are welcome at any time. Funding decisions will be announced starting the week the of April 15th. Please read the "How to Participate" section of the UROP Directory (pp.14-23) and the UROP Summer Guidelines.

Sea-to-Air Emissions. Intrested student needed to help set up and run a gas chromatographic system measuring reduced sulfer fluxes across the sea-air interface. Work, beinning now and proceeding through the summer, will focus on the sea-water diffusion constants of the gases. Experimental chemistry or physics experience will be helpful, and familiarity with gas chromatogrtaphy a plus. PAY or credit available. Contact: Prof Ronald Prinn, 54-1824, x3-2452, or Neil Donahue, 54-1810, x3-2321.

Spinel Ceramics. Study of composition effects (nonstoichiometry) on the microstructure of dense hot-pressed spinels, a class of ceramic materials with magnetic and optical applications. Fabrication of samples by hot-pressing, followed by heat treatment and examination of structures with electron microscopy. PAY or credit. Possible eventual thesis topic. Faculty supervisor; Prof Yet-Ming Chiang, Dept of Materials Science and Engineering, x3-6471, 13-4026.

Kinetic Studies of Biochemical Separations Using Liquid Emulsion Membranes. Project involves batch and batch-fed reactor studies of amino acid separations using liquid emulsion membranes. Student would be involved with experimental design, membrane formations, and the conducting of batch LEM separations, sample analysis, and simple characterization membranes of the equilibrium phenomena associated with membrane components in aqueous solutions. Contacct: Dr. T.A. Hatton, x3-4588, Dr. D.I.C. Wang, x3-2126, or Michael Thien, x3-6446.

Regulation of Genes which Code for the Nitrogenase Enzyme of K. pneumonaie. Necessary molecular biology of project is nearly completed and the student will be involved in 1)Protein purification, 2)Isolation of protein fragments on HPLC, 3)DNA-protein interaction probed using acrylamide gel-binding assays, 4)In-vitro transcription/translation assay for protein activity, 5)DNA sequencing to "foot-print" protein-DNA action, 6)Investigation of protein-protein interaction between activator and repressor gene products. Energetic interest in biochemistry sought; experience not required. Faculty supervisor; Prof Orme-Johnson. Contact: Paul V. Lemley, x3-1855.

Innovation Center—Microprocessors, Systems, Mechanical Design. Several projects are available at the MIT Innovation Center. Students with some experience in microprocessors (hardware and/or software), systems, or mechanical design are being sought. Please contact Prof Jansson, x3-5180 (Innovation Ctr).

Use of Surfactant Stabilized Emulsion Systems for Use in High- Technology Separations and Purifications. Project directed towards the study of the flow characteristics of emulsions as a function of system parameters such as surfactant concentration and dispersed phase ratio. Careful measurements of the liquid viscosity over a range of shear rates would be necessary. An independent minded individual with the ability to work with a minimum of supervision and with strong experimental skills is sought for this opening. Credit for spring term, possible PAY for the summer. Contact: Prof T.A. Hatton, x3-4588 or Don Wardius, x3-6593.

Photovoltaics: Solar Energy Simulator. To work on redesign of microprocessor to be used in the simulation of the performance of photovoltaic solar energy systems. Simulations to be conducted on-site, e.g., a single family residence, and include feedback of information on energy consumption to the consumer. Objective of the field tests is to determine how the consumer's habits and practices of energy usage change when provided with photovoltaic solar energy supply. PAY available. Contact Prof Bucciarelli, x3-4061, E51-201B.

TECH TALK

April 3, 1985
Volume 29 Number 29

Tech Talk is published 37 times a year by the News Office, Massachusetts Institute of Technology. Director: **Robert M. Byers**; Assistant Directors: **China Altman, Charles H. Ball, Robert C. Di Iorio, Joanne Miller,** Tech Talk editor, and **Calvin D. Campbell,** photojournalist; Editorial Assistant: **Lisa Hirsh**; Reporter: **Lynn Heinemann** (Institute Calendar, Classified Ads, Institute Notices).

Address news and editorial comment to MIT News Office, Room 5-111, MIT, Cambridge, MA 02139. Telephone (617) 253-2701.

Mail subscriptions are $18 per year by first class mail. Checks should be made payable to MIT and mailed to Business Manager, Room 5-113, MIT, Cambridge, MA 02139.

Morrison to begin lectures today

A deepening cocern about scientific and technological illiteracy forms the core of Professor Phillip Morrison's first Killian Lecture today (Wednesday, April 3) at 4:30pm in Huntington Hall (Rm. 10-250).

The lecture—"Energy, the Aether, and the Public Understanding of Science"—"Cosmic Fireworks: Starbursts, Whirlpools, and Fountains"—will be given next Wednesday, April 10, at the same time and place.

Professor Morrison, a rewowned theoretical astrophysicist, has been a leading interpreter of science and technology for the general public through his writings. In a synopsis of today's lecture, he mentions the strange turns that science can take—among them the idea, recently given new respectability, that there can be a rich energy store in empty space, absent of all particles and fields.

While aether, physical properties given to mere empty space, "seems back in glory," he writes, how can the public be expected to understand this energy source when nuclear energy, "conceptually simple and as relevant as life and death, still meets wide incomprehension" after a generation of familiarity.

He asks:

"How will the public ever come to grasp the steadily more complex basis of everyday life? If we cannot promote the growth of wider understanding of the world view of science and technology, we endanger not only our own abstract enterprises, but even the essence democracy. For the necessities of economics will eventually enforce a social division into islands of the trained, who understand enough devise and operate an inceasingly complex technology, within a sea of onlookers, bemused, indifferent, even hostile."

The only remedy, he believes, is "public education, strategically based in public institutions open to all."

He adds: "The rich daily experience of farm kids in Jefferson's self-reliant republic is no longer widely shared. Instead, symbols and images, once strange and scarce, flood the ubiquitous video screens. Schools now need to offer more than symbols: simple and genuine experience, diverse enough to widen the common understanding from which reasoned structures can grow. We need to offer such experience to all our children, rich and poor, from city streets of suburban malls alike."

At the first anniversary celebration on Monday, April 1, of the Jerome B. Wiesner Student Art Gallery: Dr. Wiesner, chairman of the Council for the Arts at MIT, Laya W. Wiesner, and graduate student Hyun-a Park, who was instrumental in establishing the Gallery as a gift of the Class of 1983. In the background is Mary L. Morrissey, director of Campus Information Services. The Wiesner Gallery located on the second floor of the Student Center currently is presenting an exhibit, Asian Places, with photographs and works by graduate students Cheryl Wendelken, Jean Park, and Hyun-a Park, all in the School of Architecture and Planning.

Gray warns on restrictions

(continued from page 1)

regard all basic and much applied research as not subject to classification."

Expressing confidence that a balance can be struck, Dr. Gray told the conference:

"Our competitive position in both defense and civilian areas continues to rely, more than ever, on our universities for both leadership in basic scientific and technological research and as the key source for the scientific and technically-trained talent that we need.

"The universities of the United States have much more to contribute to both the national welfare and to the enhancement of our competitive position in international markets, particularly in markets that involve technology."

While there is legitimate concern about the transfer of scientific and technical information to countries which would use it to their military and strategic advantage, President Gray said, "there is far less understanding of the degree to which quality and progress in science depend on openness and sharing of information within the educational and research communities."

"While I strongly believe that we should avoid strengthening the military posture of unfriendly nations through the careless or unintended transfer of significant technology," he continued, "I believe that restrictive measures to block the free flow of information among the scientific and technical communities are shortsighted and would in most instances be counterproductive."

Dr. Gray has been a leader in counseling caution in attempts to control research, noting that the nature and quality of research depend on open communication and that scientific research has increasingly become an international undertaking.

A year ago, Dr. Gray and the presidents of two other major research universities, Stanford University and the California Institute of Technology, protested administration proposals for controlling the release of unclassified but military sensitive information. They said their institutions might be forced to stop doing unclassified research for the Department of Defense if they were required to give military reviewers the right to restrict publication of some findings.

In his speech today, President Gray said that "many believe that the United States should cut back the flow of ideas and information to other countries, reserving the fruits of its research efforts for itself."

Proposals and actions by the federal government to restrict the dissemination "not just of products, but of ideas," President Gray said, would "strongly alter the basic foundations of our research endeavors and in doing so alter profoundly the system that has historically produced ideas, which have been the basis for many of this nation's technological advances."

All such proposals, he said, "must be carefully weighed against the resulting cost to the research process—to its progress and to its quality."

—Charles H. Ball

Two win Sloan grants

Two MIT faculty members are among 90 young scientists and economists selected recently to receive $25,000 Alfred P. Sloan Fellowships in support of basic research this year.

They are Dr. David Jerison, associate professor of mathematics and Dr. Jean M. Tirole, associate professor of economics.

Recipients of the fellowships are selected for their promise of doing original work in their fields. This year's 90 winners come from 51 colleges and universities and were selected from some 400 candidates.

Wurtman calls for better labels

(continued from page 1)

Dr. Wurtman said that when aspartame is eaten by laboratory rats, the chemical composition of the brain is changed. The amino-acid level is altered and that affects the production and release of some neurotransmitters—chemicals that the brain uses to carry signals from one nerve cell to another. If aspartame is eaten with a carbohydrate-rich food—as would be the case if someone drank a can of diet soda and ate cookies, pasta or a jelly sandwich along with it—the changes are enhanced.

"The changes in neurotransmitter release are likely to affect numerous brain functions, like the control of blood pressure or the appetite, and aspects of behavior," Dr. Wurtman said.

When normal human volunteers consume aspartame in doses that are high, but within FDA intake estimates, blood amino acid levels change "in ways that almost certainly produce corresponding alterations in the chemical composition of their brains," he said. These changes are likely to be more pronounced than in laboratory rats because the rat's liver destroys the phenylalanine in aspartame much more quickly than does the human liver, he said.

Several anecdotal reports by consumers and physicians suggest a relationship between consumption of aspartame-sweetened foods and the appearance of various neurological and behavioral problems, Dr. Wurtman said. The question of whether aspartame caused the signs and symptoms referred to in the reports can be resolved only by controlled clinical studies, he said.

"If aspartame does produce side-effects involving the brain, and if these side-effects result from the sweetener's phenylalanine content, then their production almost certainly requires that large amounts of aspartame—probably several grams—be consumed," Dr. Wurtman said.

The problem at present is that, under existing labeling regulations, it is "difficult if not impossible" for the patient or the physician to know how much aspartame has been consumed, Dr. Wurtman said.

limits on their aspartame intake," Dr. Wurtman said.

Aspartame is marketed under the brand name NutraSweet.

"It is essential that companies which include aspartame in their products be required to indicate on the labels in readable print how much of the sweetener is present in each can or serving," his statement continued.

"This simple change in labeling practice would, I believe, sharply reduce the number of consumers who believe without probable foundation that they have suffered aspartame-related side-effects. Perhaps more importantly, it would also enable physicians to identify those patients who might really have had such responses, so that such people might then undergo controlled clinical testing."

For the past 15 years, Dr. Wurtman has studied the effects of food constituents on the chemical composition of the brain and on various brain functions and types of behavior. His interest in aspartame is linked to phenylalanine—one of the two amino acids in the artificial sweetener—which produces chemical changes in the brain.

In 1980, Dr. Wurtman was invited to testify about aspartic acid—the other amino acid in aspartame—before the Board of Inquiry on aspartame that was convened by the Food and Drug Administration. He concluded that there was no significant risk of toxicity from the aspartic acid. However, he became concerned about the risks that might result from the phenylalanine, especially if—as seemed likely—"the introduction of aspartame into soft drinks would increase the quantities that some people consumed beyond the FDA's consumption estimates, for example on a hot day."

Dr. Wurtman's laboratory at MIT began pilot studies on this question about two years ago. In July 1984 Dr. Wurtman received a grant from the National Institute of Neurological and Communicative Diseases and Stroke to extend these studies.

Nassau to discuss crystal use

Dr. Kurt Nassau, whose research over the last 25 years at Bell Laboratories has been deeply involved with many of the developments that have ushered in the optical communications era, will deliver the annual John Wulff Lecture of the Department of Materials Science and Engineering at 4:15pm April 11 in Rm. 10-250.

The John Wulff Lecture Series is specifically aimed at undergraduates. It recognizes Dr. John Wulff, professor of metallurgy, emeritus, for his many years of teaching during which he repeatedly electrified hundreds of first-year students while giving them their first glimpse of materials science and engineering. Dr. Nassau's lecture, "Crystals for Electronics, Optics and Gems," is expected to follow in that tradition.

A memorable article by Dr. Nassau some years ago in Scientific American began with a reference to gems. "What makes the ruby red and the emerald green?" he asked. The article demonstrated that "color is a visible manifestation of some of the subtle effects that determine the structure of matter."

Dr. Nassau has been active in the growth and characterization of crystals for lasers, ferroelectric, optical and other solid state fields, and in the development of glasses for optical fiber communication and fast ion transport. Notable achievements have included discovery of a series of laser materials based on calcium tungsten oxide; the first continuous solid state laser operation; elucidation with others of ferroelectricity in lithium niobium oxide, an important electro-optic material; preparation of high purity low optical loss vitreous silica for optical fibers, and growth of hundreds of single crystals including early work on synthetic ruby and emerald.

Dr. Nassau holds the BS in chemistry and physics from the University of Bristol and the PhD in physical chemistry from the University of Pittsburgh. He has served on the executive committee of the American Association of Crystal Growth, the Advisory Science Council for Materials Processing in Space, and is presently on the Board of Governors of the Gemological Institute of America. He is a fellow of the Mineralogical Society of America. He holds 14 patents and has written nearly 300 publications, including the book *Gems Made by Man.*

Kovachevich is April artist

By CHINA ALTMAN
Staff Writer

Thomas Kovachevich, an artist and osteopath based in Chicago and New York, will be in residence at the Reference Gallery of MIT's Albert and Vera List Visual Arts Center, April 4-30.

His project, entitled Lessons and Characters, will include a series of exhibitions, performances, interdisciplinary collaborations with MIT faculty and staff members and impromptu dialogues drawing upon his interests in areas such as topology and anthropology.

All members of the community are encouraged to visit Mr. Kovachevich at The Reference Gallery which is open 10am-4pm weekdays and 1-5pm weekends. He is the second artist in residence in this gallery, established by the Committee on the Visual Arts (CVA) as a hybrid of laboratory, studio and staging area.

As explained by Assistant Curator Dana Friis-Hansen, the purpose of this gallery—one of three in the new Visual Arts Center—is to focus on the presence and process of the artist. There will be especially intense activity during the next four days, beginning tomorrow (April 8), when Mr. Kovachevich will be creating his initial exhibition. A reception, open to the community and the public, will be held in the gallery Monday, April 8, 5:30-7:30pm.

It is hoped that the artist in residency program at The Reference Gallery will give students and members of the community a chance for experiencing, in an ongoing and intimate way, the various stages involved in the evolution and realization of an artwork.

Lessons and Characters will begin as an exhibition of paintings based on particular experiences with these paper forms. There will be an installation of new paper forms which will be altered throughout the month and a display of paper characters from both previous and future performances.

Mr. Kovachevich will present two solo performances, the first next Wednesday, April 10, and another at the conclusion of his residence on April 30. Both, at 8pm in The Reference Gallery, will be free and open to the MIT community and to the public. Because seating is limited, reservations will be required; call x3-4680.

A number of collaborative events and dialogues with members of MIT's faculty and staff will take place during the Kovachevich residency, beginning next April 11. A complete schedule will appear in next week's Tech Talk. The exhibition and events are sponsored by the CVA.

Computer thefts boost crime rate

(continued from page 1)

piled the annual report, "and one computer theft can drive up the total larceny figure tremendously."

The larceny of funds over a period of time from the Student Center Committee led to the apprehension and conviction of a student following an investigation by the Campus Police and court-ordered restitution on a monthly basis. In all in 1984, the Campus Police recovered more than $17,000 in stolen Institute property.

In a crime bulletin circulated yesterday, the Campus Police alerted the community to an increase in thefts of wallets and pocketbooks this year. As of mid-March 26 such thefts totaling $893 had been reported, an increase of 23 incidents over the same period last year.

"Never leave personal property unattended," the bulletin cautioned. "Secure valuables and report suspicious activity to the Campus Police, x3-1212.

Thefts of personal property also were up in 1984 ($32,890 against $24,929 in 1983), as were dormitory thefts ($35,852 against $22,945). In both cases, the Campus Police said, most of the thefts involved "the usual problem of wallets and pocketbooks."

The Campus Police received 1,939 complaints in 1984, 36 more than in 1983, and 22 of these involved crimes against persons, down three from 1983. The most frequent crimes in this category were assault and battery offenses, which numbered 14.

MIT police officers, who number 53 and who hold commissions as Massacahusetts police officers, giving them the same arrest powers as regular police, made 96 arrests in 1984—10 more than in 1983—and lodged a total of 147 charges against 81 adults and 15 juveniles. The two most common charges were trespassing and possession of burglary tools.

These were some other year-end statistics compiled by the Campus Police:

	1984	1983
Suspicious Persons Checked	141	248
Motor Vehicle Thefts	30	44
Bicycle Thefts	79	56
Ambulance Runs	3,029	2,670
Escorts	11,743	11,193

THE INSTITUTE CALENDAR

April 3-April 14

Events of Special Interest

New Strategies in Industrial Science and Engineering — **Dr. Edward E. David, Jr, MIT alumnus, president, Exxon Research and Engineering Company, former presidential science advisor,** 1985 Arthur M. Bueche Award Lecture keynote address for "Technology and Risk" session, April 8, 9am, Kresge Auditorium.

7B Applied Biology Open House — Tues, April 9, 2-5pm, Rm 10-105. Faculty will be available to discuss the undergraduate program and answer questions. Pizza and beverages provided.

40 Years After Hiroshima: How to Survive in 20th Nuclear Age — **Profs Herbert S. Bridge, Martin Deutsch, Bernard T. Feld, Anthony P. French, David H. Frisch, Philip Morrison, Cyril S. Smith, Victor K. Weisskopf, Jerome B. Wiesner, and Jerrold R. Zacharias,** Karl Taylor Compton Lecture, Wed, April 17. *The Day After Trinity* — 3pm, Student Center Mezzanine Lounge, followed by discussion of the film led by Prof Feld at 4:30pm; **Symposium Theme** — **Profs Morrison, Weisskopf and Wiesner,** 8pm, Kresge Auditorium, followed by panel discussion of arms control, disarmament and world peace.

Seminars and Lectures

Wednesday April 3

Scientific Writing for the Public — Writing Center Issues in Writing series, 12:30pm, Rm 14N-317.

Pronouncing Short Vowels — Writing Center ESL Workshop, 4:15pm, Rm 14N-317.

Early Recollections of Numerical Weather Forecasting — **Dr. Joseph Smagorinsky, Geophysical Fluid Dynamics Lab/NOAA, Princeton University,** Dept of Earth, Atmospheric, and Planetary Sciences Conoco Lecture, 4-5pm, Rm 54-915. Tea served at 3pm, Rm 54-923.

The Potential Impact of the Computer on the Teaching of Electrical Engineering — **Profs William Siebert, Harold Abelson, Gerald Sussman, MIT Electrical Engineering and Computer Science,** Project Athena Seminar, 3:30-5pm, Rm 34-101.

Picosecond Photoconductive Measurements — **P. Downey, AT&T Bell Laboratories,** EECS/RLE Seminar on Optics and Quantum Electronics, 11am-12noon, Rm 36-428.

Cost/Benefit Analysis of Eliminating Soluble Poison Control in PWRs — **Galal Abu-Zaied,** Seminar in Nuclear Engineering, 3-4pm, Rm 24-213.

Mixed Convection in Channels — **Victor Ianello,** Reactor Engineering Doctoral Seminar, 4-5pm, Rm 24-121.

TBA — **B.W. Rhee,** Reactor Engineering Doctoral Seminar, 4-5pm, Rm 24-121.

Chess and Calculability in Western Thought and Art — **Prof Christopher Becker, Quinnipiac College,** Program in Science, Technology and Society Seminar, 4pm, Rm E51-302.

The US Ship Production Industry: Its Past, Present, and Future — **Prof Howard McR. Bunch, University of Michigan,** Survey in Ocean Engineering Seminar, 3pm, Rm 3-343.

Thermal Modeling of Advanced Gas Turbine Cycles — **Prof Maher El-Masri, MIT,** Thermodynamics Seminar, 4pm, Rm 1-114.

Energy, the Aether, and the Public Understanding of Science — **Prof Philip Morrison, MIT,** Killian Award Lecture, 4:30pm, Rm 10-250.

Lettrism, Body Poetry, Abstract Sound Poetry, Italian and Russian Futurism, Dada, and Kurt Schwitters — **Jean Louis Courtay, French poet, actor and psychologist,** Foreign Languages and Literatures Section lecture, 8pm, Rm 4-159.

A Blackboard Tour of Project Athena — **Greg Greeley, Athena Student Consultant,** Project Athena Seminar, 12noon, Student Center Rm 407. Lab session to follow.

Text Editing on Athena, or How to Sell Your Typewriter — **Marc Campos, Athena Student Consultant,** Project Athena Seminar, 7pm, Student Center Rm 407. Lab session to follow.

Thursday, April 4

An Expert System for Schenkerian Synthesis of Chorales in the Style of J.S. Bach — **Kemal Ebcoglu, SUNY, Buffalo,** Music and Technology Forum, 4:30pm, Rm 66-110.

Relaxation Times and Robustness for Redundant Repairable Systems of Independent Components — **Prof Keilson, University of Rochester,** Operations Research Center Seminar, 4pm, Rm E40-298.

Wideband Metropolitan Networks: CATV and Alternative Possibilities — **Dr. Stephen B. Weinstein, Bell Communications Research,** MIT Communications Forum Seminar, 4-6pm, Rm 37-252.

Optical Bistability: From Physics to Signal Processing — **Prof Hyatt Gibbs, University of Arizona,** Physics Colloquium, 4pm, Rm 26-100. Refreshments served at 3:30pm, Rm 26-110.

Controlled Release of Macromolecules from Biorodible Polymers — **C. Laurencin,** Applied Biological Sciences Seminar, 4pm, Rm E25-202.

Cleanup of Boston Harbor and the Siting of New Sewage Treatment Facility — **Judge Paul Garrity,** Department of Urban Studies Seminar, 2-4pm, Rm E51-332.

Assembly/Disassembly Networks — **Dr. Stanley B. Gershwin, research scientist, LIDS,** Laboratory for Information and Decision Systems Seminar, 4pm, Rm 37-212.

Friday, April 5

Immobilized Cell Production of Xanthan Gum: An Extra- Cellular Polysaccharide — **David K. ‡Robinson,** Chemical Engineering Seminar, 2pm, Rm 66-110.

The Transport of an Inert Gas Through Densely Packed Microbial Cells Within Hollow Fiber Membrane Bioreactors — **Shari Libicki, Stanford University,** Chemical Engineering Seminar, 3pm, Rm 66-110.

Five Grades of Intension Involvement — **Michael Bratman, Stanford University,** Philosophy Colloquiua Committee Seminar, 4pm, Rm 37-212.

Integration of Energy Technology and Architecture: An Overview — **Prof Albert Dietz, Professor emeritus, MIT Dept of Architecture,** Joint Program for Energy Efficient Buildings and Systems, 12-1pm, Rm 1-214.

Mathematical Foundations of Manufacturing Science: Theory and Implications — **Steven H. Kim, doctoral candidate, Sloan School of Management/Mechanical Engineering,** Doctoral Thesis Presentation, 8:15am, Bldg 35 5th floor lounge.

The Radial Electric Field in Tandem Mirrors and Stellarators — **Dr. Daniel Hastings, Oak Ridge National Laboratory,** Plasma Fusion Center Seminar, 4pm, Rm NW17-218. Refreshments served at 3:45pm.

Organic Chemistry at Polymer Surfaces — **Prof Thomas McCarthy, UMass-Amherst,** Center for Materials Science and Engineering Colloquium, 12:15pm, Rm 12-132. Lunch provided 12noon.

Finite Element Analysis of Fluid-Structure Interactions — **Lorraine G. Olson, PhD candidate,** Dept of Mechanical Engineering Applied Mechanics Seminar, 3-4pm, Rm 3-343.

Monday, April 8

Three Dimensional Estuarine Circulation — **Dr. Bill Boicourt, C.E.E.S., University of Maryland,** Dept of Civil Engineering Division of Water Resources and Environmental Engineering Seminar, 4pm, Rm 48-316.

How to Punch a Hole in a Soap Film — **Dr. Fred Kochman, Institute for Defense Analyses, Princeton, NJ,** Applied Mathematics Colloquium, 4pm, Rm 2-338. Refreshments served at 3:30pm, Rm 2-349.

Text Editing on Athena, or How to Put your Typewriter Up for Sale — **Marc Campos, Athena Student Consultant,** Project Athena Seminar, 12noon, Student Center Rm 407. Lab session to follow.

Text Formating on Athena: Scribe — **Susan Gertzis, Athena Student Consultant,** Project Athena Seminar, 7pm, Student Center Rm 407. Lab session to follow.

Shear Layer and Jet Experiments at the McDonnell-Douglas Research Laboratory — **Dr. Raimo Hakkinen, director research, McDonnell-Douglas Research Laboratory,** Dept of Aeronautics and Astronautics Center for Aerodynamic Studies Seminar, 4pm, Rm 37-252. Coffee served at 3:45pm.

Depression — Nightline forum/discussion, 7-9pm, Rm 37-252. Depressed? Have a depressed friend? Join us in our forum discussion.

The African Military and African Intellectuals: The Liberian Case — **Patrick Seyon, visiting scholar, African Research Program, CIS, Harvard,** Center for International Studies Seminar, 12:15-2pm, Rm E38-615. Prof Willard Johnson, Dept of Political Science will chair.

Tuesday, April 9

Unsteady Aerodynamic and Heat Transfer Processes in a Transonic Turbine Stage — **Dr. Martin Oldfield, on leave from Oxford University,** Gas Turbine Laboratory Seminar, 4pm, Rm 35-225. Refreshments served.

Resonantly Enhanced Optical Phase Conjugation in Sodium Vapor — **Bertrand Kleinmann, University of Paris and MIT,** Laser Research Center/George R. Harrison Spectroscopy Laboratory/Research Laboratory of Electronics Seminar on Modern Optics and Spectroscopy, 11-12pm, Rm 37-252. Refreshments follow.

Formation of the Terrestrial Planets and the Moon — **Dr. George Wetherill, Carnegie Institute of Washington,** Astrophysics Colloquium, 4:15pm, Rm 37-252. Coffee served at 4pm.

Thermodynamics of Turbine Cooling — **Prof Maher El-Masri, MIT,** Thermodynamics Seminar, with the cooperation of the Gas Turbine Laboratory, 4pm, Rm 35-225.

Three-Dimensional Integratred Circuits — **Hon Wai Lam, Texas Instruments,** VLSI Seminar, 4pm, Rm 34-101. Refreshments served at 3:30pm.

Symmetries of Current Densities in a Resistive Medium — **Bill Bruno and Andrew Gelman,** Math Dept Geometry Seminar, 3-4pm, Rm 2-136.

Scattering Theory and Gaussian Processes — **Sanjoy K. Mitter, MIT Lab for Information and Decisions Systems,** Statistics Center Seminar, 4pm, Rm E40-298. Refreshments served at 3:30pm, Rm E40-111.

Computers and Work — **Judith Gregory, research associate, AFL-CIO; Harley Shaiken, research associate, MIT Science Technology and Society Program; responding — Prof Michael Piore, economics,** Technology and Culture Seminar, 4:30pm, Rm 9-150. Informal supper follows.

Historical and Contemporary Views on the Force Densities of Ampere and Lorentz — **Dr. David C. Jolly,** Lab for Electromagnetic & Electronic Systems Seminar, 4pm, Rm 34-401A. Coffee served at 3:45pm.

The "Persian" Gulf as a No Man's Land: International Politics and Social Change in South West Asia — **Prof Andrew Hess, director, South West Asia Program, Fletcher School of Law and Diplomacy, Tufts University,** Center for International Studies Middle East Seminar, 4-6pm, Rm E38-615. Prof Philip Khoury, History faculty, will chair.

Implementation of Hybrid Finite Elements for Linear and Nonlinear Analyses — **Prof T.Y. Chang, civil engineering, University of Akron,** Dept of Aeronautics and Astronautics Seminar, 3pm, Rm 33-319.

Wednesday, April 10

Interior Air Quality in Tight Buildings — **William Turner, researcher, Harvard University,** Joint Program for Energy Efficient Buildings and Systems, 1:30-2:30pm, Rm 1-214.

Idioms and Culture (The American Sports Scene and its Idioms) — Writing Center ESL Workshop, 4:15pm, Rm 14N-317.

Brillouin Spectroscopy and the Composition of the Mantle — **Prof Donald J. Weidner, Dept of Earth and Space Sciences, SUNY at Stony Brook,** Dept of Earth, Atmospheric, and Planetary Sciences Conoco Lecture, 4-5pm, Rm 54-915. Tea served at 3pm, Rm 54-923.

Computer-Aided Hydrostation and Hull Surface Definition — **Prof Justin Kerwin, MIT Ocean Engineering,** Project Athena Seminar, 3:30-5pm, Rm 34-101.

Integrated Opto-Electronic Circuits — **J. Carney, Honeywell,** EECS/RLE Seminar on Optics and Quantum Electronics, 11am-12noon, Rm 36-428.

Predictions of Temperature and Velocity Distributions for Flow Recirculation in LMFBR Rod Bundles — **Tsing-Tung Huang,** Reactor Engineering Doctoral Seminar, 4-5pm, Rm 24-121.

Taxation and the Quality of Life: London, Paris, New York, Shanghai, 1800-1900 — **Prof Clifton A. Yearley, SUNY at Buffalo,** Dept of Urban Studies and Planning/History Faculty special lecture, 5-7pm, Rm 1-236.

Cosmic Fireworks: Starbursts, Whirlpools, and Fountains — **Prof Philip Morrison, MIT,** Killian Award Lecture, 4:30pm, Rm 10-250.

Resource Sharing in Local Area Networks — **Prof Leonard Kleinrock, University of California-Los Angeles,** MIT Communications Forum Seminar, 4-6pm, Rm 37-252.

How Do You Perceive Color? — **Joseph Hodnick, lecturer,** MIT Museum illustrated lecture, 7pm, MIT Museum, 265 Mass Ave. Light refreshments served.

Fertility and Choice for Women in Developing Countries — **Odette Alarcon, MD, Mass Mental Health Center; John Kaufman, Harvard School of Public Health, author, *A Billion and Counting,*** Women and International Development: Joint Harvard/MIT Group Seminar, 4:30-6:30pm, Bldg E38 7th floor conference rm. Speakers will address their work in Latin America and China.

Thursday, April 11

Work — **Balkrishina V. Doshi, architect, India,** Dept of Architecture Student Lecture, 6:30pm, Rm 9-150.

The Molecular Details of Motion in Bulk Polymers. Results From Solid State Deuterium NMR — **Dr. Lynn W. Jelinski, AT&T Bell Laboratories, Murray Hill, NJ,** Program in Polymer Science and Technology Polymer Seminar Series, 2:30pm, Rm 66-360. Coffee & cookies served at 2pm.

Crystals for Electronics, Optics and Gems — **Dr. Kurt Nassau, AT&T Bell Laboratories,** 1985 John Wulff Lecture, 4:15pm, Rm 10-250.

An Analysis of the Out-Migration of Foreign-Born Members in the US Population — **Kit-Chun Lam, Harvard University,** MIT/Harvard Research Seminar on Migration and Development, 4-6pm, Harvard Center for Population Studies, 9 Bow St.

The Nucleus as a Tool in Particle Physics — **Prof Wit Busza, MIT,** Physics Colloquium, 4pm, Rm 26-100. Refreshments served at 3:30pm, Rm 26-110.

Friday, April 12

Meeting the Financial Crisis in Transit System Operation — **William Millar, executive director, Port Authority of Allegheny County,** Center for Transportation Studies Luncheon Seminar, 12:45-2pm, Student Center West Lounge. Optional luncheon, 12-12:45pm, $2/students; $4/non-students.

Catalytic Hydroenitrogenation in a Trickle Bed Reactor — **C. Morris Smith,** Chemical Engineering Seminar, 2pm, Rm 66-110.

Surface Forces in Polymer Fluids and Absorbed Layers — **Prof M. Tirrell, University of Minnesota,** Chemical Engineering Seminar, 3pm, Rm 66-110.

Prenatal Development of Functional Connections in the CAT's Visual System — **Dr. Carla Shutz, Dept of Neurobiology, Stanford University School of Medicine,** Dept of Psychology Colloquium, 4:30pm, Rm E25-111. Coffee & doughnuts served at 4:15pm, Rm E25-101.

A Review of Energy Confinement Scaling Laws in Neutral Beam Heated Tokamaks — **Dr. Stan Kaye, Princeton Plasma Physics Laboratory,** Plasma Fusion Center Seminar, 4pm, Rm NW17-218. Refreshments served at 3:45pm.

Readings

New American Poets at MIT — **William Pitt-Root, director, Creative Writing Program, University of Montana and author of *Invisible Guests,*** Writing Program, Fri, April 5, 8pm, Rm 4-270.

Community Meetings

President Gray's Office Open Hours — Thurs, April 4, 3-5pm. Appointments for time with the president are accepted only on the day of Open Office Hours, and may be made by calling x3-4665 or dropping by the reception area in Rm 3-208.

Al-Anon — Meetings every Tues, noon-1pm, Rm 18-290; every Fri, noon-1pm, 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.

MIT Faculty Club — April 3, Omelette Bar, in lounge, 5-7:30pm; April 5, Raw Bar; April 9, Mexican Night, in dining room; April 10, Pizza Night, in lounge; April 12, Raw Bar, in lounge. 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.

Lincoln Laboratory Professional Women's Network — **Recent Trends in Software Engineering and Management — Dr. Lucy Person,** Thurs, April 4, 10m, Rm L-277. Open to all members of the Lincoln Lab community.

Smoking Cessation Program — MIT Medical Dept program, Tuesdays through April 16, 12-1pm, Rm E23-297. Cost: $25/MIT Health Plan members & students; $30/all others. To register, call x3-1316.

Medical Advisory Board Open Meeting — Monday, April 8, 12noon, Rm E23-297. Call x3-1316 if you would like to attend.

Discussion Group for Parents of Adolescents — **Myra Rodrigues & Wendy Rosen,** Social Service Office discussions, through April 16, 12-1pm, Rm E23-501.

Rape Prevention — **Cheryl Vossmer, MIT Crime Prevention Unit,** Women's Forum Special Program, April 8, 12noon, Rm 10-105.

Wives' Group — **Morning Group:** Wed, April 3, **Logan Airport Tour,** for more info, phone Jane Pickering, 924-6999; April 10, **John F. Kennedy Birthplace,** for more info, phone Phyllis Seidel, 566-3200 x7558. Meet at 9:15am at Eastgate (60 Wadsworth St, nr Kendall Sq); children welcome. **Afternoon Group:** Wed, April 3, **The Art of Decorating Easter Eggs — Swiss, German & Dutch Wives' Group members; April 10, The United Kingdom — Jane Pickering, Wives' Group member,** all meetings 3-5pm, Student Center Rm 491. Babysitting in Student Center Rm 407.

The Language Conversation Exchange — sponsored by the Wives' Group. Needs conversation partners for persons interested in practicing languages and exchanging language lessons, including practice in English with native speakers. Effort is made to match persons with similar interests and training. After they are put in contact, the partners make own arrangements. If interested, phone Julie Roberts, x3-1614.

Weekly Exercise Classes — Tech Community Women classes taught by professional instructor Kim O'Brion, Mons, 7:30-8:30pm, DuPont Dance Studio (2nd flr DuPont Gym). Fee: $21/TCW members, $28/non-members; 14 wks; Athletic Card required.

Commodore Users Group — meets monthly at noon time. For more info, call Gil, x8-3654 Draper.

MIT Women's League Informal Needlework Group — Wednesday lunchtime gatherings, 9:30am-1:30pm, Rm 10-340. Bring sack lunch, projects, swap ideas. Coffee and tea served. Meeting dates: April 10, 24, May 8 (rm to be arranged), May 22.

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.

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).

The next meeting of the MITAC Steering Committee will be on Wednesday, April 3, 12noon, Rm 34-401A. Members of the MIT Community are invited to attend.

Quebec and Le Chateau Frontenac. Fri-Mon, April 12-15. For those who missed the last extravaganza, we're doing it again! This time, 4 days and 3 nights. Leave Fri, April 12, 7am, and return Mon, April 15, approximately 8pm. All this and more for $117/pp/dbl occup. *Don't miss a golden travel opportunity!! A LIMITED number of spaces still available. Sign up today, Rm 20A-023. LIMIT 2 TICKETS/PP. MIT ID REQUIRED TO PURCHASE TICKETS.*

Alice in Wonderland. Sat, April 13. The Mad Hatter, Cheshire Cat, and Alice invite you to an enchanting afternoon at New England Life Hall with the Boston Children's Theatre production. 2pm curtain. Tickets: $3.75 (reg $4.50) available in Rm 20A-023.

Swan Lake Ballet. Wed, April 17. Classic performance of superb mastery and artistry, Wang Center, 8pm — tickets $18.35 (reg $22.50). Tickets must be purchased in Rm 20A-023.

***Cosi Fan Tutte* — Opera by Mozart.** Sat, April 27. Delight in Mozart's comic opera about the male-female tug-of- war and the role-stereotyping of the sexes. Performed by the New York Metropolitan Opera at the Wang Center, 8pm. Tickets: $35 (reg $38.50), available in Rm 20A-023.

Montreal Weekend. Fri-Sun, April 26-28. 3 days and 2 nights! *HURRY! ONLY A FEW SEATS LEFT!* Travel to Montreal via deluxe motor coach and stay at the fabulous Le Sherbourg Hotel, right in the heart of the city. Added bonus features include welcome cocktails, 2 full American breakfasts, $20 dinner coupons at the San Remo Restaurant per couple, use of indoor pool and sauna, and a walking itinerary of Montreal. Depart from West Garage at 7am, Fri, April 26; return approx 6pm, Sun, April 28. Cost: $86/pp/dbl occup only. Make reservations in the MITAC office. No refunds. Limit 2 tickets/pp. MIT ID card required.

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-082.

Museum of Science Tickets. Available for only $1. (Pay another $1 at the door, for a total savings of $3/person — reg. $5/person admission).

City Books, are here!! Only $.50.

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

Table Francaise — sponsored by Foreign Languages & Literatures Section. Venez dejeuner avec nous et parler francais! Votre hote: Helle Kristoffersen. Tous les Lundis, de 12:30 a 14:00, Muddy Charles Room a Walker Dining Hall.

Movies

The Great Dictator — LSC Classic Movie, April 5, 7:30pm, Rm 10-250. Refreshments served. $1/MIT-Wellesley ID.

The Karate Kid — LSC Movie, April 5, 7&10pm, Kresge Auditorium. $1/MIT-Wellesley ID.

Seven Samurai — LSC Movie, April 6, 8pm only, Kresge Auditorium. $1/MIT-Wellesley ID.

La Cage Aux Folles — LSC Movie, April 7, 6:30&9pm, Rm 26-100. $1/MIT-Wellesley ID.

All Quiet on the Western Front — LSC Classic Movie, April 12, 7:30pm, Rm 10-250. Refreshments served. $1/MIT-Wellesley ID.

2001 — A Space Odyssey — LSC Movie, April 12, 7&10pm, Rm 26-100. $1/MIT-Wellesley ID.

Diva — LSC Movie, April 13, 7&10pm, Rm 26-100. $1/MIT-Wellesley ID.

Deathtrap — LSC Movie, April 14, 6:30&9:30pm, Rm 26-100. $1/MIT-Wellesley ID.

Music

Noon Hour Chapel Series — Dinosaur Annex Music Ensemble performs music of Ezra Sims, Thurs, April 4, 12:05pm, MIT Chapel. Free.

Noon Hour Chapel Series — Boston Shawm & Sackbut Ensemble perform a program of German Renaissance music, Thurs, April 11, 12:05pm, MIT Chapel. Free.

Affiliated Artist Series — Richard Given, trumpet; Ellen Given, flute; Karen Sauer, piano, Sat, April 13, 8pm, Kresge Auditorium. Free.

Chamber Musicians Needed — to perform in a series of summer community concerts in Kresge Auditorium. Auditions may be required, for you or your ensemble, to determine concert placement. Sign up at the MIT Music Library. Deadline: April 15. Also, informal playing if you're not ready for Kresge Aud. For more info, leave message for Elana Doering, x3-2380.

Chinese Intercollegiate Choral Society — Rehearsals, Sun, 3-5pm, Student Center Rm 491. All who like to sing and can speak a Chinese dialect welcome.

MIT Gospel Choir — Rehearsals, Sat, 10:30am-1:30pm, Student Center Rm 491. Call 247-8691 for additional information.

Theater

Estate of Mind* — MIT Musical Theatre Guild Tech Show '85, April 11-13, 8pm, Student Center Sala de Puerto Rico. Tickets, $5/general, $4/students & seniors, $3/MIT ID.

Dance

Western Square Dancing* — Tech Squares, ongoing beginner's class through April 24, Tues, 8-11pm, Student Center 2nd Floor. Special dance: Sat, April 13, Darrel Sprague, caller and Hope Kaltenthaler, cuer.

MIT Dance Workshop** — Beth Soll, director. Regular meetings: Beginning Technique, M&W, 3-5pm, Dupont Center T-Club Lounge; Improvisation/Composition, Th, 3-5pm, Dupont Center T-Club Lounge; Intermediate Technique, T&Th, 5:30-7pm, Walker 201.

Children's Dance Classes** — Pamela Day, instructor. Creative movement/modern dance classes for children 3-12, West Campus location; children and mothers do not have to speak English. For more info and schedule, call Pamela, x3-5758.

MIT Folk Dance Club* — weekly dancing-Sundays, International 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 de Puerto Rico.

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
Arts and Media Technology Building
20 Ames Street

Hayden Gallery — Albert and Vera List Family Collection: Giacometti to Johns, through April 21. Hours, M-F, 10-4, Weekends, 1-5pm.

Sculpture Archives Gallery — Jacques Lipchitz: Sculpture and Collector, Series tracing development of 20th century sculpture by focusing on works in the MIT Permanent Collection. Guest curator: Jeanne Wasserman, Fogg Art Museum, Harvard. Through April 7. Hours, M-F, 10-4, Weekends, 1-5pm.

Reference Gallery — Thomas Kovachevich: In Residence, Performance artist creates *Lessons and Characters,* an ongoing series of exhibitions, performances, interdisciplinary collaborations and discussions with MIT faculty members. All events free. **Exhibition in Process,** April 4-8; **Exhibition Opening,** April 8, 5:30-7:30pm; **Performances,** April 10 & 30; **The Art of Healing — Dr. John Moses, MD, MIT Health Services,** April 11, 11pm; **Discussion — Prof Benson R. Snyder, psychiatry,** April 16, 12noon; **Conversations About Family — Jean E. Jackson, associate professor of anthropology and archaeology,** April 17, 12noon; **Sensual Chemistry — Prof K. Barry Sharpless, Dept of Chemistry,** April 17, 8pm; **Improvisation Workshop — Beth Soll, director, Dance Workshop,** April 18, 3-5pm; The Science of Collecting, the Art of Ribosomes — Prof Ira Wool, biochemistry, Univ. of Chicago, April 23, 12noon; **A Son's Story: Letters and Photographs from World War II — Prof Hale Van Dorn Bradt, physics,** April 25, 8pm.

THE MIT MUSEUM

Liu Tian-Wei Exhibition, Abstract works showing innovative ideas in compositional principle and a dynamic use of color, while still retaining discernible qualities of traditional Chinese painting, through April 6. **Reflections: Paintings in Chinese Style,** Chinese brush paintings by Geeta Pradhan, architect/painter, through April 6. **MIT Design Services: Jackie Casey and Ralph Coburn,** Showcase of powers by MIT's award-winning designers, through June 29. **A Holographic Environment,** Harriet Casdin-Silver, CAVS fellow and pioneer in the use of holography as an art form. **Gyorgy Kepes at The MIT Museum,** Early photographs, recent large-format polaroids, and color and black-and-white photograms by the MIT artist, educator and innovator in the arts, through June 29. **Of Aerostatic Machines: Early Ballooning in France and Britain,** Prints from MIT's Vail Collection illustrate the development of ballooning as a science and sport including fanciful inventions for steering ballons, and aerial views of Paris and other cities, through June 1985. **Physics at the Laboratory for Nuclear Science: 35 Years at LNS,** through June 30. Hours: Weekdays 9am-5pm, Saturdays 10am-4pm.

Compton Gallery

I.M. Pei: Selected Projects, Architectural drawings, photographs and models in connection with the opening of the Albert & Vera List Visual Arts Center, designed by Pei, through April 27. Hours: Weekdays, 9am-5pm, Saturdays 10am-4pm.

Hart Nautical Gallery

Robert Fulton: Engineer and Artist, Fulton's patent specifications of 1809 and 1810 for his steamboat. Twenty-one drawings and one self-portrait. Through June 29, 1985.

Ongoing exhibits: **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

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 women in the classroom since Ellen Swallow Richards. Building 6: **Laboratory for Physical Chemistry.** Building 8: **Solar Energy, Society of the Sigma XI.** Building 14N, across from Rm 14N-118.

OTHER EXHIBITS

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.

Lincoln Laboratory Gallery — 19th Century American Primitive Portraits, from the Fruitlands Museum of Harvard, Mass, through April 30. For info call Lease Plimpton, x7030 Linc.

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.

Dept of Architecture Student Exhibition Series — Stockholm: Architecture and Planning, organized by Marina Botta, MAAS '80. Cosponsored by DUSP, through April 17. **Housing Options for Sri Lanka,** organized by Nabeel Hamdo and Reinhard Goethert, through April 22. **History, Development and Technology of Earth Construction,** organized by Jean Dethier and Hugo Houben. Sponsored by the Aga Khan Program for Islamic Architecture, N52, 4th floor.

Wellesley Events

Jewett Arts Center* — Alumnae Gifts, gifts from alumnae, their families and friends, including painting, sculpture, works on paper and photography from the 12th through 20th centuries, through June 10. **Moholy-Nagy: The Evolution of a Photographic Vision,** An exhibition of 100 photograms, camera photographs and photomontages plus six films by the Hungarian artist, made in Germany from 1922-1932 when he was at the Bauhaus and living in Berlin. Additional photographs by Man Ray, Lucia Moholy and Rodchenko, accompanied by fully illustrated catalogue, April 10 through June 10.

The Village School* from *Sugawara's Secrets of Calligraphy,* Kabuki Classic — Wellesley College Theatre seeks knowledgeable assistance in all production aspects. Contact producer-director Paul R. Barstow, 235-5895.

Panel Discussion on Starwars* — participants from High Frontier and the Union of Concerned Scientists, cosponsored by Center for Peace and Conflict Studies and Peace Works, April 2, 7:30pm, Science Center Rm 377.

Developmental Aspects of Assertion and Aggression: An Issue for Women* — Gerald Stechler, PhD, Boston University School of Medicine, Stone Center Colloquium on Women's Psychological Development: Theory and Application, April 3, 8pm, Science Center Rm 277.

Teaching About Women: Problems, Prospects and Possibilities* — Peggy McIntosh and Barbara Kneubuhl, Center for Research on Women Luncheon Seminar, April 4, 12:30-1:30pm, Center for Research on Women.

International Benefit Gala* — Benefit for Ethiopia, April 6, 9pm-2am, Tower Court. Admission: $4/person, $6/couple.

Diva* — Slater Center International Week presentation of French film with English subtitles, April 7, 6:30pm, Slater. Reception follows.

Malaysian Luncheon and Travelogue* — Slater Center International Week luncheon, April 8, 12noon. Small admission charge, call x2082 for reservations.

Z* — Slater Center International Week presentation of Greek suspense film, April 8, 4:15pm.

Reagan: Foreign Policy* — Prof Linda Miller, Dept of Political Science, Slater Center International Week lecture, April 9, April 9, 12:30pm, Political Science lounge, Pendleton. Bring your lunch.

El Norte* — Slater Center International Week film, April 9, 4:15pm, Slater Center.

Concert* — Scottish Early Music Consort, April 9, 8pm, Jewett Auditorium.

Japanese Fashions on Videotapes* — Slater Center International Week event, April 10, 12:30pm. Bring your lunch.

Workshop on National and International Security* — Natalie Goldring, coordinator, Wellesley College Center for Peace and Conflict Studies, April 10, 4:15pm, Davis Lounge, Schneider.

Esperanto* — David Wolff, Slater Center International Week lecture, April 10, 7pm, Science Center.

Women in High Tech: The Employer's Point fo View* — High tech employers, Center for Women's Careers seminar, April 10, 7pm, Library Lecture Rm. $5/general public.

Chinese Luncheon* — Slater Center International Week luncheon, April 11, 12:30pm, Slater. Admission: $2.

Paid Work and Motherhood: Source of Stress, Source of Reward — Rosalind Barnett,** Center for Research on Women Luncheon Seminar, April 11, 12:30-1:30pm, Center for Research on Women. Bring bag lunch, coffee provided.

The Wellesley College Dancers* — First annual performance of original works in variety of styles, April 11-12, 8pm, Alumnae Hall.

Henry IV Part I* — Shakespeare Society production, April 11-13, 8pm, Shakespeare House. Admission: $2. Seating is limited.

Video of Moroccan princess Leila Mirrian's Wedding* — Slater Center International Week Middle East Luncheon, April 12, 12noon. Admission: $2.

Live Music from the Andes* — Fortaleza, Slater Center International Week concert, April 12, 5-6pm, Schneider Center. Munchies served.

International Talent Show* — Slater Center International Week show of traditional music and dances performed by students and faculty, April 12, 7:30pm, Jewett.

Organ Concert to Benefit Peace Center* — Paul Tegels, Netherlands, April 12, 8:30pm, Houghton Memorial Chapel. Donations: $10, $5/students, free/MIT or Wellesley ID.

International Festival* — Slater International presentation of food and cultural activities, April 13, 12-4pm, Schneider Student Center.

Spring Fashion Show Benefit* — Ethos, Alianza and Slater International show, April 13, 8pm, Alumnae Hall. Admission fee helps benefit student-initiated minority fellowship fund.

Jazz Concert* — prism Jazz, Wellesley College jazz band, April 14, 8pm, Jewett.

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

Send notices for Wednesday, April 10 through Sunday April 28 to Calendar Editor Rm 5-111, before noon, ***Thursday,* April 4.**

Memorial set for Nealand

A memorial service will be held Saturday, April 13, at 2pm in the Christopher Wren Church, Sandwich, for G. Edward Nealand, retired director of purchasing. Mr. Nealand, who was 73, died March 19 following an accident in his home in Sarasota, Fla.

A native of Newburyport, Mr. Nealand graduated from Newburyport High School in 1928 and received the SB degree in chemistry from MIT in 1932. He worked as a chemist for the Carter Ink Co. from 1933-1946 when he returned to MIT as manager of laboratory supplies. He was named MIT's first director of purchasing in 1955.

Mr. Nealand was the architect of an Institute-wide central purchasing system which accounted for nearly $20 million annually in purchases or contracts at the time of his retirement in 1975. He was regarded by his colleagues as one of the deans of college purchasing.

In 1961, Mr. Nealand went to Afghanistan to assist with the estasblishment of the Kabul University. He was responsible for writing the specifications for equipping the science buildings there.

From 1960-66 and again 1968-69 Mr. Nealand was treasurer of the National Association of Educational Buyers and he also served as president of the organization in 1966-67. At his retirement, he was voted an honorary life member of the organization.

Mr. Nealand was active in Masonic circles, belonging to the Nehoiden Lodge in Needham, the Richard C. Maclaurin Lodge at MIT, and DeWitt Clinton Lodge in Sandwich. He had also served as treasurer of the MIT Faculty Club.

He was also active in MIT alumni affairs as a member of the Alumni Council and as a class officer. Most recently he served as chairman of the 40th, 45th and 50th reunions of his class. At the time of his death, he was serving as vice president for membership of the MIT Club of Cape Cod.

He is survived by his widow, Eleanor Davies Nealand of Sandwich; two daughters, Judith Wilson of Waldoboro, Maine, and Patricia Crowell of Derry, N.H.; a son, Gregory, of Millis, and seven grandchildren.

Memorial contributions in his name may be made to the MIT Alumni Fund for Scholarships.

John J. Briganti

John J. Briganti, a houseman in the housing system, died suddenly March 13 at the age of 63. Mr. Briganti, a former resident of East Boston, lived in Medford. He had worked at MIT since 1965.

Survivors include his widow, Anna Petrucci Briganti; two children, Joseph and Bernadetta, both of Medford, and three sisters.

Richard W. Francis

Funeral services were held March 22 for Richard W. Francis, 64, of Mattapan, a former houseman in the housing system. Mr. Francis, who had worked at MIT since 1963, died March 18 following a long illness.

He is survived by his widow, Cleora Carter Francis; three daughters, Geraldine Porter, Andrea S. Francis, and Cleora Francis-O'Connor; two sons, Richard C. and James V. Francis; eleven grandchildren and four great-grandchildren. Memorial contributions may be made to the William B. Price Unit of the American Cancer Society.

Former MIT visitor killed in Rome

An internationally known Italian labor economist, who was a visiting professor at the Sloan School of Management in 1974-75 and in 1979-80, was murdered in Rome March 27.

Ezio Tarantelli, 43, president of the Institute of Economic Studies (the Christian Democratic labor union in Italy), lecturer in political economy at Rome University, and economic counselor of the Italian Confederation of Labor Syndicates, was shot by two men just after he entered his car in a parking lot near the university, according to a dispatch in The Globe from United Press International. The report said the gunmen left a leaflet from the Red Brigades terrorist group near the body. Officials said the murder was tied to a disagreement among labor unions over a June referendum on whether to restore a wage increase for industrial workers. It is presumed that he was murdered for his constructive role in reducing inflation and relieving unemployment through peaceful negotiations among the unions, employers and government.

Professor Tarantelli was a student and colleague of Dr. Franco Modigliani, Institute Professor and professor of finance and economics at the Sloan School. They had coauthored several papers.

He is survived by his wife, Carol Beebe, originally of Pittsburgh, Pa., who was a Wellesley student when they met, and a son Luca, 13.

Civil Engineering anniversary to explore diversity of field

(continued from page 1)

Friday, April 19, with a 6pm gathering at the MIT Museum.

The following day, from 8:45am to 12:15pm, alumni and guests will hear from a number of MIT faculty members.

Professor Sussman will welcome alumni, their spouses and friends of Course I to the plenary session in Rm 54-100 that opens the colloquium April 20. The purpose of the session, he says, "is to describe these new concepts and how they apply to improving productivity in engineering, construction, field monitoring and inspection, redeveloping our decaying infrastructure, protecting our supply of clean water from hazardous wastes, and our continuing search for energy resources."

The School of Engineering Perspective will be presented by Dr. Gerald L. Wilson, Dean of Engineering, Vannevar Bush Professor of Electrical and Mechanical Engineering.

Dr. Fred Moavenzadeh, William E. Leonhard Professor of Engineering and director of the Center for Construction Research and Education, will discuss, "Technology and Productivity in Engineering Systems: General Concepts, Applications in Engineered Materials."

"Robotics and Automation: Technologies and Applications" will be discused by Professor Gregory B. Baecher, head of the Constructed Facilities Division.

Professor Robert D. Logcher, director of the Computer-Aided Design Laboratory, will discuss "The Computer and Civil Engineering: Future Directions and Implications."

Professor David H. Marks, chairman of educational programs for the Center for Construction Research and Education, will explore "The Infrastructure Problem: The Opportunity for the Development of a New Kind of Professional."

The head of the department's Water Resources and Environmental Engineering Division, Professor Rafael L. Bras, will talk about "Developing and Protecting our Water Resources: A Challenge for Science and Technology."

Professor Charles C. Ladd, director of the MIT SOHIO Center for Scientific Excellence in Offshore Engineering, will describe "Energy Extraction in Extreme Environments: The Challenge of Arctic Engineering."

The colloquium lunch will be held from 12:30 to 2pm at the Faculty Club. The speaker will be Professor Steven R. Lerman of the Department of Civil Engineering, director of Project Athena, a major experiment in computers in education.

The afternoon program, from 2 to 5pm, will be devoted to parallel technical sessions—locations will be announced later—that will focus on the research, education and laboratory programs of the department's four major units.

These are: Constructed Facilities Division, including programs in geotechnical, structural and materials engineering, Professor Baecher presiding.

Transportation Systems Division, including programs in urban, intercity, freight, and passenger transportation, logistics, demand analysis, and network methods. Professor Nigel H.M. Wilson, who heads the unit, will preside.

Water Resources and Environmental Engineering Division, including programs in surface and groundwater hydrology, hydrodynamics, coastal and oceanographic engineering, aquatic science, and water resource systems. Professor Bras will preside.

Center for Construction Research and Education, including programs in construction engineering and management, construction technology, project management and control, and firm and industry structure. Professor Moavenzadeh will preside.

The program will conclude with dinner at the Faculty Club.

Members of the Institute community can obtain registration information by calling either Victoria Murphy or Theresa Lehane at x3-7104.

Computers and Work to be seminar topic

Three people knowledgeable in the field of automation will be speakers at the next session of the Technology and Culture Seminars on Computers and Society Tuesday, April 9, at 4:30pm in Rm 9-150. They are:

Judith Gregory, a research associate for the Department of Professional Employees, AFL-CIO. Formerly research director for 9-5, Ms. Gregory is coauthor of *Office Automation: Jekyll or Hyde,* and has written several reports dealing with the effects of office automation on workers.

Harley Shaiken, a research associate in the Program for Science, Technology, and Society, specializing in automation and labor. His most recent book, *Work Transformed: Automation and Labor in the Computer Age,* was published early this year.

Michael Piore, professor of economics, will be the respondent. His specialty is labor economics and he is coauthor with Charles Sabel of the recent book, *The Second Industrial Divide: Possibilities for Prosperity.*

The seminar is open to the public and will be followed by an informal supper and further discussion in the Student Center.

CLASSIFIED ADS

Tech Talk ads are intended for personal and private transactions between members of the MIT community and are not available for commercial use. The Tech Talk staff reserves the right to edit ads and to reject those it deems inappropriate. MIT-owned equipment may be disposed of through the Property Office, x3-2776.

INSTRUCTIONS: Ads are limited to one (of approximately 30 words) per person per issue and may not be repeated in successive issues. All must be accompanied 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 Institute identification. Ads using extensions may be sent via Institute mail. Ads are not accepted over the telephone.

Deadline is noon *Thursday* before publication.

For Sale

Sailbrd, Tiga Sprint, exc cond, orig $800, $700. Henri, x3-8410 or 547-0551 eves.

2 bed frms. Call x2844 Linc.

TRS-80 Mdl 1, Lvl 2, w/expnsn intrfc, 48K RAM; 2 40-trck SS/SD flppy dsk drvs; LDOS & othr sftwr, $250. Don, x3843 Linc or 369-8134.

Nikkomat EL SRL auto/man camra, Nikko-S auto F1.4 58mm lens w/haze filtr, Vivitar auto zoom, 85-205mm lens w/Sky A1 filtr, prof calib 1984 $250. Wallace, x5629 Linc.

Nikon FG w/all accsers, zoom lens & 1 Nikkor lens, camra bag, $500 or bst. Taiwo, x5-9763 dorm eves.

Guitar, Hondo II acoustc, hrdly usd, exc cond, sounds grt, inc case, bght nw for $150, selling for $85. John, 536-1303 eves.

26" Huffy M's 10-spd bike w/speedomtr, $60. J. May, x8-2843 Draper.

2 BR7813 wsw rad trs on Ford rims, $20. E.J. Casazza, x4743 Linc or 658-4934 eves.

Supr 8 Canon movie dual Chinon prjctr, Kodak splicr, $150 or bst. Richard, x3-2449.

Pine shlf, 4½x2½x1", $20; canvs chr, blck, $15; prssure cookr, $10; rmful of plnt lghts, $5; dorm cookng ware, cheap. David, x5-8841 dorm.

Westinghouse elec ktchn stove & st/st sink, rsnbl. Call 484-2507 eves.

1 pr Heierling ski boots, exc cond, sz 9M, $75; pr Nordica ski boots, gd cond, sz 8M, $50. Kevin Poulin, x3-6137.

IBM PC monochrome display mntr, 1 yr old, bst offr. Jim, x3-5019.

Wall clock, hndmd, signd by artst, $35; ceiling fixtrs, $10-25; carpt sweepr, $10; twin mttrss, $8; lwnmwr w/bag, gas, $50; burglr alrm, nds rpr, retails $500, $75 or bst;; silvr cndlstcks, antq, 12", $100; 2 qltd brwn bedsprds, nw, twin — $10, K-sz — $25; Samsonite attache case, $30. Call x3-6085.

Sears gas clothes dryr, elec igntn, $100; shag rug, approx 12x18, 1-pce, multicolrd, bst offr. Call 438-1156.

Stl bltd rad tr w/rim, P185-75-R13, almst nw, $40. Jay, x3-8531 or 494-8377.

Panasonic prtbl AM/FM/cass stereo playr w/metl tape capcty, Dlby, tps, 1-yr-old, exc cond, orig $300, bst offr. Linda, x5-8755.

Pltfrm bed, solid oak w/lrg drwr, like nw, 1-yr-old, $250 or bst. Call 648-6389.

Olivetti Lexikon 82 typwrtr, exc cond, $100 or bst. Call 924-2464 eves.

Sleep sofa, brwn pld, exc cond 1-yr-old, asking $300; round wh ktchn tbl w/4 chrs, asking $50; 1/4 carat diamnd rng, wh gld, nvr wrn, 1-yr-old, pd $650, asking $350 or bst. Dawn, x3-3833.

W's Columbia 10-spd bike, 27" whls, 19" frm, v gd cond, rcntly ovrhauld. Bruce, x3-5570 or 277-1470 after 6:30pm.

Photgrphc spot mtr, Soligor Spot Sensor II w/Zone VI holstr & scale for use w/Ansel Adams Zone sys, $90. Call 661-9046 9am-10pm.

Changng tbl, walnt finsh, exc cond, $20; sandbx, plstc turtl-shapd, w/top, $15. Chuck, x3-7508.

Sony's smallst Walkman, WM-10, $55; TI-58, $49. Makoto, 494-5284.

Daylab colr prnts frm slides: enlrgr trays, Agfachrome activtr, lrg wtr-pwrd oscillatng prnt washr, blottr book, no drkrm nec, wrks w/any colr procss esp Agfachrome 1-step prntng, orig $400, bst offr. Call 237-9059 eves.

2-cushn lvseat sofa, multi-colr, 61"l, $75; Sears exrcs bike, $25. John, x183-270 Bates Linac.

Winnie the Pooh crib w/mttrss & bmpr pad, wh; wh foldng drsng tbl; wlkr & car seat, exc cond, $150/all. Call 893-0780 or 354-4413.

Red Sox tckts, lwr box, 1 pr, $19/pr, 4/14 Chi, 6/2 Tex, 7/28 Sea, 8/25 Minn, 10/6 Milw. Call 877-9518.

Grl's 14" Strawberry Shortcake bike w/training whls, $25. Lee Linsky, x3-1782.

Arcadia alum 8' slidr w/glss panls usd by Deck Hse, some 4'w, some 3'w, no frms, $20 ea or discnt for all (about 10 pces), u-move. Call x7374 Linc or 259-9130 after 5:30pm.

K-sz beddng: qltd gld bedsprd, $15; cmfrtr, brwn, gld & beige, $15; 1 set sheets & pillw cases, $10. Nancy, x3-4271 9am-3pm or 687-4479 7-10pm.

Olds stdnt trombone, like nw, $175. Marvin, x5902 Linc or 263-6957 after 7pm.

Fluorscnt fixtrs, 8' dbl-tube, rapid-start, $10 ea. Mary, x3-5710 or 423-0734.

LR set: sofa, 2 arm chrs, mtchng cffee tbl, $200; dsk, chst, $10. Laurie, 868-2158 eves.

Fender Rhodes 73 stage piano, gd cond, grt action, asking $450. Call x3-1618 or 628-1710 or 354-2338 eves.

M's Phillips bike, can be convrtd to exercs bike. Michael, x3-6733.

L's coat, grey, full-lngth wrp-arnd, sz 10-12, Canadn-md, 100% wool, wrn only 2X, orig $150, asking $75, may be seen in Rm 5-323. Pat, x3-6829 or 245-5756.

18" 14K gold chain, med wdth, wrn 1X, nw $56, $30; 16" blue sodalite bead chokr, multi-stranded, gld beads & clsp, nvr wrn, nw $65, $30, both $50. Dana, x3-1722 or 947-9412 eves.

Hvy dty washr, $150; rnd formca tbl w/oval insrt & 4 chrs, $65; ltwt couch, $20; sm vanity w/stool, $20; braid thrw rugs, $8-15. Gwen, x3-4250.

Oak & glss stereo cabnt, bght @ Tweeter, $150; oak & glss cffee tbl & 2 end tbls, $60/set. Heather, x3-3315 until 2pm, or 861-1531 eves.

Synthszr w/digtl keybrd, gd cond, exc for hrdwr/sftwr hackr, any offr. Call 494-0328 eves.

Colrful sq dance skrt & blouse, sz 10, $20; nw wh linen lind skrt, sz 10, $20; nw Danish hngng lmp, walnt w/5 wh globes, suitbl for stairwell or high ceilng, $50. Call 862-1935.

Sea Eagle 8 hd inflтbl boat w/paddls & pllws, & pmp to inflte, used 2X on Charles, nw $290, asking $225. K. May 492-4759.

'46 Encyclopedia World-Scope, cmplt set w/'47 yr book & dictnry, mnt cond, $100 or bst. Rosalie, x8-1401 Draper.

Vehicles

'68 Cadillac sdn, exc cond in & out, $900 or bst. Tom, x3-4978 or 749-6645 eves.

'73 Ford Torino sta wgn, 70K, 302 V8, nw exh, batt, etc, rpr rcrd bck to '73, snw trs, $700. Brad, x3-6778 or 734-3650.

'73 Chevy Nova, 80K, ps, pb, eng gd, trs gd, sunrf, $650. Andy, x5-6616 dorm.

'73 VW Beetle, rear wndw dfrstr, AM/FM, no rst, exc cond, $2,000 firm. Jan Blair, x8-2843 Draper.

'74 Pinto wgn, auto, 87K, mch rstr but rns well, nds exh sys, $175. Jim, x4216 Linc.

'74 Plymouth Valiant, 2-dr, beige, rns well, no dnts, gd trs, a/c, auto, lttl rst, $750. Lit, x7480 Linc.

'74 Audi Fox, yellw, sunrf, gd for prts, ie trs & batt, $150 or bst. Pat, x3-5048 or 665-0034.

'75 Dodge Dart Swinger, slnt 6, std, 95K, rns v well, bdy nds wrk, mny nw prts, bst offr. Maureen, x3-5049 or 522-4696.

'75 Fiat 131 sta wgn, auto, AM/FM-/cass, nw brks & strtr, 2 addtnl snw trs, $975 or bst. Hamid, x3-3198 or 494-1611.

'76 Pinto wgn, AM/FM/cass stereo, 110K, 4-spd, gd trs, 4 spares, $575. Call x2875 Linc.

'76 Trimph Spitfire 1500 cnvrtbl, 4-spd, well-maint, all rcrds, nw sft top, AM/FM, snws, minr rst, fun car, $2,150. Brenda, 872-2813 7-9pm.

'76 Plymouth Arrow, 5-spd, 106K, gd trs & eng, some bdy rst, rlbl trnsprtn, $400 or bst. Kelly, x3-7856.

'77 Saab 99GL, 3-dr htchbck, 94K, 4-spd, AM/FM, a/c, rns well, no whl cvrs, $2,600 or bst. Tom, x8-1579 Draper.

'77 Ford Pinto sta wgn, 4 cyl, std, lo mi, gd bdy, gd rnning cond, nw exh sys, nw trs & brks, nw tone, recnt MA stckr, rfrcks, $850. Dick, x3-7202.

'77 Chrysler Cordoba, pb, ps, no rst, nw trs, nice paint, nds nothng, $1,800 or bst. Gregory, 364-6188.

'77 Suzuki GS750E, exc cond, looks like nw, mag whls, trpl dsks, nw Conti trs, chain & brk pads, lugg rck, case grds, $1,600 or bst. Hans, x3-2454 or 666-8335.

'79 Corvette, blck on blck, 11K, all opts, nvr smokd in, always gargd, A-1 cond, bra carcvr & T-top lcks inc. Greg, x8-4863 Draper or 396-5922.

'79 Chevy Caprice sta wgn, V8, a/c, AM/FM, rfrck, 58K, nw trs & brks, exc cond, $3,600. Call x3-7290 or 1-685-2614.

'80 Buick Skylark Ltd, V6 eng, 4-dr, fw drv, ps, pb, a/c, pwr lcks, auto, AM/FM, rr defog, tntd wndshld, 42K, gd cond, $3,500. Bob, x8-2357 Draper.

'80 Buick Regal Ltd w/air, crs cntrl, tilt whl, Chapman lck, rear def, AM/FM stereo, nw Diehard, 4 nw rads, 54K, $5,100. Paul, x3-7903 or 628-1878 after 6pm.

'80 Suzuki GS750L, red, 19K, KG bckrst & rck, $1,799. Barbara, x7383 Linc or 667-7613 (Billerica) aftr 7pm.

'81 Chevette, 2-dr htchbck, 4-spd, only 43K, no rst at all, exc shape, AM/FM, a/c, nw trs, mst sell, $2,800 or bst. Juan, x3-4668 or 494-0114.

'81 Olds Cutlass wgn, outstndng cond, a/c, AM/FM, ps, pb, rear dfrstr, 2 nw snws on rims, only 39K, $6,250 firm. Tony, x8-4873 Draper.

'81 Dodge Aires, 4-dr, lo mi, gd cond, a/c, AM/FM, rear defog, nw batt & muff, jst tnd up, asking $4,200. Kay, x3-1337 or 776-1128 eves.

'81 Honda Accord, mnt cond, 53K, sunrf, 4 exc Jensen spkrs, $4,800. M. Taylor, x8-3710 Draper.

'81 Skylark, bl, 4-dr, auto, 4 cyl, ps, pb, cruise, a/c, rads, AM, 59K, $3,500 or bst. Jan, x3-6669.

'81 Toyota Corolla dlx cpe, 2-dr, auto, AM/FM, rear dfrstr, bl in & out, rstprf w/wrrnty, snw trs, 37K, $4,400. J Constantine, x7200 Linc or 1-883-4825 (Bellingham).

'81 Yamaha XS400 1.3K, bl, like nw, usd only 1 summr, nvr dumpd, $800 or bst. Russ, x7680 Linc.

'82 Kawasaki 550 GPz, bght 4/84, wrrnty to 4/86, always gargd, exc cond, only 4K, qrtr fairng & eng guards, nd to sell, $1,775. Dave, x8-3745 Draper.

Housing

Brookline, elgnt furn 3BR condo, 2 bath, eat-in ktchn, DR, LR, w/d, dshwshr, nr T, $1,500/mo, avlbl 7/85-8/86. Shoshana, x3-6742 or 566-5348.

Martha's Vineyard, Chappaquiddick, summr rntl, 1BR, loft, sleeps 6, 1 mi frm beaches, $400/wk, July, Aug, $350/wk June, Sept. John, x8-2815 Draper.

Lrg mod ground flr studio w/dining alcv/ktchn in twnhse nr Porter Sq, bus & T, $350/mo+ 25 hrs/wk child-care for 10-mos baby, grad cpl pref, refs req, avlbl 5/1. Call x3-3581 or 661-9829 eves.

Mashpee, Cape Cod, 3BR rnch, lrg enclsd prch, quiet wdsy lot, wlk to lake, drv to wrm ocean, $250/wk after 4/1, $350/wk after 6/15. Barbara, x3-5259 or 965-9662.

Housng exch, Edinburgh, Scotland, 7/85-7/86, furn 3BR hse, 1 mi to city ctr for simlr in Camb, Brk or NW subrb, car avlbl; 2-3BR hse wnted, 7/85-7/86 in Arl, Lex or NW subrb for vstng prof, $600-1000/mo. Richard, x7864 Linc or 275-6139.

W Dennis, 2BR cottg, shrt wlk to mi-long beach, avlbl 8/10-31, $350/wk. Jerry, x4470 Linc.

ME beachfrnt hse for rnt, July-Aug (1-2 wks) on ocan, 7 mi N of Kennebunkport (1½ hrs frm Boston), 3BR, spectclr views, quiet, photos avlbl, $645/wk. Kathy, x3-2647 or 497-5525.

Apt for rnt, Coolidge Cornr Brookline, 2BR, LR, DR, ktchn & bath, nr T & shops, avlbl 5/1, $700/mo. Call 275-0111 eves.

Summr rntl, Mashpee, 3BR, 2 bath Cape, dck w/wtrview, moorng avlbl, shrt drv to S Cape Beach, all amenities in well-furn hse, $500/wk July/Aug. Nick, x3-1664.

Ovrsz 1BR Brookline condo, chrmng brck courtyrd bldg, super eat-in ktchn, elgnt LR, foyer, deeded prkg, storg, wlk to Med Area, Coolidge Cornr, $138,900. Call 566-3980.

Summr rntl, N Eastham, yr-rnd 3BR rnch, quiet area, fully eqppd, $500/wk. Roy, x8-4200 Draper.

Hm in Winchester for sale by ownr, quiet wded st on edge of Fells Reservation, $200,000. Call 729-6872.

Brighton sublt thru 8/31/85, 1BR, $330 inc ht, opt for lease renwl 9/1/85. Jeff, 776-9672 eves.

Lynn, ultra-mod 5rm 1st flr apt, dshwshr, stv & fridge, w/w, prkg, nr beach, $575/mo, refs & sec req. Edward, 233-2926.

Contmpry condo in Adams Arboretum Est, Jamaica Plain, 2BR, huge loft, 2 baths, 1,407 sq ft, tennis, pool, 230 acres of trees in bck yrd, $169,900 nego. Call x3-3638 or 522-2455.

Lexington Ctr, June-Sept, furn dlxe 2BR condo, 1,600 sq ft, uniq decor, wlk to tennis & pool, $1,400/mo; Quechee Lakes, VT, golfr's delght, 4 seasn resrt, dlxe end unit 1BR twnhse, frplc, cabl tv, mst sell, $47,900. Call 861-7487 or 467-4709.

Sunny 1BR condo in ivy-covrd brck bldg nr Harv Sq, bay wndws, wrkng frplc, hdwd flors, eat-in ktchn, $99,000 by ownr. Deborah, x3-1352 or 864-0729.

Fully furn lux studio apt, River House, flat of Beacon Hill, mod bath, ktchn, d/d, w/w, tv, sec bldg, concierge 24 hrs, rfdck, coin-op lndry, avlbl May-Nov, $650/mo inc ht, utils. Dave, x8-4537 Draper, 227-0388 eves, 383-1520 wkends.

VT, nr Woodstock, Hanover, 3-levl lux condo, 3BR & loft, sleeps 11, on glf course, lake, pool, tennis, sauna & jacuzzi in unit, rntl by wk or mo. Call x3-5320.

Summr sublt, Eastgate 2BR, 6/1-7/30, fully furn, nice view, $600/mo. Kim, 494-9255.

Animals

AKC Corgis (Pembroke), 2-mo, M & F puppies, hsebrkn, leash traind, ideal obedience prspcts. Call 944-2522.

Kittn, b&w adorbl M, 10 wks old, v affctnt & traind, free. Kathy, x3-3423.

Wanted

Frnch stdnt in 3rd yr at U Paris-Dauphine sks 1-mo postn tchng Frnch &/or looking aftr chldrn, can strt mid-July, in exchng for rm & brd. Lex, x3-3489 or 864-4257.

Cheap sofa in rsnbl cond, we haul, also rug. Bob, x2936 Linc.

Married cpl w/2 chldrn sk 3-4BR Cambridge apt, bth parnts wrk @ Linc Lab. Sarah, x4561 Linc or Malcolm, x4014 Linc.

Hitchhiker's Guide to the Galaxy, tapes of radio prgrm to dup, to amuse 3 kids on auto trip to FL. Call x3-1844.

Swimming lssns, will pay gd rates. Patrick, 491-4746 after 6pm.

Usd Nikon bdy in gd cond, pay cash. Sergio, 492-4655 after 9pm.

Usd compct fridge. Catherine, x3-4141 (9am-12noon) or 492-6429.

Classcl music group, string pref, to play during dinnr at Radcliffe Club of Boston beneft @ Kennedy Libry, mid-May, dinnr & trnsprt provided, gd opprtnty for exposr. Call x3-8067.

Roommates

2 rmmates (M or F) for lrg sunny rms, Magazine St apt, shr clning & semi-veg cooking, avlbl April or May, $182+ utils. Hugh, x3-6225 or 492-5517 6-11pm.

2 rmmates wntd for lrg 3BR Arlington apt, washr/dryr, nr bus, offst prkg, $220/mo+ ht. Gretchen, x3-2306 or Kevin, x3-4917 or 646-4189.

M to shr spacious comfy Arlington hse ovrlking Spy Pond, beginning sprng/early summr, $242/mo+ utils. Michael, x3-8524/8525.

Rmmate wntd for 4BR Wellesley hse, 1 mi frm Wellesley College, no smkrs/pets, $230/mo+ utils. Rim, Bill, Leo, Steve, x3-3791 or 237-2148 eves.

F nded for sunny spacious 2BR apt betwn Central & Harv Sqs, $243 inc ht & h.w., lndry inc. Suzanne, x3-1824 or 492-2477 eves.

F, 25-35 w/apt or looking for apt to shr by June 1 wntd, quiet. Joan, x3-1973 or 641-1249.

Carpool

Rdrs wntd for vanpool frm Hampstead NH area via Salem to Kendall Sq-Camb area, 7am (for 8:15pm arrvl)-5pm (for 6:15 rtrn). Patti, x3-8360.

Rdrs nded frm Marlboro-Sudbury-Shoppers World-Camb, 8:30am-5pm. Mary, x8-4488 Draper or 877-3642.

Rd wntd, Everett-MIT, 8:30-5 daily, will pay. Mary Ann, x3-1319.

Miscellaneous

Typng on wrd prcssr, all knds inc tchncl, rsnbl rates. Lynne, x3-4012.

Complt photgrphc srvcs, portrts to totl weddng coverage, b&w or colr lab srvcs inc custm devlpng, prntng, mntng & cpy negs, v comptitv prces. Hank, x8-2319 Draper.

16-yr-old Frnch boy sks rm & brd for 1 mo/longr this summr, in exch for hlp w/chldrn, chores & Fr tutorng. Call x3-5759 or 862-3463.

Surplus Property

The Property Office has the following excess MIT equipment for transfer within MIT. Unless noted, items are at the Equipment 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, E19-429, x3-2779, with envelope so marked. Always reference case number on envelope. MIT reserves the right to reject any and all bids.

Case 1447 — Transfer of funds required, to inspect call Deirdre Dow-Chase, x3-6841: Perkin-Elmer differential scanning calorimeter, mdl DSC2, fair cond; Perkin-Elmer 2 channel thermal analysis recorder, mdl DSC2, fair cond.

Case 1439 — To inspect call Gary Housted, x3-5195: Vulcan Copper and Supply Co Fermentor, 200 liter w/var speed stirrer, fair cond.

Case 1440 — To inspect call Gary Housted, x3-5195: Cryodry microwaave tunnel dryer, 3000 watt, gd cond.

Case 1412 — For sale by sealed bid. Bids to be recieived by 4pm EST, 4/12/85. To inspect call Katherine Cochrane, x3-6776: Apple II computer system w/monitor, disk drive & printer, gd cond.

Case 1415 — Transfer of funds required. To inspect call Dave Lanni, x3-4896: China, plates, cups, saucers, bowls, etc; style, Mayer and Buffalo. Transfer will be by entire lot, gd cond.

Case 1416 — Transfer of funds required. To inspect call Dave Lanni, x3-4896: Burnisher, silver, mdl ADAMATION-VM-126, fair cond.

Case 1414: 4 Lam Inc Luxxtra hanging light fixtures, gd cond.

Case 1418: Underwood adding machine, poor cond; wood dsk, poor cond; Norbrush generator, poor cond; 2 Stabiline voltage reg, poor cond; 4 Sanborn low level preamplifiers, poor cond; 4 Sanborn power supplies, poor cond.

Case 1437: Mico-Info-Sys microfiche reader-printer, mdl 202, poor cond.

Case 1438: 3M infrared trans maker, poor cond; Raytheon radar range, lab microwave oven, poor cond; International centrifuge, mdl V, poor cond; Bach & Simpson 5 channel auatomatic switch timer, fair cond; 2 Votator pump, thin film evaporator, mdl X-1W, gd cond; GE incubator, mdl 805, poor cond; Sturtevant utility pressure blower 3", gd cond; Cenco vacuum pump w/motor, poor cond; liquid to air heat exchanger, fair cond.

Case 1442 — To inspect call Marge Meyer, x3-3324: 2 Phillips scanning electron microscopes, 25 yrs old, fair cond.

Case 1445: Midwest Scientific Inst computer, mdl MSI-6800; Grass Inst stabilizer, mdl SD5A; Dumont Labs cathode ray oscillograph; Hewlett Packard amplifier; C-Derz Elec, 2 chart recorders, miniscript; 2 Norelco tape recordders; Lamda power supply; Simpson meter; Ross Controls digital recorder; Tiffany typing stand; Uher recorder; Power Designs powersupply; Lab Line Inst magnetic stirrer; 2 Krohn-Hite variable band-pass filter; Phillips tape recorder; cond on all items are unknown.

Case 1446: Sony video camera, vdl AVC-3200, gd cond; Ampex video tape recorder & cart, mdl VR-7000, gd cond; Digital printer, mdl LA305, gd cond; Krohn-Hite band pass filter, fair cond; Tektronix oscilloscope, mdl D54, gd cond; Lamda power supply, poor cond; Arvin Indust humidifier, fair cond; H.P. reversible counter, mdl 5280A, poor cond.

Case T-232, T-242, T-258, T-261: IBM typewriters, Executive mdl, fair-gd cond.

Case T-252, T-253, T-256: Royal elec typewriters, mdl 660, fair-gd cond.

Case T-254: Royal manual typewriter, gd cond.

Case T-231: IBM Electronic-50 typewriter, poor cond.

Case T-233, T-259: IBM Selec I typewriters, fair-poor cond.

Case T-262, T-274: IBM Selec II typewriters, gd cond.

Case 1374: 2 IBM typewriters, poor cond.

Case 1280: IBM typewriter, magnetic card printer, fair cond.

Case T-170, T-179, T-180, TI-186, T-187, T-209, T-219, T-227, T-228: Misc typewriters, elec-man, $10-100, poor-fair cond.

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

Oveta Perry	**3-1594**
Dick Higham	**3-4278**
Virginia Bishop	**3-1591**
Appointments:	
Therese McConnell	**3-4274**
Ken Hewitt	**3-4267**
Kenneth W. Chin	**3-4269**
Sally Hansen	**3-4275**
Appointments:	
Darlene McGurl	**3-4268**
Kim Bonfiglioli	**3-4076**
Appointments:	
Nancy McSweeney	**3-4077**

Administrative and Academic Staff

Special Assistant (part-time/temp), Dean for Student Affairs, to facilitate improved communications with students. Assist in planning and coordinating special activities designed to increase interaction between the Dean and a broad cross-section of students and student groups. Make all logistical arrangements for these activities. Requires excellent communication and organizational skills; ability to set priorities; and good typing skills. Some evening and weekend hours necessary. (17.5 hrs/wk, one year position) A85-523

Assistant Communications Manager, Telecommunications Systems, to provide technical and administrative support to the Director in the implementation of an integrated telecommunications system. Act as administrative and control data administrator for Telecommunications Systems. Perform special projects as assigned. Minimum educational requirement is a bachelor's degree, preferably in telecommunications or information systems/computing. Two to three years experience in telecommunications, particularly in implementation of digital PBX, or comparable experience in computing necessary. A85-522

Systems Programmer, Information Systems/Operations and Systems, to support Project Athena operation by providing programming expertise for the maintenance of systems and procedures provided by the Systems Development Group. Identify, specify, and implement fixes and enhancements to the Athena systems software as required. Specify, design and implement utility distribution, data backup, documentation developments, etc. Investigate and resolve problems involving complex systems and/or networks of systems. Carry out plans from Design/Lead Programmer and report administratively to the Manager of Systems Programming. May supervise some students. Requires bachelor's degree and 3-5 years experience in systems programming or related activities. Familiarity with UNIX commands, utilities, operating systems and procedures necessary. Must be able to diagnose software problems and failures and implement necessary repairs. Good communication skills important. A85-521, A85-520

Budget Officer, Fiscal Planning & Budget Office, to assist in the preparation of the Institute's Budget. Act as fiscal consultant for School Deans and Vice Presidents in areas of assigned responsibility. Assist in long-range planning and forecasting of future needs for expanding and for new programs. Prepare special reports as directed. Requires considerable knowledge of budgeting and accounting systems and procedures common to educational institutions. Working knowledge of personal computers helpful. Bachelor's degree in Business Administration or equivalent combination of education and experience necessary. A85-519

Manager of System Development, Project Athena, to manage MIT staff of five professional programmers and coordinate task assignments among ten other professional programmers provided by industry cosponsors. Involve undergraduate student programmers. Help lead development of an advanced, UNIX-based programming environment in support of educational computing using work stations, local area networks, and centralized service computers. Work with an ongoing deployment organization that is expanding to a system of several thousand installed work stations. Assess development requirements and control release software to ensure effective deployment. Interact with other MIT offices in planning and integration of Project Athena with other MIT activities. May serve as MIT representative with other educational institutions pursuing similar goals. Opportunity to author or coauthor professional papers. Requires knowledge of advanced system design ideas; good management and liaison skills; interest in educational impact of computing; and SB in appropriate field. A85-518

Associate Director of Industrial Internship Program, Electrical Engineering and Computer Science, to manage Industrial Internship Program (area VI-A), which currently involves about 275 students, 35 faculty advisors, and 23 participating industries and government laboratories. Candidates must have an SB in Electrical Engineering/Computer Science or related field. SM preferred. Some industrial background, strong organizational skills, and excellent verbal and written communication skills are necessary to deal with company managements, oversee program finances, counsel students on aspects of the university and industrial environments, and coordinate the program with department and university personnel. Involves some travel. C85-140

Clinical Veterinarian, Division of Comparative Medicine, to be responsible for coordination of animal health care activities within the MIT animal facilities. Develop animal quarantine and surveillance protocols; implement diagnostic tests and therapeutic regimens; and interact frequently with MIT faculty and staff. Will monitor experimental procedures to ensure that accurate information is provided in the Animal Research Committee protocol review forms. Will train postdoctoral scholars and inexperienced investigators in experimental animal manipulations. May conduct independent or collaborative research. Will supervise a veterinary technician involved in the administration of primary health care. Candidate must have Veterinary License in at least one state and eligibility to obtain Massachusetts license. Must have board eligibility in the American College of Laboratory Animal Medicine. C85-139

Associate Director-Alumni Fund, Alumni Association,to serve as principal deputy to Fund Director for all programs related to gift upgrading with direct responsibility for Major Reunion Gift, and Personal Solicitation programs, and serve liaison role with Office of Resource Development. Duties will include planning reunion programs on a class by class basis, assisting alumni volunteers in identifying new gift prospects and coordinate major gift solicitations. Familiarity with planned giving program, data base systems and computer programming helpful; minimum of five years experience in educational administration, alumni relations, fund raising, industrial or public relations required. A85-517

Assistant Manager, Maintenance, Housing and Food Service, to assist the Manager of Maintenance in supervising and coordinating all phases of department maintenance, renovation, and construction programs. Will work with Housing and Food Service Managers and support groups. Identify, develop and communicate plans of all construction jobs. Assist the Manager of Maintenance in all phases of cost and estimation for repair and renovation programs. Perform facility inspections. Contribute ideas. Interpret structural plans as required. Associate degree and/or equivalent combination of education and experience with a minimum of five years maintenance supervisory experience required. A85-516

Senior Applications Programmer, Administrative Systems, to participate in the ongoing development and support of the various projects in the Facilities Systems area of Administrative Systems. Will be involved in the development and subsequent support of a new computer system for the Physical Plant department. Will also have some responsibility for the support of the computer systems used by the Purchasing, Accounts Payable, and Property Offices. Considerable experience using PL/1 is required as is past participation in a successful implementation of an on-line interactive database system and the ability to adapt to varying configurations of hardware and software. MIT experience is preferred. A85-515

Staff Accountant, Laboratory for Computer Science, to participate in preparation of monthly financial reports, budget proposal submissions and cost analyses using IBM PC-XT, in an exciting, fast-paced environment. Monitor and reconcile monthly research expenditures in excess of $13 million/year and investment funds in excess of $2 million. Use VAX 11/785. Carry out special projects, including participation in office automation projects such as one linking the department to MIT central administrative offices. Candidates should have a bachelor's degree in accounting or related field and 1-3 years of related experience or equivalent combination of education and experience, and be self-motivated and have the ability to function autonomously. MIT experience highly desirable. Familiarity with personal computers and related software a plus. R85-642

Educational Computer Facility Manager, Electrical Engineering and Computer Science, to oversee technical staff members, administrative assistant, and several students. Manage daily operation of facility which supports the activities of more than 1100 undergraduate majors. Implement system upgrades and improvements. The facility currently has a DEC 20/60 running TOPS 20; two VAX 11/750, one running UNIX BSD 4.2 and one VMS plus oversight for 5 additional VAX 11/750 that run BSD 4.2. In addition, there are 75 HP9836A computers with an average of 3 megabytes of memory each, running HP-UX brand of UNIX and the LISP dialect SCHEME. The facility also has four LISP Machines built at MIT and connected to the MIT CHAOSNET (and hence to the ARPANET) as well as to other Athena computers via ETHERNET. Candidates should have systems programming experience in at least one

of the operating systems and an SB degree in EE or CS with 3-5 years of additional experience. Hardware experience preferred. C85-138

Postdoctoral Associate, Harvard-MIT Division of Health Sciences and Technology, to work on a project involved with increasing the translational efficiency of plant messenger RNAs. Familiarity with experimental methods used in current molecular biology and recombinant DNA/RNA technology is required. PhD essential. C85-137

Postdoctoral Associate, Nutrition & Food Science, to investigate heme redox chemistry, protein structure and monooxygenase mechanisms through the study of novel proteins generated by site-directed mutagenesis. Requires PhD in molecular biology or microbiology and extensive experience in recombinant DNA techniques. Some experience in protein purification/enzyme kinetics would be useful. C85-136

Sponsored Research Staff

Research Associate, Materials Science and Engineering, to work on the application of dynamic atomistic computer simulation techniques to research In the area of phase equilibria of the defected solid state. Candidate should have familiarity with molecular dynamics and Monte Carlo methods (particularly with those formulations which allow the application of anisotropic stress), and have extensive experience in applying such techniques to the study of grain boundaries. Research will also be conducted in the use of computers in teaching transport phenomena and thermodynamics. A PhD in physics, materials science, or nuclear engineering is required. R85-670

Research Engineer (Temporary), Harvard-MIT Division of Health Sciences and Technology, to design, calibrate and maintain equipment for second generation experimental medical system for cancer treatment and other related projects. BS in Electrical Engineering and Computer Science required. Experience in digital and analog circuit design also required. Experience in use of DEC computers for real-time control and data acquisition important. Knowledge of RF design helpful. (Through Aug. 31, 1985) R85-669

Systems Programmer, Media Laboratory, to be responsible for systems programming and maintenance of the Laboratory's Research Computer Facility. Includes DEC VAX and Wang VS installations and a network of microcomputers. Applications range from electronic music to telecommunications. Perform operating system and other software installation and updates; maintain and diagnose existing software and utilities; and implement new software to meet specific needs; document software; consult with users; interface with vendors and develop specifications to be used in defining the laboratory's requirements. BS in computer science or equivalent necessary. Extensive experience in systems programming and operations, particularly on UNIX system needed. Experience in several of the following areas helpful: local area networks, user interfaces, operating systems, telecommunications, and device drivers. Problem solving ability an asset. R85-668

Technical Assistant, Applied Biological Sciences, to work with research group developing monoclonal antibodies recognizing environmentally occurring chemical carcinogens and their metabolites. Work includes applying immunoassays to the detection of these environmental compounds in human samples. Will be responsible for some cell culture work and animal (mouse) handling. Requires BA/BS in biology or chemistry. R85-667

Research Engineer, Ocean Engineering, to perform research and administrative functions for the Ocean Engineering Design Laboratory. Will have primary responsibility for carrying out research projects, generating new concepts, supervising students, and managing the laboratory facility. Candidates must have an advanced degree and/or experience in design of ships and other marine structures. Knowledge of recent development in the use of computers in engineering design necessary. R85-661

Sponsored Research Staff, Center for Cancer Research, to be responsible for an electron microscope facility. Instruct users of facility with electron microscope use; prepare biological samples for electron microscopy; participate in projects which utilize facility; and maintain facility equipment. Techniques routinely used include nucleic acid electron microscopy, ultramicrotomy, and immunocytochemistry. Requires BS in relevant field with experience in use of electron microscopes and related equipment; strong communication and interpersonal skills; ability to work independently and to modify techniques to meet research needs. Must be familiar with sample preparation techniques and have background in cellular and molecular biology. R85-660

Technical Assistant, Center for Cancer Research, to maintain animal cell lines is tissue culture; prepare and titer virus stocks; collaborate in experiments on the molecular biology and biochemistry of animal viruses and mammalian cells. Techniques involved include nucleic acid biochemistry, hybridization, and general analysis of macromolecular components of mammalian cells. Will also be responsible for maintaining laboratory supplies and equipment. Requires BS in basic science and knowledge of current research in molecular biology. Experience in modern biological laboratory helpful. Previous experience with tissue culture techniques, nucleic acid or protein biotechnology desirable. Ability to work as team member on common problem helpful. R85-659

Technical Assistant, Laboratory for Electromagnetic & Electronic Systems, to be responsible for electronic circuit construction and biochemical measurements in a cellular biophysics research laboratory. Candidate must have demonstrated experience in maintenance of laboratory procedures. Must have BS in a biological or engineering science and at least one year of experience. Good interpersonal skills important. R85-658

Research Staff, Haystack Observatory, to code and maintain real time control programs for a high resolution system and to make improvements to the control program as radar hardware, operations, and data gathering considerations dictate. Assist in development and maintenance of the operating systems for three ModComp Classic minicomputers. Candidate must have background in one or more of the following: computer science, mathematics, engineering or physics. Bachelor's degree and two years experience required. Good working knowledge of assembly and FORTRAN computer languages necessary. Experience in programming minicomputers desirable. Initiative and ability to work as team member important. R85-657

Technical Assistant, Biology, to aid in conducting basic research in immunology laboratory. Must have competence in one or more of the following areas; cell culture, immunochemistry, biochemistry, or molecular biology, with a possibility of independent research. Experience in immunology desirable, B.A. required. R85-656, R85-655

Research Associate, Earth, Atmospheric, and Planetary Sciences, to conduct original research on problem in oceanic trace element geochemistry. Work will involve the development of analytical techniques for the analysis of seawater and marine sediments using the flameless atomic absorption spectroscopy. One to two months per year will be spent at sea where experience with the collection of uncontaminated trace element samples on oceanographic research cruises is necessary. A Ph.D. with at least five years postdoctoral experience, and experience in the analysis of trace metals in seawater at sub-nanmolar concentration levels is required. Solid-source mass spectroscopy and sea going extraction of marine pore water samples is desirable. R85-654

Principal Research Scientist, Materials Processing Center, to conduct research in chemical synthesis of fine powers, surface and colloid chemistry, binder burnout, and sintering. Will work with five faculty and staff members in the Ceramics Processing Research Laboratory who direct the research of over 50 students, postdoctoral researchers and visiting scientists from industry. Must have proven record of refereed publications and reports. Ph.D. in Chemistry/Materials; with extensive experience (minimum 5 years) in directing research and development efforts. R85-645

Computer Facility Manager, Research Laboratory of Electronics, to be responsible for overall operation and maintenance of computer systems used for research in audition and for system programming requirements associated with the development of a multitasking, real-time experimental test facility. Responsibilities include: (1) implementing high-level, user-friendly software interface for running multiple real-time experiments in audition from a VAX with special purpose hardware incorporating an AMD 2901-based microcontroller; (2) maintaining VMS and RSX operating systems running on VAX and PDP-11 computers; (3) installing, integrating and maintaining utilities for scientific programming and statistics; (4) supervising technical support staff; (5) interacting with service personnel in troubleshooting. Requires minimum of a bachelor's degree in electrical engineering/computer science. Experience with VMS and RSX/11M operating systems highly desirable. One to two years experience preferred. R84-587

Library Support Staff

Library Assistant IV, Humanities Library, to assist interlibrary borrowing assistant with processing journal requests, inquiries, records and searches. Perform general secretarial duties for Humanities library, including typing correspondence, reports, bibliographies; sorting mail; maintaining files; and processing payroll records. In addition, will participate in the Reference/Information Service answering inquiries on catalogue holdings, references, and other library services. Requires minimum of 2.5 years direct/related experience. Excellent typing, organizational and communication skills necessary. Familiarity with word processing helpful. NON-SMOKING OFFICE L85-578

Library Assistant III (part-time), Acquisitions Department, to process incoming materials and verify order forms; process invoices, accessions and property stamps materials; assist with follow-up on outstanding orders. Answer phones and inquiries; perform bibliographic searches on OCLC terminal; assist in file maintenance. Requires high school graduation and one year of related experience. Neatness, accuracy and attention to detail important. Basic typing skills necessary. Knowledge of foreign language helpful. L85-590

Library Assistant III, MIT Libraries, Catalogue Dept., to input catalogue records on the OCLC terminal from work forms prepared by cataloguers. Edits online contributed and Library of Congress catalogue records based on cataloguer's written instructions. Participates in maintenance of the Libraries' database, including, holdings and heading changes. Types charge cards, book pockets, reference cards, and files. Performs auxiliary aspects of cataloguing, i.e., removal and correction of cards in the Institute Libraries Catalogue. Will perform other assignments as required, e.g., microcomputer applications. High school graduate or equivalent is necessary, one year direct/related experience, accurate typing with attention to detail essential, experience using CRT terminal desirable. L85-553

Secretary/Staff Assistant

Administrative Secretary, School of Humanities & Social Science, to provide administrative and secretarial support to the School's Equal Opportunity Committee. Process appointment and travel forms; type and proofread manuscripts and correspondence using DECmate; update computerized personnel records; schedule meetings and appointments. Requires excellent organizational skills, good typing, ability to work independently, tact and discretion in dealing with people and confidential materials. Word processing experience preferred. Minimum 4.5 years direct/related experience required. NON-SMOKING OFFICE S85-592

Administrative Secretary, Biology, to provide secretarial, accounting and administrative support to one professor and a large research group. Involves heavy typing and editing of manuscripts, proposals and correspondence using DEC word processor and VAX computers. Monitor and forecast several research grants; assist in preparing budget proposals and forms for appointments, terminations, visas, etc. Answer phones; arrange travel; assist with general office tasks. Requires excellent typing, dictaphone, proofreading, organizational and interpersonal skills. Attention to detail important. Familiarity with MIT accounting systems, background in science, and knowledge of VAX/VMS, Scribe, word processing, and computer spreadsheet programs helpful. Minimum 4.5 years direct/related experience required. NON-SMOKING OFFICE B85-591

Administrative Staff Assistant (part-time), Research Laboratory of Electronics,to perform all administrative, secretarial, and clerical duties for two faculty and graduate student staff in RLE's Image Processing Group. Responsibilities include typing, filing, receptionist duties, xeroxing, travel arrangements, scheduling seminars, maintaining filing systems, handling purchasing activities, maintaining group roster and executing library searches. Individual will also handle academic work for one of the two faculty. Excellent command of the English language and typing skills (65 wpm) required. Ability to use word processing system essential, Math/Science background highly desirable. Minimum 4.5 years direct/related experience required. B85-557

Sr. Secretary, Upward Bound Program, to type all communications, letters, and reports; monitor accounts; coordinate preparations for meetings, orientations, and general events; answer phones, and maintain files. The MIT/Wellesley Upward Bound Program is a coeducational, multiracial, multiethnic educational program for high school students in Cambridge to encourage them to attend college and to provide them with the necessary academic and social skills needed for success. Candidates must be able to work well with people of varied ethnic, cultural and racial backgrounds. Good typing required. Shorthand or speedwriting desirable. Should be willing to commute to or reside at Wellesley College during 7 week summer session. Must have Mass. Driver's License. Car not essential. May include some evening or weekend hours. B85-593

Sr. Secretary, Patent, Copyright & Licensing Office, to perform secretarial duties such as typing, filing, xeroxing, answering phones, arranging travel, and assisting other office staff in preparing patent reports for government agencies. Should be able to draft cover letters, manage records and monitor flow of software licensing. Requires strong organizational skills; typing (55-60 wpm); at least 2.5 years of office experience; and knowledge of or willingness to learn word processing. B85-586

Sr. Secretary, Athletic Department, to provide clerical support to the Supervisor of Intramural Athletics and the Director of the MIT Day Camp. Type and photocopy; prepare student referee payroll vouchers; record and collect forfeits. Process application materials for Day Camp participants; handle billing and revenue accounting; and perform related projects as assigned. Provide clerical support for coaches on a shared basis. Requires good typing, bookkeeping and interpersonal skills. Organizational skills and ability to work independently necessary. Willingness to learn word processing essential. Prefer professional secretarial training. Minimum 2.5 years direct/related experience. NON-SMOKING OFFICE B85-579

Sr. Secretary, Civil Engineering, to provide secretarial support to two faculty members and administrative assistant. Type class notes, exams, and technical reports using AB Dick word processor. Answer phones; photocopy; distribute mail; maintain calendar; arrange travel; order supplies; and perform general office tasks. Must be able to manage detailed workloads and meet deadlines. Good typing and proofreading skills essential. Word processing skills and knowledge of technical/mathematical typing important. Minimum 2.5 years direct/related experience necessary. B85-577

Sr. Staff Assistant, Center for Advanced Engineering Study, to administer all registration and speaker tasks for the CAES Conference and Seminar Program. Develop registration forms and prepare program evaluation reports for 15 to 20 conferences annually. Must have outstanding communication skills and interpersonal skills. Accuracy with details important. Experience with word processing preferred. Some travel required. Minimum 2.5 years direct/related experience necessary. B85-573

Sr. Secretary, Francis Bitter National Magnet Laboratory, to type and prepare technical reports and proposals. Summarize monthly accounts; make travel arrangements; organize conferences and seminars; use PC of mailing list preparation and data retrieval; answer telephones; and perform routine office duties. Requires 2.5 years office experience and strong organizational skills. Knowledge of PC operation or word processing experience desirable but not essential. B85-567

Sr. Secretary, Humanities Writing Program, to perform moderately complex secretarial duties for the Administrative Officer and the Head of the Writing Program. Type and proofread correspondence, reports and manuscripts using word processor; maintain accurate financial and historical records; prioritize workload to incorporate emergency projects; provide information and answer inquiries about the program. Requires 2.5 years direct/related experience. Some college preferred. Good typing (55-60 wpm), and knowledge of or willingness to learn word processing important. B85-566

Sr. Secretary, Mechanical Engineering, to provide secretarial support to a research group. Duties include answering phones; screening mail and answering general correspondence; making travel arrangements; mailing reprints; typing and xeroxing of grant proposals, technical manuscripts, lecture notes and general correspondence. Responsible for complete account maintenance and monthly budget projections, petty cash, ordering supplies and assisting with supervision of research group in purchases and general information. Ability to work independently, knowledge of basic accounting and familiarity with MIT desirable. 2.5 years direct/related experience required. B85-563

Sr. Secretary, Mechanical Engineering, to provide secretarial and administrative support for one faculty member. Duties will include preparation of technical manuscripts and reports; updating mailing lists and distributing materials; answering telephone inquiries and correspondence and preparation of teaching materials. Extensive interaction with students and government agencies providing funding. Knowledge of basic accounting and MIT experience desirable. Excellent technical typing with attention to detail essential. 2.5 years direct/related experience required. B85-562

Sr. Secretary (part-time), Earth, Atmospheric, and Planetary Sciences, to perform secretarial duties for a group of geology professors and their research staff and students. Duties will include typing of correspondence, scientific manuscripts, and class-related materials; maintain files, answer phones, errands, etc. Excellent typing skills, ability to proofread, and some technical typing preferred; correct formatting of business correspondence and manuscripts is necessary. Minimum 2.5 years direct/related experience required. B85-559

Sr. Secretary, Psychology, to provide secretarial support for busy neuropsychology laboratory. Duties will include typing correspondence, tables, and transcribing class schedules, and reprints for graduate courses; ordering books, reprints, equipment, and office supplies; arranging travel; completing and typing travel vouchers; arranging and publicizing weekly research meetings, answering phones; screening and routing messages; photocopying; running errands; checking, maintaining, and creating files; coordinating incoming manuscripts for journal review; receiving visitors. Excellent typing; familiarity with medical terminology and technical typing preferred. Experience with word processor or willingness to learn essential. Occasional overtime requested, ability to work under deadlines with frequent interruptions essential. Minimum 2.5 years direct/related experience required. B85-554

Sr. Secretary, Whitaker College of Health Sciences, Technology and Management, to work with two Associate Professors of Neurobiology and their research groups in the Whitaker College. Duties include typing and word-processing in the preparation of correspondence, manuscripts, and grants; preparing Institute forms; maintaining correspondence and account files; answering phones; ordering supplies; photocopying; and other office support functions as required. Prefer good typing and proofreading skills. Familiarity or willingness to learn word processing (DECMATE II) necessary. Good interpersonal and organizational skills essential. Minimum 2.5 years direct/related experience required. B85-550

Sr. Secretary, Sloan School, to provide secretarial support to the **Management in the Nineties** Program. Type correspondence and reports for rough draft using typewriter or word processor; answer phones and screen calls; prepare high quality presentation materials; make travel arrangements. Participate as team member supporting program seminars and conferences, including logistics, invitations, and RSVPs. Requires excellent secretarial skills, including word processing (WANG), dictaphone, and typing. Excellent interpersonal skills essential. Must be effective team member. Some overtime necessary. Minimum 2.5 years direct/related experience required. NON-SMOKER preferred. B84-345

Secretary, Research Laboratory of Electronics, to work in headquarters office. Type correspondence; prepare Institute forms; maintain files, and greet visitors to the laboratory. Maintain records on database management system. Provide assistance to the Administrative Assistant and the laboratory's purchasing and fiscal groups. Interact with faculty, staff and students. Requires high school graduation and at least one year of related experience. (May consider Sr. Secretary level with 2.5 years experience.) Excellent typing, interpersonal skills and organizational ability essential. Experience with dictaphone and database systems helpful. Knowledge of or willingness to learn word processing necessary. NON-SMOKING OFFICE B85-582

Secretary (part-time), Applied Biological Sciences, to perform secretarial duties including typing correspondence, answering telephones, filing and xeroxing. Will screen prospective subjects, schedule subjects for appointments with appropriate research project staff and send out appropriate forms for the study. Will be trained to use the personal computer and VAX system. Must have strong organizational skills, speak fluent English and enjoy interpersonal contacts. Good typing skills desirable, 20 hrs/wk, non-smoking office. 1 year direct/related experience required. B85-560

Technical Support Staff

Second Cook, Endicott House (Dedham, MA), to assist the Executive Chef. In absence of Chef, will supervise kitchen staff and assume leadership responsibilities. Prepare food according to instructions for all meals with high standards of cooking and presentation. Purchase, stock and issue foods and price menus as directed by Chef. Work toward creative improvement of menus. Maintain food control program in receiving, stocking and issues. Should be capable of ordering and pricing food; preparing menus, and enforcing sanitation control. Must be dependable and have own transportation. T85-588

Office Assistant

Administrative Assistant, Center for Cancer Research, to assist the Administrative Officer with financial and business affairs. Will review budgets, reconcile monthly statements, maintain commitment reports on DECmate, verify and authorize requisitions and invoices. Must have 4.5 years direct/related experience or equivalent combination of education and experience. Good organizational skills, attention to detail, ability to set priorities independently essential. Experience with MIT procedures and grants management helpful. Must have knowledge of or willingness to learn to use DECmate II word processor. S85-589

Administrative Assistant, Resource Development, to act as research analyst in the Development Office. Compile and maintain information on gift prospects and donors. Research and write background reports, involving reviewing reference materials, accessing information on the Alumni-Treasurer's Office database, and summarizing this and file materials into standard report formats. Track information and correspondence through electronic control system to determine current status of prospects and to conduct searches. Will supervise other research assistants and oversee area projects. Requires strong analytical and organizational skills, and ability to work independently and meet deadlines. Minimum 4.5 years direct/related experience. NON-SMOKING OFFICE S85-581

Administrative Assistant, System Dynamics Group, to coordinate schedule, correspondence, files, and other activities of the Director and staff members. Answer and screen calls; develop working knowledge of the project and respond independently to inquiries; oversee production of papers, proofreading, and printing through Graphic Arts. Maintain accurate records of publications; type from dictaphone; arrange travel; assist with other office tasks as necessary. Requires minimum of 4.5 years direct/related experience. At least 2 years of college strongly preferred. Excellent organizational skills; attention to detail; follow-through; typing skills; and willingness to assume responsibility and work independently important. Experience with DECmate I helpful. NON-SMOKING OFFICE (40 hrs/wk) S85-509

Sr. Office Assistant, Operations Research Center, to assist Administrative Officer with accounting and administrative functions. Includes processing admissions, reconciling accounting statements, producing annual reports and graduate student directory, and supporting activities related to Fall registration. Conduct special projects and assist other support staff as needed. Requires accuracy with detail, ability to work independently, good judgment and analytical skills, good communication skills, and strong secretarial skills. Knowledge of word processing and spreadsheet computer packages helpful. Minimum 2.5 years direct/related experience required. S85-587

Editorial Assistant, News Office, under supervision of editor of Tech Talk, will research, write and secure approval for articles for publication in Tech Talk and distribution to external media, assist editor in make-up of paper, including final proofreading. Will serve as principal backup to editorial secretary for Notices, Institute Calendar and Classified Ads. As secondary backup to administrative secretary, will occasionally assist in production of press releases, answering telephones and greeting visitors. Must be able to use word processor, including communications function, or be willing to learn. Familiarity with the Institute and writing/production experience will be assets. Occasional overtime required. Minimum 2.5 years' direct/related experience necessary. S85-585

Sr. Office Assistant, Development Office, to compile and maintain information on gift prospects and donors. Research reference materials to produce standard profile reports used by analysts in preparing research reports; generate other research reports such as the Corporate changes of MIT Alumni as needed. Utilize the Alumni Association/Treasurer's Office database as a resource. Process incoming correspondence including gift records, acknowledgments, memos, letters and reports. Good record keeping skills essential. In addition, requires good typing and organizational skills and willingness to learn to use computer terminal. Analytical skills desired. Professional telephone skills helpful. Minimum 2.5 years' direct/related experience required. NON-SMOKING OFFICE S85-583

Sr. Office Assistant (perm. 9 month position), Humanities & Social Sciences, to provide office support to the Shakespeare Ensemble, an undergraduate group specializing in the production and performance of Shakespeare. Assist the Director and steering committee in its ongoing development campaign and fund raising efforts. Plan and implement publicity campaigns for four productions. Manage the Ensemble office. Act as business manager for the group, including budgeting and light bookkeeping. Supervise student assistants in various aspects of administration. Provide secretarial support to the group. Requires good typing, writing, and interpersonal skills. Willingness to learn word processing and light bookkeeping skills important. Strong organizational skills, flexibility, theatre experience and some college preferred. Minimum 2.5 years direct/related experience required. S85-580

Sr. Office Assistant, Plasma Fusion Center, to provide secretarial and administrative support regarding the preparation and/or coordination of various personnel, safety and space related matters. Will work with faculty, researchers, administrators and students. Assist with research staff search and hiring, processing of various personnel actions, coordinating research appointment information with associated academic departments, assisting with arrangements for U.S. and foreign visitors, participating in various special projects associated with fusion energy at both the Center and national levels; compiling data for various reports and surveys. Good accurate typing and proofreading skills required, familiarity with/or desire to learn word processing preferred. 2.5 years direct/related experience required. S85-561

Sr. Office Assistant, Graphic Arts Service, to perform clerical duties in the Accounting Office of Graphic Arts Service. Will be responsible for all requisition-voucher pricing; weekly billings and all related matters; handle inquiries relating to monthly copying charges; compile daily statistics from copy machine data for final monthly report. Will act as a back-up to the operator of the computer costing system; cover for receptionist when needed and perform other accounting/clerical functions as assigned. Ability to work accurately with figures, good typing skills and knowledge of office calculators preferred. High School graduate or equivalent plus one year direct/related experience required. S85-558

Office Assistant, Medical, to perform various office tasks associated with health insurance. Responsible for data entry and reconciliation of health insurance claims information using personal computer. Will code, modify, and verify information on MIT Health Plan computerized patient database. Assist with processing applications and claims. Provide secretarial support and perform special projects as assigned. Must have good typing and organizational skills; and ability to handle detail accurately. Familiarity with IBM PC and knowledge of BASIC programming language preferred. Minimum one year of office experience required. NON-SMOKING OFFICE S85-570

Office Assistant, Medical, to gather, review and organize patient visit documents for data entry. Audit data for completeness and accuracy. Enter data into Medical Department's information system via personal computer according to established procedures. Sort and file patient visit documents. Must be high school graduate and have one year of related experience. Accurate typing (40 wpm), good filing and organizational skills, and ability to handle detail under pressure important. Must be flexible, take initiative, and be willing to develop proficiency on personal computer. S85-569

Office Assistant (part-time), Medical, to process applications for the MIT Affiliate Health Program in the enrollment services area of the MIT Health Plan Office. Monitor billing; code and modify information on the computerized database; assist with special projects; and provide secretarial support as needed. Requires good typing skills, facility with numbers, attention to detail and ability to learn a variety of tasks quickly. Experience with on-line computer terminals helpful. Minimum of one year of related experience necessary. (20 hrs/wk, flexible) NON-SMOKING OFFICE S85-568

Office Assistant, Comptroller's Accounting Office, to process invoices through CRT's. Occasionally review vendor statements. Prepare invoices for CRT operators. Contact MIT laboratories and departments and outside vendors by phone. Perform other duties as assigned. Some overtime may be necessary. Some typing ability and knowledge of CRT operation helpful, Department is willing to train. S85-521

Office Assistant (part-time), MIT Libraries-Administrative Services, responsible for following incoming/outgoing domestic, international and interdepartmental mail for the MIT Libraries. Will deliver and pick up mail at various Institute locations. Duties will include, filling mail bags to be picked up by other services, wrapping packages, answering inquiries about current mail and shipping procedures, maintaining an inventory of supplies and order of mail room. Responsible for postage equipment, including monthly statistics for billing purposes. Will train new staff when required. Must be willing to lift 50+lbs mail bags; requires good arithmetic skills and knowledge of adding machine or calculator desirable. High School graduate or equivalent plus one year direct/related experience required. (20 hrs/wk, 8:00 a.m.-12:00) S85-555

Service Staff

Technician B (Electronics), Plasma Fusion Center, to assist in laboratory or research work and operate experimental and technical equipment under the supervision of scientific personnel or technicians of a higher grade. Must be able to work for periods of time without supervision. Will work in the RF group and assist in constructing and maintaining large, high power RF and microwave equipment. Requires mechanical skills

David to give Bueche talk on April 8

(continued from page 1)

education, participant in industry-government-university relationships and catalyst for international collaboration in science and technology."

Dr. David received his BS degree from the Georgia Institute of Technology in 1945, and both his SM and ScD degrees in electrical engineering from MIT in 1950.

He began his career at Bell Labs, where he rose through the ranks until he was called to serve as science advisor to President Nixon and director of the United States Office of Science and Technology in 1970. Programs initiated while he was science advisor include the space shuttle, the breeder reactor and the "War on Cancer."

In 1972, Dr. David joined Gould, Inc., as executive vice president, and he assumed the presidency of Exxon Research and Engineering Company in 1977.

He is currently a member of the White House Science Council and is US representative to the NATO Science Committee. He serves on the governing boards of MIT, the University of Pennsylvania Faculty of Arts and Sciences, and Rensselaer Polytechnic Institute. His other honors include being voted "Scientist of the Year" in 1984 by the editors of "Research and Development" magazine, numerous honorary degrees, and election to both the National Academy of Science and the National Academy of Engineering.

Dr. David served two five-year terms on the MIT Corporation starting in 1974 and was elected a Life Member in 1984. He has been a member of the Corporation Executive Committee since 1979. He has served on MIT Visiting Committees for Modern Languages, Electrical Engineering, Mathematics (chairman, 1974-80) and Sponsored Research, and in 1981 was MIT's James A. Henderson Lecturer.

William Pitt Root to read poems April 4

William Pitt Root, director of the Creative Writing Program at the University of Montana and author of *Invisible Guests* (1984), will give a reading in the New American Poets series at MIT sponsored by the MIT Writing Program on Thursday, April 4, in Rm 4-270 at 8pm. His reading will be the second in a spring series of young poets.

Radio Free Europe has carried Mr. Root's poems in its broadcasts to the USSR, where they have been transcribed and circulated through samizdat networks or literary underground. "I'm told the poems become available in places like butcher shops where if you ask for certain cuts of meat, you get poems smuggled into the wrapping paper—a means of distribution I find is as humbling as it is thrilling to think about. To care so much about poetry!" he said. In the US his poems have appeared in The Atlantic, the New Yorker and The Nation as well as in more than 40 anthologies in Europe, Japan and Canada. His books have been nominated for the Pulitzer Prize, the American Book Award and the National Book Award while his poems have received three Pushcart Prizes and in 1982 the Stanley Kunitz Award.

He was invited by Lady Bird Johnson to represent both the Literature Program of the National Endowment for the Arts and the Poetry-in-the-School program at the LBJ Library on the NEA's 10th anniversary, in recognition of his achievements as a writer and a teacher of writing. He has also collaborated with experimental filmmaker Ray Rice in producing two animated 16mm films based on his poems. Both films have received honors from the International Poetry Film Festival.

All readings are free and open to the public.

As Ann Brazier and Nancy Drago, left, hand out membership packets, new members of the Quarter Century Club were welcomed last week by the Club's board of directors, from left: James J. Fandel, Dorothy Bowe, Winifred McDonough, Jeri Whitman, Mary Frances Daly, Carol Ann Tranfaglia, Francis Magurn, Lawrence Paglierani, Mary Hovnanian and Salvatore Lauricella. *—Photo by Calvin Campbell*

Quarter Century Club inducts 92 new members

Hundreds of members of MIT's Quarter Century Club gathered in the Sala de Puerto Rico last Thursday to welcome 92 new members to fellowship. James J. Fandel, manager of labor relations in Personnel and president of the Club, presided over the brief ceremony, and noted that the new members bring the total membership to 1,860. Daniel H. Gould, assistant to the Provost and Club board chairman, read the roster of the initiates. A social hour followed.

New members are:

Nancy F. Ahlquist of South Weymouth, Center for Cancer Research.

Leonard E. Andexler of Littleton, Nuclear Reactor.

John G. Barry of Methuen, Department of Athletics.

Professor Manson Benedict of Wayland, Department of Nuclear Engineering.

Professor Glenn A. Berchtold of Lexington, Department of Chemistry.

Lucille A. Blake of Cambridge, Department of Mechanical Engineering.

Edward A. Boughan of Andover, Center for Space Research.

Robert M. Byers, Sr., of Marshfield, director of the News Office.

Manuel Cabral, Jr. of North Reading, Research Laboratory of Electronics.

Robert N. Clark of Melrose, Comptroller's Accounting Office.

Francis M. Colarusso of Saugus, Physical Plant.

Emaline A. Cornett of Nashua, N.H., Department of Physics.

Maureen C. DeCurcey of Somerville, Bursar's Office.

Gerard Devine of East Weymouth, Graphic Arts.

Gene F. Dresselhaus of Arlington, Francis Bitter National magnet Laboratory.

Edward W. Fitzgerald of West Roxbury, Research Laboratory of Electronics.

Professor Jerry A. Fodor of Tolland, Ct., Department of Linguistics and Philosophy.

Carol J. Gleason of Billerica, Comptroller's Accounting Office.

Professor Harvey P. Greenspan of Brookline, Department of Mathematics.

Professor Sigurdur Helgason of Belmont, Department of Mathematics.

D. Richard Jankins of Quincy, Department of Chemical Engineering.

Professor Daniel M. Kan of Newton, Department of Mathematics.

James F. Keefe of Carlisle, Graphic Arts.

Professor Marten Landahl of Cambridge, Department of Aeronautics and Astronautics.

Alan J. Lazarus of Lexington, Department of Physics.

George H. Leach of Westwood, Research Laboratory of Electronics.

Institute Professor Emeritus Salvador E. Luria, Director, Center for Cancer Research.

David A. Lynch of Wakefield, Francis Bitter National Magnet Laboratory.

Professor Boris Magasanik of Waban, Department of Biology.

Joseph J. Martori of Arlington, Alumni Association.

Francis X. Masse of Gloucester, Radiation Protection Officer.

William McDermott of Tewksbury, Nuclear Reactor.

John T. McNeill of Boston, Food Services.

Paul T. Menadier of Milton, Nuclear Reactor.

Jean A. Mooney of Watertown, Department of Electrical Engineering and Computer Science.

Professor Alan V. Oppenheim of Lexington, Department of Electrical Engineering and Computer Science.

Judith A. Quimby of Arlington, Department of Applied Biological Sciences.

Professor Phillips W. Robbins of Beverly, Department of Biology.

Dr. Melvin H. Rodman of Winchester, Medical Director.

John R. Rogers of Nashua, N.H., Bursar's Office.

Anna Scali of Somerville, Department of Biology.

Professor Richard D. Schafer of Belmont, Department of Mathematics.

Professor William F. Schreiber of Cambridge, Department of Electrical Engineering and Computer Science.

Professor Fred C. Schweppe of Carlisle, Department of Electrical Engineering and Computer Science.

Constantine B. Simonides of Wellesley Hills, Vice President in the Office of the President.

Arthur A. Smith, Jr. of Braintree, Legal Counsel, Patent Section.

Barbara A. Smith of Arlington, Department of Electrical Engineering and Computer Science.

Professor Benson R. Snyder of Brookline, Provost's Office.

Professor Gilbert Strang of Wellesley, Department of Mathematics.

Professor Annamaria Torriani-Gorini of Brookline, Department of Biology.

William E. Turchinetz of Lexington, Department of Physics.

Professor August F. Witt of Winchester, Departemnt of Materials Science and Engineering.

Fee Q. Yee of Malden, Plasma Fusion Center.

Lincoln Laboratory

Emory D. Ariel of Boston, Lincoln Group 54.

Richard A. Brockelman of Lunenburg, Haystack.

Robert J. Burns of Bedford, Lincoln Group 61.

Arthur R. Calawa of Acton, Lincoln Group 87.

Albert A. Cella of Holliston, Lincoln Division 9.

William J. Clancy of North Chelmsford, Lincoln Group 11.

William F. Colbert of North Reading, Lincoln Group 71.

Daniel M. Corbosiero of Natick, Lincoln Group 53.

Judith E. Crotty of North Billerica, Haystack.

John F. Decaprio, Jr. of Bedford, Lincoln Group 94.

Edward J. Delaney of Dracut, Lincoln Group 83.

Stuart G. Dickson of West Acton, Lincoln Group 53.

Andre R. Dion of Concord, Lincoln Group 61.

Robert E. Fahey of Arlington, Lincoln Group 83.

David J. Frediani, Jr. of APO San Francisco, Calif., Kwajalein.

Jerry Galpern of Dracut, Lincoln Group 71.

Richard W. Gaudette of North Chelmsford, Lincoln Group 12.

Edward M. Hofstetter of Carlisle, Lincoln Group 24.

James F. Howard of Newbury, Lincoln Group 23.

John P. Husler of Holliston, Lincoln Group 72.

Ben H. Hutchinson, Jr. of Lexington, Lincoln Group 67.

Walter J. Landoch, Jr. of North Chelmsford, Lincoln Group 23.

Arthur H. Levasseur of Maynard, Lincoln Group 66.

Philip J. Lozier of Needham, Lincoln Group 18.

Marilyn L. Malpass of Bedford, Lincoln Group 24.

Francis A. McCarthy of Natick, Lincoln Group 62.

John M. McPhie of Framingham, Lincoln Division 5.

Mary L. Murphy of Burlington, Lincoln Group 17.

Michael A. Nader of Littleton, Lincoln Group 96.

Carl E. Nielson, Jr. of Concord, Lincoln Division 4.

Muriel C. Plonko of Sudbury, Lincoln Group 85.

Samuel M. Pothier of Everett, Lincoln Group 72.

William C. Provencher of Marlboro, Lincoln Group 67.

Paul J. Rothenheber of Kikei, Hawaii, Lincoln Group 54.

Carl M. Steinmetz of Wellesley, Lincoln Group 34.

Irvin G. Stiglitz of Lexington, Lincoln Group 44.

Lawrence W. Swezey of Groton, Lincoln Group 55.

George H. Wheaton of Somerville, Lincoln Group 76.

John J. Worsencroft of Beverly, Lincoln Group 12.

MIT, Hennigan School join to work on "School of the Future"

(continued from page 1)

more child-centered, more successful."

Dr. Papert said that the Hennigan School was selected "from a number of schools that proposed themselves as partners in a long-term collaboration."

Next year, he said, one wing of the school will be provided with the "level of computer power that the MIT group considers to be minimal for exploring the ways computers will be used in the nineties. Functionally, this means that a computer must be available every time someone wants to write something, calculate something or just fool around."

Numerically, this might mean more than 100 computers in the wing, which has a population of about 200 students, he said. The exact number, as well as the choice of computers, will be determined in the course of experience, Professor Papert said.

Most of the computers will be "work-horse machines" used for writing and learning to program. These will be standard, present generation micro's. There will also be a number of machines of "superior power," he said, because the spirit of the experiment is to lead, rather than to follow, the kinds of machines available to schools. Otherwise, Professor Papert said, "tomorrow will always be a prisoner of the primitivity of yesterday."

Others involved in the program from MIT are Andrea diSessa, Sylvia Weir, Sherry Turkle, William Higginson, Aaron Falbel, Susan Imholz, Sandie Bellone and Lise Motherwell. Professor Papert is project director. The program also will involve Bernice Johnson, principal of the Hennigan School, and a team of Hennigan teachers led by Joanne Ronkin and Linda Moriarty, and other teachers from other Boston schools, including the Josiah Quincy School with which MIT has a long-standing collaboration, Professor Papert said. The teachers will be trained at summer workshops at MIT. MIT people will also work at the Hennigan School, Professor Papert said.

The Globe quoted Dr. Papert as saying he chose Boston for his project because the system is "way ahead in openness to experimenting with new technology." The Hennigan was selected from among the city's 80 elementary schools because of "the marvelous educational philosophy of the teachers and principal," he told The Globe.

in addition to electronics knowledge. Graduation from a two-year day technical school or equivalent in applicable experience required. Should have thorough knowledge of operation of analog and digital electronic devices and electronics construction techniques. Should enjoy challenge of working in fast-paced research program and opportunity to learn variety of skills. H85-141

Technician B (Electronics), Plasma Fusion Center, to assist in laboratory or research work and operate experimental and technical equipment under the supervision of scientific personnel or technicians of a higher grade. Must be able to work for periods of time without supervision. Will work in the Controls group and assist in the system integration of Programmable Control equipment on the TARA project. Requires strong electronics background with some programming experience. Includes chassis fabrication, relay wiring, and cable routing from process equipment to control system. Will initiate wiring sketches and run lists. Will perform ladder logic programming and Process Control System maintenance including annotation of ladder logic, listing of process I/O allocation, and editing. Requires graduation from two-year day technical school or equivalent experience; thorough understanding of operation of analog and digital electronic devices and electronics construction techniques; and knowledge of computer languages or previous experience with industrial programmable controllers. H85-140

Waiter/Waitress, Faculty Club, to perform such duties as may be necessary to the effective operation of the dining facilities including but not limited to setting up tables; taking orders; serving customers; clearing tables; carrying food and dishes to and from the dining room and kitchen; setting up and clearing buffets; cleaning and filling serving dishes; stocking sideboards and pantries; and keeping closets and furniture in clean and good repair. (20 hrs/wk, M-F 5-9 pm) H85-139

Houseman/Housekeeper, Housing, to perform all duties associated with general cleaning in housing facility, reporting to House Manager. Clean and wax floors; wash wall surfaces and inside windows; vacuum floors, carpets, drapes and upholstery, and dust. Will spot clean carpet and upholstery, as directed by supervisor. Clean bathrooms, showers and kitchen appliances. Service rooms when necessary including making beds, emptying waste baskets and distributing soap and towels. Strip, refinish and buff floors using power equipment. Dispose of trash and rubbish. Must be physically able to perform all tasks and be familiar with the use of cleaning equipment. H85-138

Bartender (part-time), Faculty Club, responsibilities include bartending for the front bar as well as for private parties; setting up and breaking down before and after functions; and performing related duties. Basic math skills and fluency in English required. Must be available to work week nights 5pm to 10pm for a total of 15 hours per week. Must be at least 20 years of age with bartending experience. H85-137

Electrician, Physical Plant, to install and maintain all types of electrical equipment and systems. Must have ability to work from blueprints, verbal instructions or sketches as necessary. Some electronic experience desirable. Must be available to work all shifts as required. May be required to work on irregular schedule as determined by the needs of the Electric Shop. Requires a minimum of 5 years applicable experience with Massachusetts State license required. H85-131

Technician B (electronic), Plasma Fusion Center, to assist in laboratory or research work and operate experimental and technical equipment under the supervision of scientific personnel or technicians of a higher grade. Must be able to work for periods of time without supervision. Technician will work in the RF group and will assist in constructing and maintaining large, high power RF and microwave equipment. This position requires some mechanical skills in addition to electronics knowledge. Graduation from a two-year day technical school or its equivalent in applicable experience required. Should have thorough understanding of the operation of analog and digital electronic devices and electronics construction techniques. H85-121