Massachusetts Institute of Technology

TECH TALK

April 27, 1983
Volume 27, Number 32

New home for ILP

The Industrial Liaison Program has moved into renovated offices on the fourth and fifth floors of Building E38 (292 Main Street).

The move took place last Friday (April 22) and brings together the four offices of the ILP which had been dispersed throughout the campus, according to Professor James D. Bruce, present director of the program.

The ILP telephone extension, x3-2691, remains unchanged.

Medical question

The MIT Medical Department would like to know your opinions about the Department.

Questionnaires will be mailed to randomly selected MIT students and employees, and Draper Laboratory empoloyees. The information collected will assist the Medical Department in evaluating and improving its services. The results will also be compared to a similar survey done in 1980.

If you receive a questionnaire, please take the time to respond and return it to the Medical Department.

PBK meeting

Members of the Class of 1983 to be honored by election to Phi Beta Kappa will be chosen at the annual meeting of the MIT PBK Chapter today (Wednesday, April 27) at 4pm in the Bush Room (10-105). Professor Robert I. Hulsizer, president, urges all members of the Chapter to attend, and he invites all Phi Beta Kappa members at MIT, no matter where initiated, to affiliate with the MIT chapter. For further information, call Prof. Hulsizer, x3-6075, John I. Mattill, secretary, x3-8251 or Jay K. Lucker, treasurer, x3-5651.

No smoking

The MIT Medical Department will offer a five-session smoking cessation program beginning Tuesday, May 3, at noon. Sessions will be held once a week on Tuesdays from noon to 1pm in the Health Education Conference Room, E23-297.

The program is geared to smokers who are self-motivated to quit smoking and is based on behavior modification. "Quit Kits," films and other American Cancer Society and American Lung Association materials will be used.

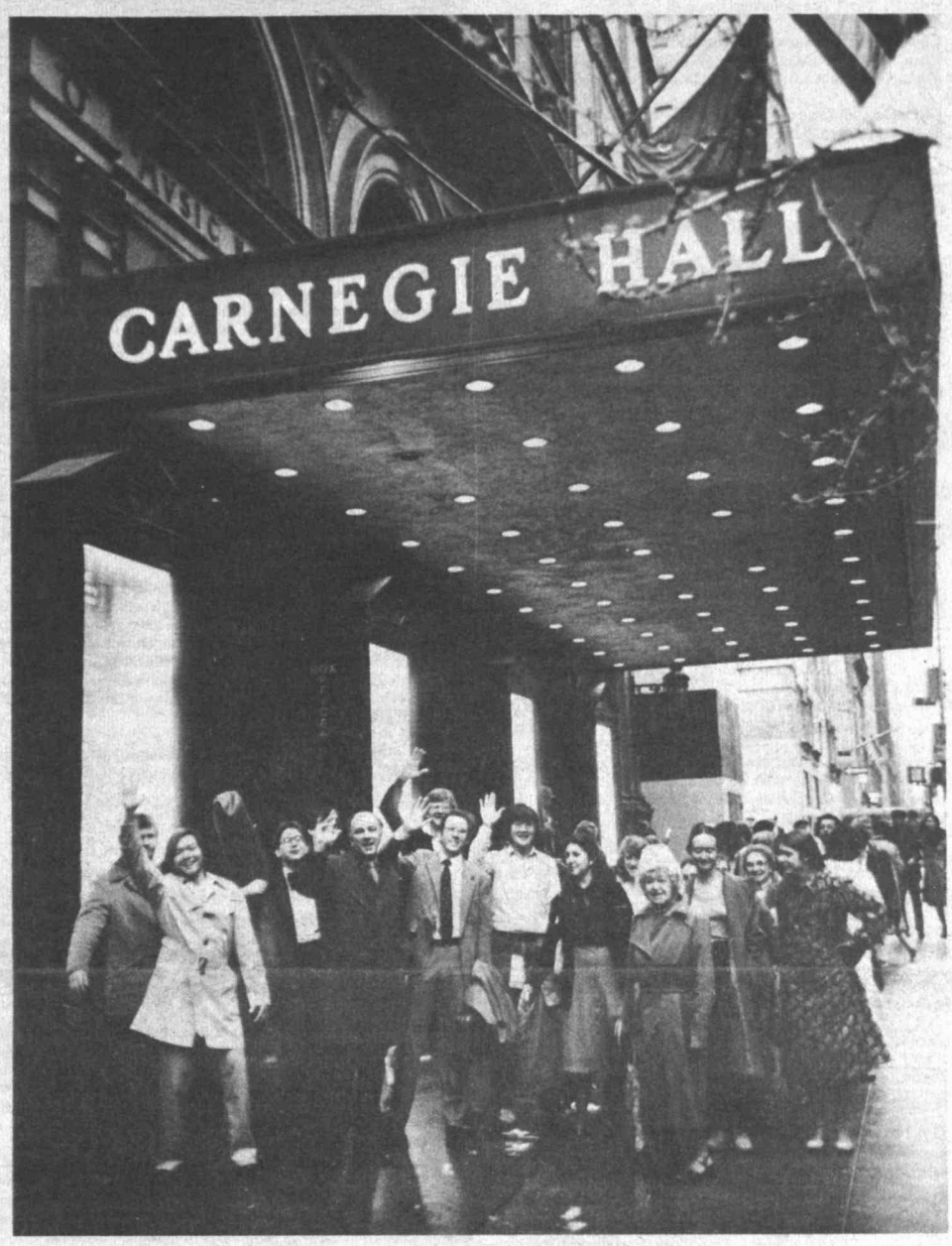
The program will be led by Brenda Lindemann, MIT Health Educator, assisted by Jane Labbe, American Cancer Society trained facilitator. It will be limited to 20 participants with pre-registration required. The fee is $20. For further information and pre-registration contact the Health Education Service, x3-1316.

Sisterhood

The Association for Women Students (AWS) is seeking women students to serve as big sisters to the incoming freshwomen next fall. Students interested in filling such a role are asked to call Suzanne von Rosenberg, Dorm x5-8319 (or leave a message at the Burton House desk), or Nancy Peterson, Dorm x5-6581.

Mariachi music

AMEX-MIT, the Association of Mexicans at MIT, will present "Mariachi" in a concert of authentic Mexican music at Kresge Auditorium May 2, Monday, at 8pm. Admission is $2.



Members of the MIT Symphony orchestra are shown as they arrived at New York's Carnegie Hall for their concert Sunday night. David Epstien, conductor of the orchestra and professor of music at MIT is fourth from the left. This was the third appearance at the famous hall for the Symphony. Among the honored guests attending was composer Vincent Persichetti, whose Opus 90 was given its New York premiere. Following the concert there was a reception at Carnegie hosted by the MIT Alumni Center.

Scholars to share arms control knowledge

By ROBERT C. DI IORIO
Staff Writer

MIT and Harvard University, with the support of the Alfred P. Sloan Foundation, are taking steps to advance college teaching on the background of nuclear weapons and arms control policy issues.

The effort will begin with a July workshop at which scholars at MIT and Harvard will share their expertise on nuclear weapons and national security with professors from liberal arts colleges, many of whom have plans to teach courses in these fields.

In a longer-range project, MIT, Harvard and WGBH-TV, the public broadcasting station in Boston, are developing a plan to capture on film and videotape the extensive body of scholarship—developed at research centers across the country—on nuclear weapons and arms control. The video material would be used in college courses and by civic organizations at forums. Some of the material may prove suitable for broadcast.

The Sloan Foundation is supporting the workshop with a grant of $161,954 and the video program with a grant of $130,972.

The chief instructors for the two-week workshop, which will be held from July 10-23, will be drawn from the Arms Control and Defense Policy Program of the MIT Center for International Studies and from the Center for Science and International Affairs at Harvard's John F. Kennedy School of Govern-

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Alberty urges lab exemption in 'right-to-know' legislation

By CHARLES H. BALL
Staff Writer

MIT Professor Robert A. Alberty has urged a legislative committee to exempt laboratories from a proposed state law that would govern the handling and labeling of chemicals.

Dr. Alberty told the House-Senate Joint Committee on Commerce and Labor that there are "very great differences between the laboratory and the plant" and that the legislation under consideration would cause "serious problems" for universities, hospitals and other organizations with laboratories.

Dr. Alberty, professor of chemistry at MIT and former dean of the School of Science, testified April 20 before the committee, which is holding hearings on so-called "right-to-know" legislation which would require much more extensive labelling of all the many laboratory chemicals used at MIT and elsewhere.

"There are many federal regulations on the handling of chemicals and their disposal that those of us responsible for laboratories have to live up to," Professor Alberty told the committee. He also noted that the federal government's Occupational Safety and Health Administration (OSHA) "recognizes the differences between laboratories and plants."

Dr. Alberty has taken an active role in the development of procedures for reducing risks associated with the use of chemicals in laboratories. In 1981 he was a member of a National Research Council committee that wrote a

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Gray sees need to reexamine MIT mission for coming decade

By ROBERT M. BYERS
Staff Writer

President Paul E. Gray, in a far-reaching review of the university's future over the next decade or so, told the April meeting of the faculty last week that the Institute through the 1980s will face stern tests in the resolution of continuing issues in four generally related areas of academic life—the mission and character of its undergraduate education, the ultimate size and scale of operations, the scope and range of its intellectual enterprise, and the cost of doing research here.

Need for insitutional vision

"This special place has a remarkable ability to sense the needs of the future and to get there first; indeed, to have a large hand in shaping the future," President Gray said. "My principal task here is to enhance the academic and social environment in ways that will encourage the extraordinary individuals who comprise this faculty to follow their intellectual instincts. It is a role of nurturing and supporting a congenial environment.

"At the same time, however, there is a need to reexamine and to reconstruct for these

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Johnson panel maps 2-part high-tech plan

Preserving our national capacity to create and use frontier technologies must be "among the nation's highest priorities," a blue-ribbon panel headed by Howard W. Johnson, Chairman of the MIT Corporation, told the Senate Finance Committee earlier this month. Stressing that domestic actions hold the key to the nation's performance in advanced technology development and trade in the years ahead, the panel urged the United States to give "immediate attention" to a strategy aimed at strengthening domestic innovative capacity and reducing international trade frictions.

The 22-member panel of national leaders in technology, industry, labor, education, economics, and foreign affairs included three MIT faculty members. Assembled by the National Research Council, it focused on relations among the major industrialized nations and was unanimous in its findings.

Because US technology traditionally has been the world benchmark, our advanced technology enterprise has been taken for granted and "has been undervalued in the past national scheme of priorities," the panel explained. Since World War II, however, there has been "a progressive narrowing of American technological leadership" as other countries' technological efforts have gained strength.

Now, the panel declared, our nation's capacity for technological innovation must be recognized as a vital national resource in government policymaking. This capacity to introduce new technologies across all industrial and service sectors, the panel said, is the key to improving productivity and introducing new and improved products and services that will be competitive in world markets.

Technological innovation is a dynamic process essential not only to the country's economic well-being but also to its military security, the panel noted.

Stressing that our national welfare is

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INSTITUTE NOTICES

Announcements

Official Notice: Registration Material for the First Term 1983-84 will be available in Lobby 10 Monday, May 2, and Tuesday, May 3. Descriptions of subjects will be available in the main libraries, the Information Center and in department headquarters.

Nominations for the John Asinari Award for Undergraduate Research in the Life Sciences—Undergraduates in Courses VII, VII-A and VII-B; Tom Lynch, Rm 56-524, x3-4711. Deadline: April 29, 1983.

Institute R/O—Anyone interested in working Institute R/O 1983, please leave a message for Lillian Chiang, R/O Coordinator, in the UASO, Rm 7-105.

Official Notice Final Examinations—All students should obtain an examination schedule at the information center, 7-121.

The Advisory Committee on Shareholder Responsibility—will meet in the Maclaurin Room, 10-300 at 4pm, Wed, April 30 to review a number of questions on the proxies of companies in which the Institute is a shareholder.

MIT Honorary Matrons and the Faculty Emeriti—are invited for sherry at the President's House, Thurs, April 28, 11:30am. The Matrons' luncheon at the Faculty Club will follow at 1pm.

Summer Study in the Netherlands*—Nijenrode, the Netherlands Summer School of Business, is offering a course of study focusing on International Business (June 27-August 5). The School was founded in 1946 by several large Dutch Corporations (such as Philips, Unilever, L.L.M.). It is a residential school which offers programs on the undergraduate and the graduate level. MIT students have participated in this program with great success. If you are interested in further information, please call Dr. Gary DeVos, University of Massachusetts - Boston, 929-8076. Dean for Student Affairs Office/Student Assistance Services Section/Foreign Study.

Biomedical Engineering and the PreMed Path: Professor Robert Mann and Dean Jeannette Gerzon will speak on the procedures and opportunities for biomedical engineering students interested in entering medical school. Sponsored by the Biomedical Engineering Society. Tues, May 3, at 4pm. For information call x5-9592.

Talbot House Available—There are still May weekends available at Talbott House, South Pomfret, Vt., for use by MIT groups of 15-27 for informal gatherings in a country setting. For information, call Renee Caso, Rm 7-103, x 3-3621.

Club Notes

Nightline, MIT's student-run all-night peer counseling hotline, is now recruiting staffers for fall term. You don't need to be an insomniac or a future psychiatrist, you just need to have a willing ear. Training will be provided. All students, graduate and undergraduate, are eligible to be staffers. For more information, call Nightline any night after 7pm at x3-7840.

MIT/DL Bridge Club*—ACBL Duplicate bridge, Tues, 6pm, W20-473. For info call Gary Schwartz, x8-1484, Draper or Sam Smith, 244-4679.

The MIT Aikido Club**—meets Mon, Wed, & Thurs, 5:30pm; Tues & Fri 7:30am, DuPont exercise room. Aikido is a non-competitive Japanese Martial Discipline. Beginners welcome.

MIT Hobby Shop**—Complete facilities for wood working, metal working & darkroom, Mon-Fri, 10am-6pm, Wed, 10am-9pm, W31-031. Fee: $15/per term students; $25/per term community. For info call x3-4343.

Tiddlywinks**—Interested in learning tournament style tiddlywinks? All welcome, learn or just observe Wed, 8-10pm, Student Center, Rm 473.

MIT Rugby Football Club**—All undergrads, grads & staff members encouraged to try rugby. No experience necessary. Practice, Tues & Thurs, 5pm, Briggs Field, games, Saturday afternoons, followed by party. Call Steve Schwed, Dorm x5-8336, Leo Casey, Dorm x5-7253.

MIT Tae Kwon-Do Club*—Meets Mon, 6-8pm, Burton Dining Hall; Wed, 6-8pm, Burton Dining Hall; Fri, 6-8pm & Sun 4-6pm, T-Club Lounge. Tae Kwon-Do is a Korean martial art. For info call Charlie, x3-7764.

MIT Ice Dance Club*—Membership open to any skaters able to skate forward & backward edges, no experience necessary. For info call Beverly, x3-1512.

MIT Outing Club*—Plan hiking, camping, canoeing, ski trips, rental equip avail, Mon & Thurs, 5-6pm, Student Center, Rm W20-461.

MIT Women's Rugby*—Beginners, experienced, undergrads, grads, etc. For info call Holly Reese, Mccormick Hall, call x5-8607, Dorm.

MIT European Club*—8pm, Tang Hall Lounge, 550 Memorial Dr. For info call 864-5510.

MIT Badminton Club**—Practice Fri, 7-10pm & Sun, 10am-1pm, Rockwell Cage. All levels welcome. Bring own equipment. For info call Dorm x5-9690 or x5-9593.

ACBL Duplicate Bridge at MIT*—Bridge games every Sat, 7pm; every Thur, 6:30pm, $.50 entry fee, Rm 473, Student Center. Lessons free w/entry starting at 6:15pm from Bridge Masters. No partners necessary, all welcome. For info call Rajan Batta, x3-6185, 494-1968, Dorm x5-9563.

MIT Table Tennis Club**—Meets Sat, 4-6pm & Sun, 6-8pm, T-Club Lounge. All welcome. For info call Suguru Araki, 494-1100, x3-5342.

MIT Women's Ice Hockey**—Practice Tues & Thurs, 7-9pm, Ice Rink. All welcome. For info call Mary Bowden, 253-2272 or 721-2277.

MIT Figure Skating Club*—Weekend sessions, ability to skate forward & backward. Selfpaced & informal. For info call Peter, x5-7269, Laurie, x3-6799.

MIT Frisbee Club**—plays Ultimate Frisbee weekly & has occasional games vs other schools. John Schutkeker, captain, 876-1823 or Frank Revi, co-captain, x5-6167. Sat, 11am-2pm; Wed, 4-7pm, Great Court; Tues, 4-7pm, Briggs Field.

The MIT UHF Repeater Association **—offers radio communications assistance to any MIT event free of charge as a public service. If you or your group are interested call Richard D. Thomas, 354-8262 for details.

MIT GO Club*—Play an Oriental game of high strategy, every Thurs, 8pm, Rm 1-136. Will teach beginners. GO sets & books available.

MIT Judo Club**—Mon & Wed at 7pm, Sunday at 4pm, Special Fitness Rm.

MIT Cycling Team—Bicycle racers interested in intercollegiate competition should check the bulletin board by the Dupont desk for information. Eric Martinot, Dorm x5-6107.

Religious Activities

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

The Tech Catholic Community cordially invites the community to a Farewell Tribute to Father Robert Moran, CSP, Saturday, May 7, at 7pm in the Sala de Puerto Rico. For information, call x3-2981.

Charismatic Prayer Group*—Mon eves, 6:45, Miller Room 1-114. Pot-luck supper followed by prayer meeting, Bible sharing, music & praise. Jim Mahoney, x3-3074.

Christian Science Organization at MIT*—Weekly Testimony Meeting, Thurs, 5:15pm, 6th flr Lounge, Ashdown.

Islamic Society*—Daily prayers, Ashdown house (basement), 5 times a day. Call 225-9837 for schedule. Friday prayer, Ashdown House 1-2pm, Khutba starts at 1:15pm, congregation at 1:45pm.

Jewish Services*—Friday, April 29: Reform Shabbat Dinner, 5:30pm, 500 Memorial Drive; Conservative/Reform Services, 5:30pm at Hillel; Orthodox Services, 7:30pm, Rm 50-010; Shabbat Dinner, 7:30pm, Kosher Kitchen; Candle Lighting, 7:21pm. Saturday, April 30: Orthodox Services, 9am, Rm 50-010; Shabbat Lunch, 12:30pm, Kosher Kitchen.

Rainbow Sign Observance—Yom He-Keshet, the anniversary of the covenant with Noah to protect the earth and continue the species. Singing, storytelling, reaffirrmation, Sunday, May 8, 2:30pm, Mezzanine Lounge. X3-2982.

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

Morning Bible Studies—Fri, 7:30-8:30am, L-217. Ed Bayliss, x3456, Lincoln.

Noon Bible Study*—Every Tues, Rm 3-465, bring your lunch. Ralph Burgess, x3-8121.

Prayer Time*—Fri afternoons, 1-2pm, weekly Bible Class, Rev. Miriam R. Eccles, founder & director of Alpha and Omega Missionary Society. Guest speakers & refreshments. Center for International Studies, Seminar Rm III (E38—6th flr).

Tech Catholic Community*—Sunday Mass only, 9am, noon, 5pm, Chapel; week day Mass, Tues, Thurs, 5pm; Fri, noon, Chapel. Bible study, Thurs, 7:30pm, Ashdown, 6th flr Lounge. Call x3-2981.

The Gospel of John*—Bible study. How Christ came to be man's life to produce God's dwelling place on earth. Tues, noon-1pm, Rm 8-119.

Association for Research and Enlightenment Study Group—Tuesdays, 8-10pm, Ashdown House First Floor Lounge. First Tuesday of every month will be an Inquirers Group for newcomers. For info: Dave Rosenblitt, Dorm x5-8275 or Scott Greenwald, Dorm x5-9592.

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

The Lutheran Ministry and Episcopal Ministry—Hold weekly service of Holy Communion Wed, 5:10pm, Chapel. Supper, scripture study & discussion follows at 312 Memorial Drive. Call x3-2325 or x3-2983.

Campus Crusade for Christ**—Family time, 7:15pm, Fri, eves, Rm 37-252, (Marlar Lounge). Come for fellowship, scripture teaching, prayer, singing, refreshments & fun. Tues, prayer time, 7:30-9am, W20-441, Student Center. Call Dorm x5-9153.

Internships

EDIC, Economic Development and Industrial Corporation of Boston, has nine internships available this summer. This is the city's agency for industrial development whose goals are to bring industry to Boston, keep existing industry and create jobs. These internships are in the areas of: landscape design, design, marketing and communications, employer relations, accounting, real estate, development planning, project management and construction management. Applicants must have a work study grant, another type of financial aid funding or work on a volunteer basis. Contact names and more information available in the Career Planning and Placement Office, Rm 12-170.

WXNE-TV Boston has internships available in the Production Department of this commercial broadcast television station. The Production Department supplies service support in the production of on-air programming, on-air promotions and commercials. No salary, prefer juniors and seniors with prior exposure to technical equipment. Minimum of eight hours per week, available year round. Contact: Carolyn Elizabeth Powers, Production Coordinator, WXNE-TV, 100 Second Avenue, Needham Heights, MA 02194.

The Confederation of Italian Industry in Rome has two traineeship programs for senior graduate students in economics, statistics and business administration. Ideal candidate should be Italian or have an interest in the Italian institutional set-up with special reference to the industrial sector. The program consists of up to four months in Rome, association with an ongoing research project and the salary is Lit. 800,000 gross per month. Write Antonio Martelli, Centro Studi Confindustria, Viale dell'Astronomia 30, 00144 Rome, Italy.

The Center for Space Policy Analysis, Inc., is currently looking for a paid intern for the summer. This new consulting firm is doing policy research and analysis for the government and the aerospace industry. The position will be a combination of research and writing in all policy related areas of space: political, legal, economic and national security issues, along with preparation of briefs and research to aid senior staff. Please forward the following: a one-page brief explaining your expectations, a short writing sample, two letters of reference, a current transcript and a resume. These should be sent to: Tom Mitchell, Assistant to the President, Center for Space Policy Analysis, Inc., 20 Chandler Street, Somerville, MA 02144.

The Computer Museum in Marlboro, MA, is looking for an architecture or design student for a three, six or nine month paid internship beginning summer 1983. The intern will construct a scale model of a proposed 55,000 square foot two-story museum space which will be used in planning for exhibitions in the new location. Student should have a solid familiarity with space planning and model construction and knowledge of design principles and process. Send a letter and resume or portfolio to: Jamie Parker, Exhibits and Archives Coordinator, The Computer Museum, One Iron Way, Marlboro, MA 01752.

The Computer Museum in Marlboro, MA, has a paid internship available for a qualified history of science or history of technology student. This internship, beginning in early summer 1983, can be for three, six or twelve months. The student should have a strong interest in computing technology and research, his/her own car and good communication skills. Send a letter and resume to: Jamie Parker, The Computer Museum, One Iron Way, Marlboro, MA 01752.

The Wooster School in Danbury, CT, has a teaching internship available. Responsibilities include teaching two sections of first or second year French or Spanish, supervising a dormitory for adolescent girls, and coaching interscholastic sports and/or directing drama productions. The salary is $6,000, room and board, medical insurance and life insurance. This is a one year appointment which begins on August 29, 1983, and continues until June 30, 1984. Send resume, transcript and three letters of reference to: Christopher H. Taylor, Assistant Headmaster, Wooster School, Ridgebury Road, Danbury, CT 06810.

Congressman Edward Markey has summer and fall internship opportunities available in his Boston office. These internships offer students a firsthand look at the day-to-day operations of a congressional office. Duties may include interaction with constituents or researching legislation. Interested individuals may contact Joseph Zampitella at 223-2781 or send a resume directly to Mr. Zampitella, 2100A JFK Federal Building, Boston, MA 02203.

For further information concerning these opportunities, contact E. Reed or D. Wilhoite, Rm 12-170, x3-4733, Career Planning and Placement Office.

Student Jobs

The Handel and Haydn Society of Boston needs telephone solicitors to contact patrons for renewing subscriptions. Solicitations are being made through May on Monday through Thurs nights, 6-9pm, the pay is $5/hr. If interested contact Tom Flynn at 158 Newbury St. or 266-3605.

The B-R Services, Inc. needs student for part-time help in party serving, cleaning, household chores (inside and outside), servicing the elderly, housesitting and babysitting. The hours are very flexible and the minimum pay is $5/hr. For more information, call Mrs. Paul Goldberg or Mrs. Richard Kay at their answering service, 527-4896.

Investment expert needs student to do investment statistics, posting, and some calculating. Requires neat, clear handwriting; applicant should be good with figures. Undergraduate preferred. The job starts at the end of April and carries through June 24 ($5/hr). For more information, call 491-2137.

Gillette still has some summer internships open. Sophomores or juniors in computer science are preferred for programmer positions in manufacturing systems. Students should know FORTRAN, BASIC, or COBOL. System is DEC 10. The internships are full-time during the summer and pay starts at $7/hr. If you are interested, call Susan Woodsell at 463-3133.

The Editorial Production Department of the Business Research Corporation needs several students with some proofreading experience to work with business information for an on-line database. Applicants should be highly motivated and enjoy working in a computer environment. The positions are part-time during the summer (12-24 hrs/week, $6/hr plus merit increases). Contact the personnel manager at 787-2205 for more information or to arrange an interview.

The New York Times has a manager's position opening. This position will entail the duties of running a paper delivery service. Bookkeeping, collection of funds, promotion work; accounts payable and accounts receivable. Must be an early riser. Car not a must, but helps. Hours are flexible (10-20). Wages are based on commissions on papers sold and new subscriptions. For more information call the Student Employment Office or come in for interview sign up, Rm 5-119.

Cable Television Schedule

April 27-May 4

Wednesday, April 27
Channel 8
10am, 6.343 Digital Speech Processing
4pm, "The Last Epidemic: The Medical Consequences of Nuclear Weapons and Nuclear War," directed by Helen Caldicott of the Physicians for Social Responsibility.
7pm, "The Last Epidemic" (see above).
7:30pm, 8.02 Help Session with Professor Lewin. This program will be repeated until 3am.

Channel 10
4pm, Boston VA Medical Grand Rounds—"Selective Aspects of Infection in the Elderly," Dr. Richard Gleckman, chief of infectious disease unit, St. Vincent's Hospital, Worcester.*
5pm, Committee on Immunology-Annual Albert H. Coons Memorial Lecture: "Human Antibodies and Idiotypes," Dr. Henry G. Kinkel, the Rockefeller University, New York.*

Thursday, April 28
Channel 10
5pm, Biochemistry and Molecular Biology*
8pm, 18.03 Quiz Review with Professor Toomre. This program will be shown until 3am.

Monday, May 2
Channel 10
4:30pm, Department of Biological Chemistry*

Tuesday, May 3
Channel 8
3pm, Chaplin: "The Gold Rush," presented for 21.021, Comedy, Professor Thorburn.
4:30pm, Live coverage of the Biology Colloquium, see Institute Calendar.
7:30pm, 8.02 Help Session with Professor Lewin. This program will be repeated until 3am.

Channel 10
9:30am, Electronic Images by CAVS Fellow Mit Mitropoulos.
10am, MIT Cable Television System: A Tool for Exploration.
12:15pm, Harvard Showcase*
3pm, "L'Annee Derniere a Marienbad" ("Last Year at Marienbad") directed by Alain Renais. Presented for 21.301, French New Wave Cinema.
7pm, Chaplin: "The Gold Rush," "The Champion," and "The Tramp," presented for 21.021, Comedy, Professor Thorburn.

Wednesday, May 4
Channel 8
10 am, Digital Speech Processing
noon, MIT Showcase; "CAVS Media Forum," Artistis Discover Video, 1968-76—some of the earliest video projects at MITs CAVS.
7:30pm, 8.02 Help Session with Professor Lewin. This program will be repeated until 3am.

Channel 10
4pm, Boston VA Medical Grand Rounds*
5pm, Committee on Immunology*
7pm, Keaton: "The General," "Cops," and "The Balloonatic," presented for 21.021, Comedy, Professor Thorburn.

* Courtesy of Harvard Video Services Center.

Biemann, Stanley win Guggenheims

Two MIT faculty members are among 292 scholars, scientists and artists selected for John Simon Guggenheim Memorial Foundation Fellowships for 1983.

They are Dr. Klaus Biemann, professor of chemistry, who will use his Guggenheim Fellowship to study the structure of biologically significant large proteins, and Dr. Richard P. Stanley, professor of applied mathematics, who will use his in studies of interactions between combinatorial mathematics and representation theory.

This year's successful fellowship recipients were selected from among 3,571 applicants.

AFROTC scholarships

With 226 scholarship student out of an enrollment of 244 in the Air Force ROTC program, MIT leads the nation in the number of AFROTC scholarship students this year, according to figures recently compiled.

MIT's AFROTC unit also includes the largest number of female scholarship cadets—54, 34 of whom are MIT students. MIT's AFROTC detachment includes 59 cadets from Harvard, Tufts and Wellesley.

Nationally, the MIT unit numbers in the top ten per cent of 152 institutions that host AFROTC.

Graduate Studies

The Mary Ingram Bunting Institute—announces the "Peaceful Fellowship" for women "actively involved in finding peaceful solutions to conflict or potential conflict among groups or nations." Women working with a national or international group in the general area of peace and disarmament or other relevant issues are eligible to apply. The recipient is expected to be in residence at the Institute, at Radcliffe College, for the period of the fellowship. Fellowships average $16,000 for 12 mo. Further information avail in the Graduate School Office, Rm 3-136. Deadline May 1, 1983.

New York State Senate Legislative Fellows Program—applications are being accepted through May 20, 1983. Fellows spend one year, beginning September, 1983, as legislative staff members in Albany, N.Y. A salary of $15,800 will be paid to each of the ten fellows chosen. Applicants must be New York State residents who are currently graduate students. Students in all disciplines are invited to apply. Applications and more detailed information are available in the Graduate School Office, Rm 3-136.

The Carl E. Menneken Fellowship to further the progress of engineering and science in areas of importance to the Navy is announced for 1983-84. Candidates for the $1,200 fellowship should submit the topic and a brief description of their thesis with a supporting document from his/her thesis advisor to the President, Naval Postgraduate School Foundation, Inc., Naval Postgraduate School (Code 007), Monterey, CA 93940. Further information is avail in the Graduate School Office. Rm 3-136. Deadline: May 18, 1983.

UROP

Summer Proposals For Overhead Waiver Still Being Accepted Please discontinue sending us proposals for full UROP funding. As usual, at this time we can only entertain proposals which ask for a minimal amount of money from UROP; try to send us requests for overhead waiver only. Emergency requests for UROP *may* be considered. Proposals should be submitted to the UROP coordinator in your faculty research supervisor's department. Funding decisions will be announced 2 weeks after receipt of your proposal. Please read the "Participation" section of the UROP Directory, pages 12-22.

Satellite Systems Development
A Jr. or Sr., probably in EE or Physics, with background in hardware design and laboratory test equipment is needed. This program involves design and testing of the electronics data processing system for a proton telescope. This telescope will be one of several experiments flown on a radiation effects space mission. PAY AVAILABLE ($6-6.75/hr) full time during summer and part-time in fall. Contact Dr. Ed Boughan, 37-555, x3-6146.

Development of Innovative New Products
A few positions will be available in the Innovation Center for students interested in the development of innovative new products. Must be willing to work both during the summer and during the fall semester. Will be involved in the generation and development of innovative products for industrial sponsors. Projects are available in many different areas including microprocessor-based systems, new sensors, energy related projects, and many other areas. Contact the Innovation Center, W59-202, x3-5180. Faculty Supervisor: Dr. David Jansson.

Hacker Heaven - LCS
The program is designed for undergraduates just completing their freshman year who have no previous UROP experience within the Laboratory.

Submicron Structures Laboratory
Miniaturization is the wave of the future. Micromachining and microfabrication are emerging as a vital new technology in the manufacture of mechanical microdevices. We are seeking a jr. or special sophomore in Mech. E., Mat. Sci., or EE immediately and leading to a bachelor's thesis. Involves the development of fabrication techniques for miniature light valves made of diffraction gratings. The ultimate goal of the research is to incorporate a matrix of these microdevices into a flat panel video display. Creativity, patience and dedication are prerequisites. PAY AVAILABLE. Contact Josie Stein, 13-3145, x3-3331 or Dr. John Melngailis, 13-3065, x3-4679.

TECH TALK

April 27, 1983
Volume 27 Number 32

Tech Talk is published 37 times a year by the News Office, Massachusetts Institute of Technology. Director: **Robert M. Byers**; Assistant Directors: **Charles H. Ball, Robert C. Di Iorio, Joanne Miller,** Tech Talk editor, and **Calvin D. Campbell,** photojournalist; Staff Writer: **China Altman**; Reporter: **Eileen J. Kennery** (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 $15 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.

General Electric Co. recently presented the initial payment on its $800,000, four-year pledge of support for MIT's new Microsystems Program. James Baker, executive vice president and senior executive, Technical Systems Sector, hands the $150,000 check to President Paul E. Gray. With them, from the left, are Keith Russell, manager of integrated circuit design for GE; William J. Cimonetti, general manager of GE's Armament Electronic Systems Department, and Professor Richard B. Adler, associate head of the Department of Electrical Engineering and Computer Science.

Graduate women's residence to be named for Ida F. Green

MIT will name its first residence hall for women graduate students—recently completed at 350 Memorial Dr.—for Ida Flansburgh Green of Dallas, Texas, a major benefactor who has long been a particular friend to women pursuing graduate studies at MIT

Formal dedication of Ida Flansburgh Green Hall will take place June 10 as part of MIT's Technology Day, a homecoming when hundreds of alumni and alumnae will return to the campus for the day.

Announcement of the name for the new residence hall was made by MIT President Paul E. Gray and Corporation Chairman Howard W. Johnson. The name, they said, "honors a woman who has long been concerned with both the strength and vitality of MIT and the encouragement and expansion of opportunities for women students here."

"Over the past two decades," they said, "women graduate students at MIT have had in Ida Flansburgh Green a firm advocate, a staunch supporter, an ardent champion and a warm friend.

"We see in the opening and naming of the residence hall in Mrs. Green's honor an opportunity to underscore the Institute's commitment to women."

The four-story brick building, formerly used as MIT's infirmary, was remodelled at a cost of more than $1 million and provides on-campus housing for 46 women graduate students and their faculty residents, Professor Edith Waldstein and her husband, Fredric. The hall is self-governed and has its own constitution. It is next door to and closely allied with McCormick Hall, MIT's principal undergraduate women's residence, named for Stanley McCormick, husband of the donor, the late Katharine Dexter McCormick, a 1904 graduate of MIT. The building for graduate women became available last year when the MIT infirmary moved into new and expanded facilities.

Mrs. Green and her husband, Cecil Howard Green, a 1923 graduate of MIT and founder and director (now honorary director) of Texas Instruments, Inc., and its predecessor, Geophysical Services, Inc., have been among MIT's most important benefactors for the past quarter century.

In the 1960s, they provided MIT with its 20-story Cecil and Ida Green Building which houses the Department of Earth and Planetary Sciences and the Department of Meteorology and Physical Oceanography. On the tenth anniversary of the building, the ninth floor lounge was designated the Ida Green Room.

Also over the years, Mr. and Mrs. Green have established at MIT a total of nine endowed professorships in geophysics, geology, electrical engineering, physics and education.

In 1974, Mr. and Mrs. Green provided MIT with a $1 million fund to endow the Ida Green Fellowships for women students just beginning their graduate studies at MIT, and every fall Mr. and Mrs. Green return to the campus to meet personally the newly-selected Ida Green Fellows. Some 75 women have been Ida Green Fellows since the graduate fellowship program began in 1974. Mr. and Mrs. Green have also established the Ida Green Fellowship for women in science and engineering administered nationally by the American Association of University Women.

Both Mr. and Mrs. Green are Life Members Emeriti of the MIT Corporation. In 1979 they were co-recipients of the Public Welfare Medal of the National Academy of Sciences, and they have received many other distinguished national awards jointly and individually. Mrs. Green is an Honorary Member of the MIT Alumni Association and of the Association of MIT Alumnae (AMITA). When Ida Flansburgh Green Hall is dedicated on Technology Day, members of Mr. Green's Class of 1923 will be holding their 60th anniversary reunion.

Women graduate students have nearly tripled in number at MIT over the past decade. This year, 856 women make up 19 percent of MIT's graduate student body of 4,489. In 1973, the Institute had 318 women graduate students, or nine percent of the graduate student body of 3,358.

In addition to the residents of Ida Flansburgh Green Hall, some 200 women graduate students are housed on campus in coeducational residences. But on-campus housing for graduate students in general is short at MIT and the shortage is even more acute for women. The new hall increases the percentage of women graduate students housed on campus from 25 to 30 per cent.

(Undergraduate enrollment of women at MIT also has been increasing steadily over the past decade or two. Presently, more than 1,100 of MIT's 4,300 undergraduate students are women.)

Dubowsky named to post in manufacturing-productivity lab

Professor Steven Dubowsky, known for his work in the development of self-learning adaptive control procedures for rigid and flexible robotic manipulators, has been appointed associate director of the Laboratory for Manufacturing and Productivity at MIT.

An interdepartmental facility in the School of Engineering, the laboratory provides a focus for research and education in manufacturing and productivity at MIT. It is directed by Professor Nam P. Suh of the Department of Mechanical Engineering, who announced Professor Dubowsky's appointment.

Professor Dubowsky joined the MIT faculty in 1982 and is a senior member of the Systems and Design Division of the Department of Mechanical Engineering. He was a faculty member at the University of California in Los Angeles from 1971 until transferring to MIT.

He holds the BME in mechanical engineering and control systems from Rensselaer Polytechnic Institute (1963), the MS from Columbia University School of Engineering and Applied Science (1964), and the doctor of engineering science, also from Columbia (1971).

Professor Dubowsky's research activities have involved the dynamic behavior of nonlinear machines and electromechanical systems. His early work was directed toward developing methods and models to permit practicing engineers in industry to evaluate the dynamic performance of high-speed systems without the need for exhaustive analysis, thus reducing the technology transfer problem. More recently his research has been focused on the study of the three dimensional vibrations of machine systems using finite element techniques, the acoustical noise generated by high-speed systems, the development of self-learning adaptive control procedures for rigid and flexible robotic manipulators, and the use of microcomputers for machine and robotic control.

He is a member of Tau Beta Pi and Sigma Xi and has been a member since 1981 of the honorary editorial board of the Journal of International Federation for the Theory of Machines and Mechanisms and the editor of the Journal of Mechanisms, Transmissions and Automation in Design since 1982.

Professor Dubowsky has consulted for a number of industrial firms including Hughes Aircraft Corp., Lockheed Research Laboratories, Optical Science Consultants, Cincinnati Milacron Corp, and SRI International. He has held industrial positions with General Dynamics Corp., the American Electric Power Service Corp., and the Perkin-Elmer Corp.

"Professor Dubowsky's industrial experience and his research activities make him especially well suited for the position of associate director of the Laboratory for Manufacturing and Productivity," Professor Suh said. "His background provides him with a perspective that is compatible with that of the representatives of industrial firms associated with the laboratory's cooperative research programs."

Those programs include:

Axiomatics, the establishment of a new approach to manufacturing decision-making designed to facilitate rational design of products and optimization of manufacturing systems; polymer processing; flexible materials processing; machine dynamics; productivity analysis; tribology, the study of friction and wear; computer-aided design; computer-aided manufacturing, including robotics, and metals processing.

Exam time reminder

As examination time approaches, **the Committee on Educational Policy would appreciate the cooperation of the teaching staff observing Faculty Regulation 2.51** regarding the end-of-term scheduling of examinations, quizzes, term papers, and other assignments. This regulation reads:

—Final examinations shall be held during the final examination period following each term. Any single examination shall be limited to not over three hours...

For each subject in which a final examination is given during the prescribed period, no written examinations shall be given during the eight days preceding the examination period. For each subject in which no final examination is given during the prescribed period, no more than one written examination limited to one normal class period (or to one and one-half hours, whichever is shorter) shall be given during those preceding eight days.

No assignment, term paper, or oral presentation for any subject shall fall due after the last day of class exercises for that subject.

Each term undergraduate and graduate students from a variety of departments contact the chairman of the Faculty, the chairman of the Committee on Academic Performance, or the chairman of the Committee on Graduate School Policy to protest violations of the rules during the last week of classes and during final exam week itself—for example, having a quiz moved to some time other than a regularly scheduled class period (perhaps so that it can be two hours long), having an assignment or take-home exam fall due during final exam week, etc. Violations of the rules, while generally well intended, often work hardships on students, given their overall load of four or five subjects.

In order to help minimize these problems, **the CEP expects literal compliance with Regulation 2.51 by the teaching staff.** In addition to the obvious, our interpretation of these rules includes the following, and applies both to undergraduate and graduate subjects:

—Each subject in which no final exam is given may have a one-hour quiz in the last week of classes during a regularly scheduled class period. (A quiz of one and one-half hours is allowed, but only if done within a regular class period.)

—In general, take-home exams cannot fall due past 9am on Monday of the last week of classes, with the limited exception of subjects which have no final exam, and have no quizzes or other assignments due during the last week of classes.

—Major assignments, such as term papers, projects, and take-home exams, should be assigned early enough to allow students to complete most or all of the work before the last week of classes.

—No assignment, of any kind, may be given which falls due after the last regularly scheduled meeting of the class for that subject. This obviously does not prevent an instructor from giving an extension to an individual student, but an extension should not need to be given to the majority of the class.

—No classes, examinations, or exercises of any kind may be scheduled beyond the end of the last regularly scheduled class in a subject, except for final exams scheduled through the Registrar's Office.

—Any departure from these rules requires the permission of the CAP for undergraduate subjects or the CGSP for graduate subjects. Asking students to vote on some deviation from the rules is not an acceptable procedure.

End-of-Term Dates, 1982-83 Spring Term:
Last Week of Classes—May 9-13 (Last Day of Classes for Subjects with Final Exam—May 11).
Final Exam Period—May 16-18.

N.A. Lynch, Richards Professor, forms distributed systems group

Dr. Nancy Ann Lynch, Ellen Swallow Richards Associate Professor in the Department of Electrical Engineering and Computer Science, has formed a new research group to apply mathematical methods to solving problems in the design of distributed computer systems.

Dr. Lynch said her group will try to identify fundamental problems in communication, coordination of multiple processors, synchronization, timing, concurrency control and resource allocation in large computer systems.

Formerly a member of the faculty at the Georgia Institute of Technology, Dr. Lynch joined the MIT faculty last year as the first Ellen Swallow Richards Professor. The professorship was established in 1973, the 100th anniversary of the graduation of Mrs. Richards, who was the first woman student at MIT. The chair was fully endowed in 1981.

The Ellen Swallow Richards Professorship is intended to recognize the national importance of contributions by women to research and education at MIT, to honor the professional achievement of Mrs. Richards and to strengthen the role of women on the MIT faculty. Mrs. Richards served in the Department of Chemistry from 1878 until her death in 1911.

Professor Lynch received the BS degree in mathematics from Brooklyn College in 1968 and the PhD, also in mathematics, from MIT in 1972. Before joining the Georgia Tech faculty in 1977, she served three years on the faculty of the University of Southern California, and a year at Tufts University.

She is a member of the Army Basic Research Committee of the National Research Council. She is this year's program chairman for the Association for Computing Machinery Symposium on Principles of Distributed Computing, and has played the same role for the IEEE Computer Society Symposium on Foundations of Computer Science. For several years she was secretary-treasurer of the Association for Computing Machinery's Special Interest Group on Automata and Computability Theory.

The author of numerous professional papers, Professor Lynch has also led seminars at universities throughout the country.

—JM

Jaffe, Solomon win first science prize

The first Science Council Prize for excellence in undergraduate teaching will be shared by two faculty members in the School of Science, Professor Robert Jaffe of physics and Professor Frank Solomon of biology. Announcement of the awards was made by Professor John M. Deutch, dean of the School of Science.

Professor Jaffe, who teaches a broad range of subjects in physics, was cited for his careful preparation and clarity of presentation as well as personal warmth. His students and colleagues said he presented a "model of the best kind of university teaching."

The excitement, enthusiasm and clarity of Professor Solomon's lectures in General Biochemistry were widely recognized and appreciated by his students, who come from many departments of the Institute. He was also praised for the extra time he spends with students and for a large number of UROP projects.

Both teachers, the nominating committee said, draw students to them in many ways besides formal classroom instruction, and also excel in graduate level subjects. The nominating committee included Professors James L. Kinsey (chairman), Maurice Fox, Anthony French and Alar Toomre.

Press journals cited

Two journals published by the MIT press have received awards in the seventh annual Professional and Scholarly Book Awards sponsored by the Association of American Publishers, Inc.

Via:5, the journal of the University of Pennsylvania's Graduate School of Fine Arts, is the 1982 winner in the category, Excellence in Design and Production, Journals, Looseleaf and other Media.

Perspecta 19, the Yale University architectural journal, received an honorable mention in the Best Single Issue of a Journal category.

THE INSTITUTE CALENDAR

April 27-May 8

MISS THE TECH TALK DEADLINE?

Put your announcement on the MIT Cable System. "Today at the Institute" runs 24 hours a day on Channel 12 and can be viewed in Lobby 7, Lobby 10, and anywhere the cable is connected.

Simply submit announcement in writing to Rm 9-030. We prefer a day's warning, but faster action may be possible.

Useful also for correcting errors, notifying about cancellations, and dealing with emergencies.

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

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

Events of Special Interest

Spring Crafts Fair*—Everything from home made baked goods to hand made pottery, potholders, quilts, purchase mother's day gifts ahead of time or just come and browse through arts and crafts. Technology Wives Organization, April 27, 8:30am-4:30pm, Lobby 10.

Wampanoag Indian Culture Past and Present*—**Paula Peters,** Wampanoag Indian and education specialist at Plimouth Plantation, slide show and discussion, English Section of Foreigh Languages and Literatures, 7pm, Wednesday, April 27, Rm 10-250.

World Hunger Week Events at MIT:*
—What Can Members of the MIT Community do to Solve World Hunger: a panel discussion with **Nevin Schrimshaw, Nick Herman, Scott Paradise, Eugene Chamberlain, Edward Josephson,** 8pm Thursday, April 28, Student Center Rm 400.
—Ending Hunger Briefing: An Examination of the Extent and Possible Solutions to the Problems of World Hunger, by a briefing leader from the New York Hunger Project, 10am-2pm, Saturday, April 30, Rm 9-150.
—Exhibit: World Hunger—A Solvable Problem, Lobby 7, all week.
—Food Drive in Conjunction with the Boston Food Bank, Collection boxes for nonperishable goods in Eastgate, Westgate, E19 Lobby, Lobby 7, Lobby 10, 312 Memorial Drive, all week.
Activities sponsored by the MIT Hunger Action Group.

Art Sale*—**Art works, mostly ceramics, by members of the Student Art Association.** Wednesday and Thursday, May 4 and 5, 10am-4:30pm, Lobby 10.

Rainbow Sign Observance: Commemorating Noah's Rainbow Covenant in the Nuclear Age*—**Storyteller Judith Black, Rabbi Dan Shevitz, Jeffrey Dekro** of New Jewish Agenda, 2:30pm, Sunday, May 8, Student Center Mezzanine Lounge, $2. Info: x3-2982.

Seminars and Lectures

Wednesday, April 27

Observation of Hot Electron Interchange Instabilities in EBT*—**Dr. Shinji Hiroe,** Oak Ridge National Laboratory. Plasma Fusion Center Seminar, 11am, Rm NW16-213.

Guided Wave Devices for Optical Communication*—**R.C. Alferness,** Bell Labs. Optics and Quantum Electronics Seminar, 11am, Rm 36-428.

New Nuclear Power Plant Concepts for Small Energy Users**—**Colin McDonald and Robert Schleichner,** GA Technologies, Nuclear Engineering Special Seminar, noon-1:30pm, Rm 24-115.

Stochastic Forcing of Eastern Basin Circulation*—**Dr. J. Carton,** Harvard University, Oceanography Sack Lunch Seminar, 12:10pm, Rm 54-425.

Where is the UN System Going Today?*—**Drago Najman,** Harvard Center for International Affairs Fellow, Center for International Studies Seminar, 12:15pm, Rm E38-615.

Taking Essay Exams*—Mini Sessions, 12:15pm, Rm 14N-317, The Writing Center.

The Effects of an Artificial Skin on Scarring and Contraction in Open Wounds*—**Dennis P. Orgill,** Harvard-/MIT Division of Health Sciences and Technology Seminar, 1pm, Rm 13-5101.

Active Control Pantograph*—**David O'Connor,** Mechanical Engineering Graduate, Vehicle Dynamic System Seminar, 3pm, Rm 1-236.

Increasing Complexities of Construction*—**Dr. John M. Hanson,** President, Wiss, Janney, Elstner & Associates, Construction Engineering and Management '83 Seminar, 3:30pm, Rm 3-270.

Optimal Memory Allocation: Problems, Principles, and Examples*—**Dr. Vaclav E. Benes,** Bell Laboratories, Murray Hill, N.J. Laboratory for Information and Decision Systems Seminar, 4pm, Rm 39-430.

Controlled Release of Drugs*—**Professor Robert Langer, Department of Nutrition and Food Sciences.** Tau Beta Pi Lecture, 4pm, Rm 36-153. Social hour to follow.

Thermodynamics of Electrical Noise*—**John Wyatt,** EECS faculty, MIT. Thermodynamics Seminar, 4pm, Rm 1-114.

A New Approach to the Two Body Orbit Determination Problem*—**Robin Vaughn,** graduate student, MIT. Department of Aero/Astro I.G. & C. Seminar, 4pm, Rm 33-206.

Henry Adams: Imagining the Dynamo*—**Professor J.C. Levenson,** Edgar Allen Poe Professor of English, University of Virginia, Charlottesville. Program in Science, Technology, and Society Colloquium, 4pm, Rm E51-136.

Thermodynamics of Electrical Noise*—**Professor John Wyatt, MIT,** Department of Electrical Engineering and Computer Science. Thermodynamics Seminar, 4pm, Miller Rm 1-114.

Late Neogene Intermontane and Foredeep Sedimentation in the Northwest Himalaya*—**Professor Gary Johnson,** Department of Earth Sciences, Dartmouth University. Earth and Planetary Sciences Seminar, 4pm, Rm 54-915.

Dilemmas of Productively Investing Oil Revenues: Venezuela*—**Terry Karl,** Professor of Government, Harvard University, CIS Latin America Energy Policy Series Seminar, 4-6pm, Rm E38-615.

Pressure Shift in Carbon Dioxide*—**K. Soo Hoo,** nuclear engineering, Applied Radiation Physics Seminar, 4pm, Rm E25-202.

What's New at Bates?*—**Dr. William Turchinetz, MIT** Society of Physics Students Colloquium, 4:15pm, Rm 4-339. Social hour follows.

The Article System, Part II*—for those for whom English is a Second Language, 4:15pm, The Writing Center.

Jews and Gentiles in Love: Interdating, Intermarriage, and Conversion*—**Ken Bruss,** Jewish Family and Children's Service and Rabbi Dan Shevitz of MIT Hillel. Discussion for Faculty and Staff, 5:15pm, Rogers Rm 10-340.

Thursday, April 28

Programming, Designing, and Building Energy Efficient Structures*—**Gordon Tully,** Massdesign Architects and Planners, Cambridge, Mass. MIT Joint Program for Energy Efficient Buildings and Systems, noon, Rm 1-114.

Development, Or Instant Underdevelopment? Human Rights and Wrongs in the Amazon Basin*—**Professor Jean Jackson,** Associate Professor of Anthropology, CIS Energy Policies in Latin America Seminar, 12:15pm, Rm E38-615.

Non-Linear Problems and Chaos in Biology*—**Prof. Robert M. May,** Princeton University. Department of Physics Seminar, 4pm, Rm 26-100. Refreshments at 3:30pm, Rm 26-110.

Efficacy and Regional Distribution of High Frequency Ventilation*—**Jose Venegas,** PhD Cand./MEMP. Harvard/MIT Division of Health Sciences & Technology. HST 590: Biomedical Engineering Center, 4pm, Rm E25-117.

Mexico-USA Relations*—**The political, economical and social relations between Mexico and the United States. Peter Smith,** Associate Dean of the School of Humanities and Social Science. AMEX MIT, 4:30pm, RM 54-100.

Reminiscences on The Origins of Linear Programming*—**Prof. George Dandzig,** Stanford University. Operations Research Center Seminar, 5:15pm, Rm E51-329.

Then and Now, Two Projects*—**Richard Tremaglio,** Architecture Lecture Series, 5:30pm, Rm 3-133.

Friday, April 29

Stability of Chebyshev Collocation*—**Dr. Luis Reyna,** Courant Institute of Mathematical Sciences, New York University, Special Applied Math Colloquium, 11am, Rm 2-338.

Prospects for Automobile Usage and Production in Developing Countries*—**Professor Remy Prud-'Homme,** Institute of Urbanism of Paris, University of Paris, XII. Center to Transportation Studies Luncheon Seminar, noon, Mezzanine Lounge, Student Center.

Fermat's Last Theorem and Primes in Arithmetic Progressions*—**Leonard M. Adleman,** Computer Science Department, University of Southern California. Applied Mathematics and Laboratory for Computer Science Seminar, 2pm, Rm 2-338.

The Effects of Solids Upon Mass Transfer Parameters in Stirred Gas-Liquid Contactors*—**Thomas M. Bartos,** Chemical Engineering Seminar, 2pm, Rm 66-110.

Molecular Diffusion in Supercritical Fluids*—**Pablo G. Debenedetti,** Chemical Engineering Seminar, 3pm, Rm 66-110.

Photogenerated Gap States in Polyacetylene*—**Joseph Orenstein,** Bell Labs, Murray Hill, N.J. Center for Materials Science and Engineering Colloquium, 4pm, Rm 26-414.

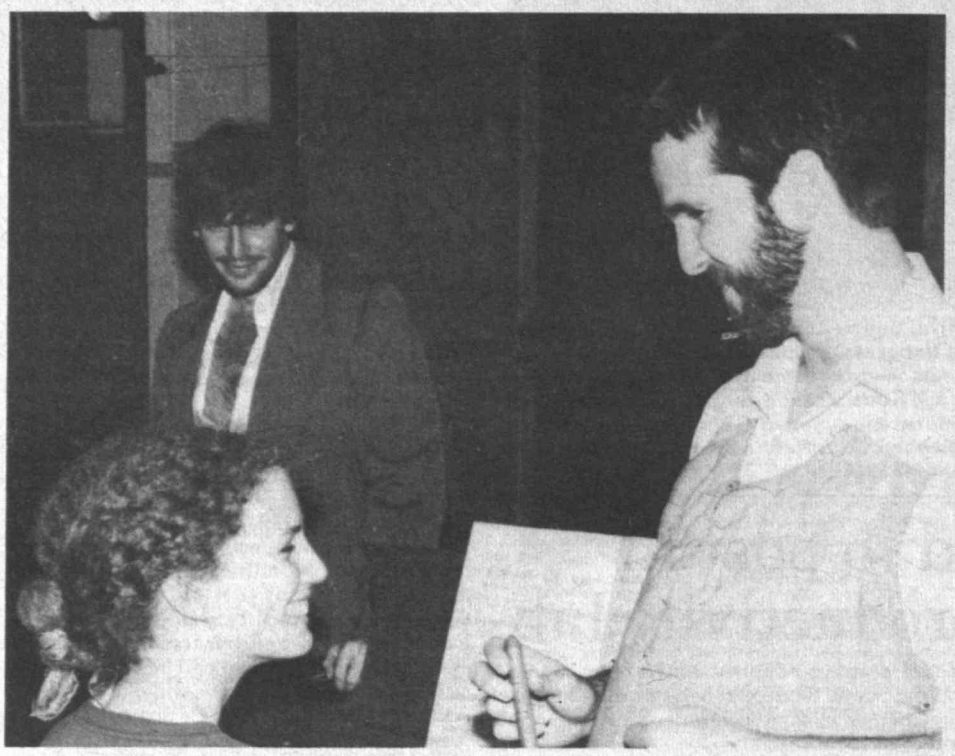
Energy and the Energy Cycle; A Counter-Intuitive Result*—**Dr. Ed Schneider,** Harvard University. Department of Meteorology and Physical Oceanography. Quasi-Biweekly Seminar Series, 4pm, Rm 54-915.

The Plasma Separation Process-Isotopic Engineering*—**Tom Romesser,** TRW. Plasma Fusion Center Seminar, 4pm, Rm NW14-2209.

The Biomechanics of Swimming Propulsion*—**Dr. Robert Schleihauf,** Teachers College, Columbia University. Psychology Colloquium, 4:30pm, Rm E25-111.

The "Cost" of Algorithms*—**Prof. Harold Kuhn,** Princeton University. Operations Research Center Seminar, 5:15pm, Rm E51-329.

The Deindustrialization of America*—**Barry Bluestone,** Professor of Economics, Boston College, SACC/Black Rose, 8pm, Rm 9-150.



Three of the four cast members are shown in rehearsal for *Play Strindberg*, the MIT Dramashop's spring production which opens in Kresge Little Theatre this weekend. Seated is Susan Wiegand, Wellesley '84 and standing are Patrick Byrne '85, left and Albert Ruesga '81. The play, directed by David Waggett '81, transforms the bourgeosis marriage tragedy of Stindberg's *The Dance of Death* into a comedy. Dates are April 28, 29 and 30 and May 5, 6 and 7, all at 8pm. Tickets are $3 for students and senior citizens; $3.50 for all others.

—Photo by Ernest Fasse '85

Monday, May 2

NATO Defense Policy: German and American Views*—**Dr. Wilhelm Schonfelder,** Political Section Counselor, Embassy of the Federal Republic of Germany, and **Dr. David Schwartz,** Brookings Institution, MIT Arms Control and Defense Policy Studies Program and Harvard Center for European Studies Seminar, 11am-1pm, Rm E38-762.

Factoring Multivariate Polynomials over a Finite Field*—**Dr. A.K. Lenstra,** Mathematisch Centrum Stichtig Mathematisch krvislaan 413 1098-SJ, Amsterdam, Netherlands. Applied Mathematics Colloquium, 4pm, Rm 2-338.

Theories of the Quantum Hall Effect?*—**Dr. William F. Brinkman,** Bell Laboratories. Francis Bitter National Magnet Laboratory Colloquium, 4pm, Rm NW14-2209. Refreshments at 3:30.

Modeling the Mechanical Behavior of Complex Aggregates*—**Dr. Joseph Zarka,** Mechanics of Solids Laboratory, Ecole Polytechnique, Palaiseau, France, Special Materials and Mechanics Seminar, 4pm, Rm 3-343.

Applications of Three-Dimensional Groundwater Flow and Mass Transport Simulation Techniques*—**Dr. Brendan Harley and Robert P. Schreiber,** Camp, Dresser & McKee, Inc., Water Resources and Environmental Engineering Seminar, 4pm, Rm 48-316.

Culture and the Political Economy of Urban Design*—**Anthony King,** Brunel University, lecture 7 in the series "The Universal and the Particular in Culture and Technique," Aga Khan Program for Islamic Architecture, 5:15pm, Rm 4-169.

Comparative Cenozoic Petroleum Geology of Major Deltas: Mississippi, Niger and McKenzie*—**Dr. Doris Curtis,** Adjunct Professor, Rice University, and geological consultant, Curtis & Echols, Earth and Planetary Sciences Special Colloquium, 4pm, Rm 54-915. Tea at 3pm in Rm 54-923.

Village of Refuge in the Holocaust*—**Philip Hallie,** Sponsored by MIT Chaplains, 7:30pm, Rm 9-150.

An Epistemology for Learning in a Computer Culture*—**Dr. Seymour Papert,** Professor of Mathematics and Education, 7:30-9:30pm, Rm 26-100.

Tuesday, May 3

NMR Imaging in Medicine*—**Leo J. Neuringer,** MIT National Magnet Laboratory. Modern Optics and Spectroscopy Seminar, 11am, Marlar Lounge Rm, 37-252.

The Shape We're In: Recent Research in Human Physique*—**Stephen Bailey,** Assistant Professor of Anthropology, Tufts University. Anthropology/Archaeology Program, noon, Rm 20B-136.

Culture and the Political Economy of Urban Design*—**Anthony King,** Brunel University, Aga Khan Program for Islamic Architecture, 2-5pm, Rm 4-153. Call x3-1408.

Survey of Design for Testability*—**Thomas W. Williams,** IBM Corporation, Boulder, Colo., VLSI Seminar, 4pm, Rm 9-150. Refreshments at 3:30.

The Labor Market Adjustment of Migrants: Patterns, Critiques and Rejoinder*—**Professor Barry Chiswick,** University of Illinois at Chicago, MIT/Harvard Research Seminar on Migration and Development, 4-6pm, Harvard Center for Population Studies, 9 Bow Street.

Rotor Blade/Vortex Interaction Noise*—**Dr. R. Schlinker,** United Technologies Research Center, E. Hartford, Ct., Gas MIT Turbine and Plasma Dynamics Lab, Department of Aero/Astro Seminar, 4:15pm, Rm 31-161.

Protein-Peptide Interactions in the Activation of Mammalian Lymphocytes*—**Dr. Ronald H. Schwartz,** Laboratory of Immunology, National Institutes of Health, Biology Colloquium, 4:30pm, Rm 10-250. Coffee at 4pm.

Wednesday, May 4

Heat Flux Measurements in Buildings*—**Professor Thomas P. Bligh,** mechanical engineering, Joint Program for Energy Efficient Buildings and Systems, noon-1pm, Rm 1-114.

Power Reactor Development: Innovation through Simplification**—**Harry Mandril,** MPR Associates, Washington, D.C., Nuclear Engineering Special Seminar Series, noon-1:30pm, Rm 24-115.

Estimates of Mass, Momentum, and Kinetic Energy Fluxes of the Gulf Stream*—**M. Hall,** MIT-WHOI Joint Program, Oceanography Sack Lunch Seminar, 12:10pm, Rm 54-915.

Dynamic Analysis and Control of the Electrostatically Controlled Membrane Mirror in Large Space Structures*—**Dr. Rudnaputna Ramnath,** Raytheon Co., Aeronautics and Astronautics and IG&C Seminar, 4pm, Rm 33-206.

Thermodynamics and Economics of a New Coal-burning Steam Locomotive*—**Hal Fuller,** National Steam Propulsion Company. Thermodynamics Seminar, 4pm, Miller Rm 1-114.

The Period and Q of the Chandler Wobble*—**Prof. Anthony Dahlen,** Department of Geological and Geophysical Sciences, Princeton University. Earth and Planetary Sciences Seminar, 4pm, Rm 54-915.

Evolutionary Modeling and Understanding Tehnological Change*—**Prof. Richard Nelson,** Professor of Economics and Director of The Institute for Social and Political Studies, Yale University. Program in Science, Technology, and Society Colloquium, 4pm, Rm E51-136.

Hysteresis and the Slow-Binding Inhibition of Hexokinase by M(III)ATP Complexes*—**Dr. John F. Morrison,** John Curtin School of Medical Research, Australian National University, Arthur D. Little Lectures in Biological Chemistry, 4pm, Rm 4-370.

Pronunciation: Review of Stress and Intonation**—Mini-session for those for whom English is a second language, The Writing Center 4:15pm, Rm 14N-317.

Thursday, May 5

Iran-Comparing Revolutions*—**Prof. Nikki Keddie,** Dept. of History, UCLA, Department of Humanities Seminar, 4pm, Rm 4-159.

Structural Reliability of Nuclear Power Plants*—**Prof. Gerhart Schneller,** University of Innschruck, Austria. Structural Engineering Seminar, 4pm, Rm 1-350.

FT Results on RF Lower Hybrid Heating*—**Dr. Francisco DeMarco and Dr. Franco Santini,** Laboratorio Gax Ionizzati, Frascati, Italy, Plasma Fusion Center Seminar, 4pm, Rm NW14-2209.

Binaural Interaction in Hearing Impaired Listeners**—**Ken Gabriel,** PhD candidate in Electrical Engineering and Computer Science, HST-Biomedical Engineering Seminar, 4-5:30pm, Rm E25-117.

Iran: Comparing Revolutions*—**Nikki R. Keddie,** Professor of History, UCLA, History Section Lecture, 4pm, Rm 4-159.

All about Karma: Challenging our Destiny*—**MIT Nichiren Shoshu Buddhist Study Group,** Seminar on Buddhism 7pm, Room TBA.

Friday, May 6

Implications of Recent Legislations for Urban Mass Transportation*—**Robert H. McManus,** Associate Administrator for Grants Administration, Urban Mass Transportation Administration, U.S. Department of Transportation, noon, Mezzanine Lounge.

Nitrate Pharmacokinetics*—**Dale Schultz,** Chemical Engineering Seminar, 2pm, Rm 66-110.

Bioenergetics and Macroscopic Balances in Microbial Metabolism: Some New Concepts and Applications in BioReactor Identification*—**Gregory Stephanopoulos,** Department of Chemical Engineering, California Institute of Technology. Chemical Engineering Seminar, 3pm, Rm 66-110.

Mechanisms of Acoustic Emission in Stressed Solids*—**John A. Simmons,** Research Mathematician, Metallurgy Division, National Bureau of Standards. Mechanical Engineering Seminar, 3pm, Rm 3-133.

Plasma Diagnostic Systems for Large Mirror Machines: MFTF-B, G.W. Leppelmeier, Lawrence Livermore National Laboratory, Plasma Fusion Center Seminar, 4pm, Rm NW14-2209.

The Mechanism of the Reaction Catalyzed by Dihydrofolate Reductase*—**Dr. John F. Morrison,** John Curtin School of Medical Research, Australian National University, Arthur D. Little Lectures in Biological Chemistry, 4pm, Rm 4-370.

The Dangers of Femininity*—**Paula Webster,** writer & anthropologist. SACC/Black Rose, 8pm, Rm 9-150.

Community Meetings

Alcohol Support Group**—Meets Weds, 7:30am, sponsored by MIT Social Work Service. Call Ruth, x3-4911.

Overeaters Anonymous**—Will meet weekly in Rm 4-149 on Sunday morning, 9:30am-11am. All welcome.

Al-Anon*—Meetings held every Tues, noon-1pm, Moore Rm 6-321; every Fri, noon-1pm, Health Education Conference Rm E23-501 (this week only). The only requirement for membership is that there be a problem of alcoholism in a relative or friend. Call Ruth or Shirlee, x3-4911.

MIT Faculty Club**—The Club is open Mon-Fri. Luncheon hours: noon-2pm; dinner hours: 5:30-8pm. For reservations call x3-4896.

Nightline*—We're a student run hotline from 7pm-7am on the MIT campus. For information or just to talk, give us a call at x3-7840.

Weekly Exercise Classes**—Patricia Murray, one of Maggie Lettvin's teachers. Technology Wives Organization. Thurs, thru May 12, 7:30-8:30pm, Exercise Room, 2nd flr, DuPont Gym, $2/TWO members; $2.50/non-TWO members per class.

Maggie Lettvin's Exercise Class**—For less capable women, Thurs, 11am, Rm 8-219. Wear loose, comfortable clothing. Athletic card req.

Maggie Lettvin's Self-Designed Fitness Satellite Classes**—First class every Mon, Wed, & Fri, Alumni Pool area, 1-2pm, taught by Janice Novak, 2nd class Wed & Fri, Rm 8-219, 1-2pm taught by Suzanne Walker. Wear leotards & tights or sweat suits. Athletic card req.

Maggie Lettvin's Self-Designed Fitness Classes**—Mon-Fri, noon, Wrestling Rm, DuPont Gym, 5pm class, T-Club Lounge, gym. Wear loose, comfortable clothing. Athletic card req.

DeJeuner Francais*—**Dominique Rabate,** Visiting instructor from the Ecole Normale Superieure. Foreign Languages & Literature. A French lunch every Tues, noon, Muddy Charles Rm. For info call x3-4771.

Parent Support Group*—Health Education Service. Support system for working parents of the MIT Community, open to prospective parents as well as new parents, April 27: Your Child Learns to Talk. Jane Goldman, associate professor of Child Development at the University of Connecticut, speech and language development, noon, Rm E23-297. Call x3-6320 or x3-1744.

Wives' Group*—Wed April 27: An informal discussion of women's roles and the issues raised by the women's movement, 3-5pm, West Lounge, Student Center. All women in MIT Community welcome. Babysitting available during afternoon groups in Rm 473.

Volunteers*—to help organize May 1, Walk for Hunger, assist in registering, driving, etc. For information call Jackie, x3-1957/or 58 to schedule organizing meeting.

Reflexology and Health*—Bettina Richichi, every Tues, noon-1:30pm, Rm 1-134. Sessions demonstrate benefits of reflexology. Call x3-3979.

Association for Women Students**—Discussion on the organization and use of a women's resource center at MIT. Open meeting Wednesday, April 27, noon-1:30, Mezzanine Lounge. Bring your own lunch; drinks and ice cream will be served. For further information call Betsy Salkind, 876-2578.

Women's Forum*—The Challenges of Old Age—Dr. Janet Sand, Clinical Psychologist, Harvard University Health Service, Monday, May 2, noon-1pm, Bush Room.

AAUW Reception for Women of the Class of 1983 and Women Graduate Students**—Tuesday, May 3, 4-6pm, Student Center West Lounge.

Activities Committee

Tickets may be purchased from 12:30 - 1:30pm at MITAC booths in Lobbies 10 & E18, Fridays, and from Quarter Century Club, 20C-023, from 10am - 3pm daily. Lincoln Lab employees purchase tickets Wednesdays & Fridays from 1 - 3pm, Rm C-372 from Malcolm Coley, x4014.

MITAC, the MIT Activities Committee offers discount movie tickets for General Cinema and Sack Theaters. Tickets are $2.50 each and are good 7 days a week, any performance. Regular theater admission is $4 so you can save $1.50 per ticket. In addition MITAC will be selling discount passes for the Museum of Science which are good any time through Dec. 31, 1983. Passes are $1, plus $1 at the door, a $2.50 savings on the regular $4.50 adult admission.

Discount Factory Outlets Shopping Spree!*—Fall River Outlet shopping. Bus leaves MIT West garage, 8:45am, return 5pm, will make 3 stops which will allow you to shop at approximately 11 outlet stores. Details at MITAC booths, $6/includes bus trip and planned itinerary. Cut-off: May 6. Lunch available.

Boston Red Sox vs Minnesota Twins*—Discount tickets are $5, regular $6.

Boston Ballet*—Discount tickets for all performances, April 28-May 8 (Tuesday-Saturday at 8pm; Saturday and Sunday at 2pm). Regular $10-$24 tickets are available for $5 on day of performance with MITAC coupons.

Puppet Show in the Little Theatre*—*The Witch that Hates Birthdays, Billy Goats Gruff* and other nursery rhymes. Sunday, May 22, 1pm, $.50 children; $1 adults.

Movies

The Lady Eve*—LSC Classic Movie, April 29, 7:30pm, Rm 10-250.

Silver Streak*—LSC Movie, May 1, 6:30 & 9:30pm, Rm 26-100. Admission $1 w/MIT or Wellesley ID.

***Back Breaking Leaf; Up Against the System; Henry David Thoreau-Beat to a Different Drummer*—with Terence Macartney-Filgate,** filmmaker, Film/Video Section, May 2, 7pm, 275 Mass. Ave. Free.

Laura*—LSC Classic Movie, May 6, 7:30pm, Rm 10-250. Admission: $1 w/MIT or Wellesley ID.

Attack of the Killer Tomatoes*—LSC Movie, May 8, 6:30 & 9pm, Rm 26-100. Admission: $1 w/MIT or Wellesley ID.

Born to Film and ***Little Boy****—Film/Video Section, May 9, 7pm. 275 Mass. Ave. Free.

The Return of the Tall Blond Man With One Black Shoe*—LSC Movie, May 14, 7 & 9:30pm, Rm 26-100. Admission: $1 w/MIT or Wellesley ID.

Music

Thursday Noon Hour Chapel Series*—April 28: Spectrum Concert, a performance of West African music by the Tufts University West African Drum Ensemble, David Locke, director. Noon, MIT Chapel.

Gunnar Johansen and John Buttrick, Pianists, Solo works by Busoni, Chopin and Liszt. Reger Variations for two pianos, April 28, 8pm, Kresge. Free.

MIT Spring Jazz Festival*—Herb Pomeroy's MIT Festival Jazz Ensemble and Everett Longstreth's MIT Concert Jazz Band, April 29, 8:15pm, Kresge.

MIT Logarhythms-May Day Concert has been cancelled.

Mariachis*—**Mexican Folk Music,** El Mariachi Guadalajara, AMEX MIT, May 2, 8pm, Kresge. Admission: $2; members free.

Nonharmonic Digital Synthesis and The Little Prince: Notes for an Opera*—Seminar. James Dashow, director, Sciadoni Electric Music Studio of Rome, visiting lecturer, May 2, 7pm, Center for Advanced Visual Studies.

Concert: Electronic and Computer Music of James Dashow, 8:30pm, Sala de Puerto Rico, Student Center.

MIT Brass Ensember*—Gordon Hallberg, director, May 1, 3pm, Kresge. Free.

Chapel Concert*—Chamber Orchestra. Roland Vasquez, conductor, Haydn Symphony 59 in A major, Fire, Rodrigo's Fantasia para un Gentilhombre for guitar and chamber orch, with Himberto Bruni, guitar, May 5, noon, Chapel. Free.

MIT Chamber Music Society*—All Beethoven Program, May 5, 7pm, Sala de Puerto Rico.

Theater

Play Strindberg*—by Friedrich Duerrenmatt, Directed by David Waggett, '81 the MIT Dramashop's major spring production, April 28, 29, 30 and May 5, 6, 7 at 8pm, Little Theatre, Kresge. Admission: $3.50, $3/students, senior citizens. Call x3-4720 for reservations.

Wellesley Events

Wellesley College Exhibition Gallery Talks*—Sundays at 3pm for general public, by special request for groups of more than 10. Interpreter for the hearing impaired available, second Sunday each month. Access for the handicapped available. Admission: Free. **Hours:** Mon-Sat, 10am-5pm; Sundays, 2-5pm.

Special Collection Exhibition*—Exhibit of autographs, first editions and association copies illustrating Robert Frost's literary career, Margaret Clapp Library, through June 15.

Masterpieces of the French Calotype*—through June 12. **A Still Life Instinct,** lecture by Eugenia Parry Janis, Professor of Art History, Wellesley College, Wellesley College Museum.

Still Life: Photographs from the Collection of The Museum of Modern Art*—Photographs by Weson, Steichen, Cunningham, Evans, Cartier-Bresson, Samaras and Friedlander.

A Still Life Instinct*—Eugenia Parry Janis, Professor of Art, Wellesley College, April 28, 4:30pm, Reception following.

Cabaret*—Wellesley College Theater presentation, Thursday-Saturday, May 5-7, Alumnae Hall. Tickets $4.50.

Exhibits

COMMITTEE ON THE VISUAL ARTS

Hayden Gallery: Affinities: Bill Jensen and Myron Stout; Terry Winters and Brice Marden. Exhibition explores an intimate, generative relationship between two generations of artists who share a commitment to the traditional ambition of painting at a time when many other artists are seeking more extrinsic or shocking alternatives, May 7-June 26. Opening Reception: May 6, 5-7pm.

Hayden Corridor Gallery: Contemporary Self-Portraiture in Photography. Lee Friedlander, Duane Michals, Lucas Samaras, Cindy Sherman, Linda Benedict-Jones, Ellen Carey, Robert Cumming, Jerry Uelsmann and William Wegman. May 7-July 4. Opening Reception: May 6, 5-7pm.

Strange Stories*—Paintings on paper by two artists, Judith Linhares of New York and Marilyn Holsing of Philadelphia, reworking traditional myths in contemporary forms. Through May 1. Free.

THE MIT MUSEUM

New exhibits at The Museum: Gyorgy Kepes. An exhibition of paintings, including a painting commissioned by the MIT Class of 1948 for their 35th reunion this June. May 10-August 15.

Math in 3D: Morton C. Bradley's richly colored geometric sculptures revolve in space to evoke Plato's thought: "Perfect beauty is geometric beauty." 9am-5pm; April 11-June. Free.

Ongoing exhibits: **Jan Van Goyen (1596-1656)***—Five chalk drawings by the Dutch landscape master; **Mechanical Computing:** slide rules, slide rules, and more slide rules; **A Bunch of Electricals: An MIT Electrical Engineering Retrospective.** Including the Bush Differential Analyzer and the Edison Dynamo given to MIT by Thomas A. Edison in 1887. Through June.

Margaret Hutchinson Compton Gallery*—**Engineering Wizard of Bristol: Nathanael G. Herreshoff.** Models, drawings, artifacts of the legendary naval architect and marine engineer Nat Herreshoff (MIT 1870) of Bristol, R.I. In his 79-year career he designed more than 800 vessels, including a torpedo boat for the US Navy. The exhibit includes a Herreshoff dinghy and one of his steam engines. April 21-Sept. 24.

Hart Nautical Galleries*—**The America. Color lithographs of schooner Yacht America,** winner of the 100 Guinea Cup later known as the America's Cup. **William A. Baker '34: A Tribute.** A memorial exhibition of his watercolors, drawings, plans of historic vessels, etchings and models. Through June. Daily 9am-10pm, Rm 5-126. Free.

Ongoing exhibits: **MIT Seagrant**—A review of MIT ocean research; **English Harbor Scenes 1829**—Etchings by E.W. Cooke. Etchings published in London in 1829 show the variety of ships and craft to be found in English harbors at the beginning of the Industrial Revolution; **Collection of Ship Models**—Half-models and drawings. Historical view of the design and construction of ships.

Corridor exhibits: Building 1 & 5, 2nd floor: **John Ripley Freeman Lobby.** Building 4: **Samuel Cate Prescott, Rogers Building, Norbert Wiener, Karl Taylor Compton. Community Service Fund, Ellen Swallow Richards.** Building 6: **Laboratory for Physical Chemistry.** Building 8: **Solar Energy, Society of the Sigma XI.** For information call MIT Museum, X3-4444.

CREATIVE PHOTOGRAPHY LABORATORY

Photographs—by MIT graduate students Terrence Crane and Micaela Garzoni Rantoul. April 20 -May 20.

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Stroboscopic Light Laboratory Corridor*—Permanent exhibit of high speed photographs. Main corridor, near Rm 4-405.

Rotch Visual Collections*—Changing exhibitions pertinent to the School of Architecture and Planning. Weekdays 8:30am-6pm. Rm 7-304. Free.

Drawings for Galaxy*—Computer Studies for a Large Scale Sculpture. Rob Fisher, MIT '61. Visible Language Workshop, April 15-May 13, Mon-Fri, 10am-7pm, VLW, Bldg N51 Lobby, 275 Mass. Ave.

Art Exhibit of works done by members of the Student Art Association*—Drawings, Watercolors, Ceramics, Photographs, Etchings, etc. Sunday, May 8-Saturday, May 14, 11am-7pm, Student Center West Lounge. Opening Tuesday, May 10, 3-7pm.

Common Denominator—Photographs of the Boston Common*—by Rosalyn Gerstein, graduate student in urban studies and planning, May 2-30, DUSP Common Room (7-335).

Dance

Ongoing Yoga Classes*—Begin now. Intermediates, Mon, 5:45; beginners, 7:20; Thurs, lunchtime, 12:05. All levels begin in Feb., Rm 10-340. For info call Ei Turchinetz, 862-2613.

Children's Dance Class**—Instructor, Pamela Day. Creative Movement Classes for children ages 3-4 meet Mon and Wed 2-3pm and Sat 10:30-11:30am. Creative Movement/Modern Dance Classes for children ages 5-12 meet Sat 9:30-10:30am. West Campus location. For info and registration call Pamela x3-5758.

MIT Dance Workshop**—Regular meetings. Beginning technique, N.W, 3-5, T-Club Lounge in Dupont; Composition/Improv; Th, 3-5; Intermediate Technique, T, Th, 5:30-7pm, Walker 201. Beth Soll, Director. For info call x3-2877.

Spring Dance Performance*—Beth Soll, director, MIT Dance Workshop, Reeva Gibley, instructor, MIT Athletic Department with student dancers, including one work choreographed for non-dancer students, May 13 & 14, 8pm, Kresge Little Theatre.

Sports

HOME EVENTS: April 27: jv golf, **Exeter,** 1:30pm; jv lacrosse, **Curry,** 3:30pm; April 28: jv track, **GBC,** 3pm; April 29: baseball, **Clark,** 3pm; softball, **Regis,** 3;30pm; April 30: lt crew, **Rutgers; w crew, Smith Cup, BU & Northeastern; lacrosse, Bates,** 1pm; softball, **Brandeis,** 11am.

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

Send notices for Wednesday, May 4, through Sunday, May 13, Calendar Editor Rm 5-113, before noon, Friday, April 29.

Gunnar Johansen, right, pianist and founder of the Leonardo Academy, is shown in rehearsal with John Buttrick, associate professor of music at MIT, for their concert tomorrow, April 28, at 8pm in Kresge Auditorium. Admission is free and open to the public. Mr. Johansen, who is permanent artist-in-residence at the University of Wisconsin, established the Leonardo Academy in California in 1971 as a vehicle for collaborative meetings among scientists, thinkers, politicians and artists. He said he wanted to get the best minds talking together in the interest of the future. The next meeting of the academy is planned for next year in The Hague to discuss the possibility of establishing an international uniform monetary system. "Can you imagine what that would do to make the world one?" Mr. Johansen asked. His one-week residency at MIT, sponsored by the Music Section and the MIT Council for the Arts, includes informal meetings with faculty members and students, as well as his Kresge concerts. The April 28 concert includes music from Liszt, Busoni, Chopin and Prokofiev, as well as Reger's Variations for two pianos on a theme of Beethoven, Opus 86, which he will play with Professor Buttrick.

P&G executive will close Sloan series

O.B. Butler, chairman of the board of Procter & Gamble, will speak at MIT on Thursday, May 5, on "Corporate Responsibility" in the final lecture of the 1982-83 Distinguished Speakers Series sponsored by the Sloan School of Management. He will give his talk, which is open to the MIT community, at 4:30pm in Rm E51-329.

Mr. Butler, chairman at Procter & Gamble since 1981, was vice chairman of the board from 1974-81. He has been a member of top management since 1968 and an employee of the company since 1945. Procter & Gamble products include Crest toothpaste, Duncan Hines food mixes, Tide detergent and Ivory soap.

Previous speakers in the Distinguished Speakers Series have included John Reid SB '61, SM '63, vice chairman of Citicorp & Citibank; Howard Kauffmann, president of Exxon Corporation; Robert Noyce PhD '53, vice chairman of Intel Corporation; Sanford Weill, then chairman and chief executive officer of Shearson/American Express; and Roger Martin, chairman of Saint-Gobain, the French conglomerate. The series will resume in the fall.

Festival marks Pomeroy's 20th anniversary

The Spring Jazz Festival at Kresge Auditorium April 29 (Friday) at 8:15pm will celebrate Herb Pomeroy's 20 years of affiliation with MIT.

Mr. Pomeroy, an affiliated artist in the Music Section, Department of Humanities, first came to MIT in the fall of 1963 and established the all-student MIT Festival Jazz Ensemble, one of three groups performing in the spring festival. Jazz musician Everett Longstreth, who was brought to the Institute by Mr. Pomeroy, also will appear with his MIT Concert Jazz Band. The third band on the program will be the Brandeis Jazz Ensemble with Ross Bauer as director.

Free tickets may be obtained in Lobby 10 on Thursday and Friday. Admission at the door will be $1.

Mr. Pomeroy is a trumpeter, composer and leader of the 16-piece professional jazz band which bears his name. He also teaches at the Berklee College of Music. The Boston Globe recently cited him in a feature article on the talented jazz musicians of Boston. He was quoted as saying "Once I started to teach in Boston, I found that teaching and my playing were enhancing each other. Here I have lovely variety."

The Globe cited Pomeroy as being a major force in the Boston jazz world since the 1950s. His band is widely known even though, by choice of its home-loving members, it does not make national tours.

This year's version of the MIT Festival Jazz Band has 18 members. The rhythm section is made up of Richard E. Riman, graduate student, of Teaneck, N.J., guitar; Anthony J. Riccobono '84 of Scotia, N.Y., bass; Jamshied Sharifi '83 of Cambridge, piano and James A. Gordon '83 of Peabody, Mass., percussion.

The trumpet players are: John A. Ragan '85 of Prairie Village, Kan.; Timothy B. Chambers '84 of Colorado Springs, Colo.; Roy L. Groth of Graham, Wash.; David J. Bondelevitch '85 of Swampscott, Mass.; David C. Ricks, graduate student, of Chevy Chase, Md.

Trombone players are: John M. Wilson '84 of Beckley, W. Va.; Charles D. Nabors '84 of Potomac, Md.; Michael T. Strauss, graduate student, of Somerville, Mass. and Joseph Klein '84 of St. Paul, Minn.

Saxaphone players are: Richard M. Ehrlich, graduate student, of Boston; Charles R. Marge '84 of River Edge, N.J.; Peter J. Rosamilia '83 of Selkirk, N.Y.; Jay S. Elson '85 of Decatur, Ill. and Kevin Short of Millis, Mass.

Alberty urges lab exemption

(continued from page 1)

300-page report entitled "Prudent Practices for Handling Hazardous Chemicals in Laboratories." At MIT, he is chairman of the Institute Council on Environmental Health and Safety.

Citing "the special characteristics of the handling of chemicals in laboratories," Dr. Alberty told the legislative panel:

"Chemicals used in laboratories occur in almost limitless (and ever-increasing) varieties. Of the six million known chemicals, only several thousand have been subjected to any biological testing and very few to extensive tests. Therefore, in laboratories we have to be careful in handling *all* chemicals."

He noted that laboratories are equipped with ventilation hoods and other protective devices, and that laboratory workers are trained for avoiding exposure to chemicals. He added that chemical containers in laboratories are always labeled with chemical names and that increasingly chemical manufacturers are including more safety information on the labels.

As for labeling, Dr. Alberty said, "we simply do not have enough information to live up to the proposed requirements on research chemicals."

"At MIT," he told the committee," we have several thousand laboratories and I hate to think how many additional employees would have to be hired to keep all the records proposed in the act and to make available the information on demand as provided for in the act."

In summary, he said, the proposed law "would greatly increase our expenses in using chemicals in laboratories" without significantly reducing the hazards to laboratory workers.

CLASSIFIED ADS

Ads are limited to one per person per issue and may not be repeated in successive issues. All ads must be accompanied by full name and extension. Ads must be submitted in person to the Tech Talk Office or mailed to Rm 5-113. Persons who have no extensions or who wish to list only home telephones must present Institute identification.
Deadline is noon on the Friday before publication.

For Sale

Complte Qn sz mattress w/hd brd, 2 dressers, 1 mirror, night tbl, gd cond, $130/all. Call 277-8079.

Port typewriter, $25; tbl & benches, $25; flr lamp, $5; stereo spkrs, $25; amplfr, $20; cassette deck, b/o; bkcase, $10; 3x4 rya rug, $20. Mary, x3-7217.

Racing bike, 24½" Criterium frame, v stiff, titanium axle, campy/dura-ace components, 2 whl sets, racing sewup, training narrow gauge clincher, wt 20½ lbs, mint cond, $1,200. Dan, 522-0368.

Four radial tires, P155/80R13, gd for 1 more summer & fall, $40 for all. Call x8-4782 Draper.

TDK SA-90 cassettes skill 2.70/ea minimum orer 10 tapes, to reserve yours send name & phone number to: P.O. Box 144, MIT Branch, Cambridge, Ma 02139.

Atari 800 system w/48K Memory, 410 program recorder, joysticks, game & technical software, $1,000/best. Call 225-7421, Dorm.

Full sz matt, boxsprng & frame, brand new, $80; humidifier, $10; revolving heater, $40; hi chr, $25; walker, $10; infant bath tub & sponge, $5; snowsuit, $10; metal shelf, $5; hairdryr, $8, all exc cond. Call 494-8383.

Furniture exc qual, sofa, $275; teak roll top dsk, $185; wicker chrs, $65/ea; 16" deep bkcase, $30; pine dropleaf tbl, $60; sm oak gateleg tbl, $175; bureau & more. Karen, x3-2746 or 862-6680 eves.

Bancroft Executive tennis racquet w/plastic cover, exc cond, grip 4 5/8, $30. Francesco, x3-2189.

Huffy 10 spd, $55/best; horizontal 4 draw, 2 shelf filing cab w/keys, $55/best; Giant veneer dresser w/5 draws & 2 shelves, $60/best; Upright Hoover Vac, $35/best. Michael, x3-2272 or 628-6046.

Two panasonic RZ-J11 mini stereo cassette players w/hdphone, made in Japan, 1 is new, $40/best; 1 is gd cond, $35. Li, x3-6675 or 497-2215 after 6pm.

Double bed mattress & boxspring, $35. Laura, x3-6752 or 628-5761.

Small gas grill, $18; hibachi, $10; cheese serve tray, $5; 12 harvard cognac glasses, $20; brfcase travel backgammon, $15; cooler, $2.50. Call x3-6085.

24 ft round, above ground pool, hvy duty liner, solid metal frame, 3/4 h.p. pump, sand filter, hoses, ladder & other accessories, $320. Call 275-0560.

Apple II plus system, 48K, disk drive, w/controller, & DOS 3.3, 12" grn monitor w/stand, R/F modulator, joystick, software, only 5 mo old, $1,450/best. Call 494-1758 eves.

Kenmore port rm air cond, 115 volt, autom thermostat, 2 fan spd, easy mount install, 2 yrs old, used 1 yr, asking $200. Bill, x8-4455 Draper.

Typewriter, Smith corona, manual, mint cond, like new, in vinyl carrying case, $80. Call x3872.

Boy's 10 spd, compl reblt, $120/negot. Tim, x5-7408 or x5-7449 Dorm.

CD/M OS module & wordstar word processing package, for Hewlett Packard Series 80 computer, new, 1/2 retail price. Stu, x3-1610 or 876-8037.

Old sofa bed, $50. Call 253-8068 or 489-0176.

Toro 5 hp 30" hand propelled vac/blower w/11 ft vac extension hose for hard to reach areas, $200/best; 6 hp Sears lawn & garden shredder bagger w/hopper & leaf ramp, $230; owners manuals for both incl, both in vy gd cond. Phil, x2236 Lincoln.

Golf balls, all name brands, titleist, prostaff, top flite, etc. new & used, orange, yellow, whit, $6/doz. & up. Dan, x4410 Lincoln.

Tires, 1 almost new steel belted FR-15; 1 exc FR-15, GM fit, both for $75. Lee, x3-7950.

Prairie Home Companion tickets, May 22, 3pm, Live with Garison Keeler, $17/ea. Joanne, x3-2110 after 6pm at 547-1082.

Man's 10 spd bicycle, Fuji S10S, vy gd shape, $125. Sylvain, x3-2645 or 332-3417.

Minolta 35 mm camera model SRT-MCII, CLC, w/45 mm 1.2 minolta lens, & 75 mm -200mm 4.5 minolta zoom lens w/hood like new, gadget bag/owners manual for camera, filters & caps for both lenses, $295. Ricky, x2204 Lincoln or 569-1435.

Man's Raleigh Record 23½", team colors, Reynolds 531 db frame, all exc pts, perf cond, $450; Frigidaire 12.3 cu ft custom delux 2-dr refrig, perf cond, $250. X3-6297 or lv msg X3-2961.

Suzuki '79 GS 750E, 12K, Kerker 4-1 ex, cafe hndlbars, bl, cont tires, 2 fl-face helmets, $1,650. Call 322-8533.

Lvng country, must sell: new DR tbl w/4 ch, $90; conv sofabed, $150; Panasonic radio cassette, $60; 3-spd bike w/2 locks, $50; tbls, $10; curtains, $10; lamp, $6; new Sony 4-band radio, $50; tennis racket, $10; K items. Call 494-1102.

TRS-80 Mod III, exc cond, 48K, casette, software (just games), many manuals, $650 or best. Lummox, x3-6857 or 232-3257.

Cheap: K equip, sofa, chair, B&W TV. X3-3712 or 628-7403.

Brine extra strength defensive lacrosse stick, $15. Steve Altes, 536-1300.

Apt sale: furn, rugs, K utensils, clothes, books, records, plants. Call 492-2981.

Raleigh Record man's bicycle, $60; huge Sylvania color TV, $75; 4-drw oak bureau, $25; br new hardwd, dulcimer, $50. Larry, 864-7793.

Honda '75 cycle, CB360T, less than 3K, exc cond, $800 or best. X3-4152 or 861-0535.

Queen waterbed, gd cond, homemade frame, $70; Bose 901 Series II w/equalizer, exc cond, $475 or best. Sandy, dorm x5-8440 or 494-1328.

Heathkit stereo amp, looks & sounds great, 50W RMS/chan, $140. Dan, x4432 Linc or 738-7949 evgs.

Phillips man's 5-spd bicycle, incl pump, Tech-lock, $75. Paul, x3-3225 or 492-5676.

Two new Vista Carrera 7 10-spd bicycles, nvr used, won in contest, 1 man's, 1 woman's, worth $320—both for $280 or each for $145. Bill, 547-8403.

VW fac air cond for bus, van or camper, nds recharging, best offer. Sergio, 924-2929.

Alspa comp system, 64K RAM, 280, CP/M op sys, Televideo 910 terminal, 2 dbl-density 8" disk dr, $2,000 or best. John, x2973 Linc or 631-5912 evgs.

Tires: 3 Continental stl belted radials, 165SR14; 1 Mich ZX radial 165SR13, 1 Mich XAS radial 165HR13, $25 each or best. X8-1347 Draper.

Olivetti Lexikon 83DL elec typwr, v gd cond, $140. X3-4079.

Four tickets to Prairie Home Companion, Fri, May 20, $17 ea. Trish, x3-8540.

Craftsman Eager-1 20" rear bagging pwr mower, used 1 seas, $140. Call 277-6629, 6-8pm.

Hotpt hvy duty washer, limited use, exc cond, asking $200. Jack, x3-7326 or 846-7701 evgs.

Man's hockey equip: gloves, $8; CCM 6½-7½ helmet, $10; socks, $5; pants, 36-38, $15; shin pads, $12; all for $40. Rich, x3-6712.

Versatron broiler-oven-toaster, yr old, exc cond, best offer. Al, x3-3980.

Queen Anne brown vinyl tufted wing chair, $80. X3-3025.

Lg suitcase, $5; woman's wide wedding band, 18K, made in Greece, $45; 14K earrings, $100 value, $50; red scatter rugs, $5 ea. X3-6085.

Suzuki '76 bike, TS125, 4K, runs terrific, nvr beat or dumped, exc local trans, street legal, $500 or best. Scott, 272-3573.

Hardwick gas stove, 4-brnr, oven, clean, gd cond, $150. Call 396-5011 after 3pm.

TI Silent 745 thermal printing terminal w/acoustic coupler, $790. Neil, Dorm x5-7370, 494-1110, or lv msg x3-3161.

Technics SA-300 recvr and TEAC CX211 tape deck, $50 ea or best. Call 876-2204.

Workbench mod brown tweed couch, $75 or best. Dottie, x3-6634 or 492-2138.

Computer printer: IBM Selec w/Tycom baseplate, can be used as typwr, $500 or best; Z-80 based S-100 microcomputer, many boards, best offer; 2 Shugart 8" floppy disk drives, $124 ea. Carmen, 623-2871 evgs.

Head tennis racket, fiberglass (Arthur Ashe comp), nylon strings, grip sz 4½, $48. X3-2115 or 472-1347.

Sears Graduate port elec correcting typwr, orig $295, yr old, $150; Univega man's 3-spd bike, ideal commuter, fenders & Kryptonite lock incl, $75. Mike, x3-6997 or 868-4970.

Osborne port computer, 64K, 2 5¼" disk drives, software incl Wordstar, Mailmerge, Supercale, br new, bought Feb, $1,395 or best; Zenith 9" Monitor, Epson printer, best offer. Call 332-9632 after 5:30pm.

Volvo jack, $10; removable rfrack for Volvo wgn, $10. X3-3140 or 862-5561.

Car ramps, nrly new, $15; 13" snow tires on rims, $35; man's Remington Microthin elec shaver w/batt & recharger, hardly used, $15. Jim x3-1754 or 494-8747.

Honda '75 CB500T, gd running bike, $900 or best. John, x8-2815 Draper.

Handmade Oriental silk flowers: iris, orchid, pansies, etc, reas. X8-3970 Draper or 664-5984.

Tires: 1 new Firestone Delux ww, E78-14, $25; 1 ww E78-14, $15; VW rack, $25; 4 Chrysler fl sz hubcaps, $5; AMC '68 Javelin for pts, $200 firm. J. Blair, x8-2843 Draper.

Sears trash compactor, gd cond, $150. Kathy, x3-8264.

Dbl bed, stor cab, lg ova; rug, all fair cond, v cheap. Sue, x3-8984 or 661-4692.

KZ400 '78 motorcycle, well cared for, 4K, lowering blocks, carrying case, side saddles, $725. Catherine, x2918 Linc.

Suzuki GN400X, 4K, fairing and engine guard, well maint, $999 or best. Jim, 547-7894.

DEC PDP11/03 and peripherals TI 59 & PZ-100. Ray, 494-9128.

Vehicles

'66 VW, solid body, rec rebuilt eng, $450. Call 354-3709 evgs.

'70 MGB-BT, gd eng, 5K on rebuilt, gd carbs, master cyl, exhaust, trans, wire wh w/mtd Pirelli radials, body rusted but restorable, $800. Amy x3-6871 or 647-5887 evgs.

'71 Toyota Corona, new tires, br, overhauled eng, runs well, $500 or best. Steve, x3-8675 or Lynne, 489-3712.

'71 Chevelle, 83K, reas cond, $400, negotiable. Murthy, x3-3222 or 494-1443.

'71 VW bug, yellow, rebuilt body & eng, exc cond, new all-wthr radials, br, spkrs in doors, $2,500. Tom, x3-4978.

'72 Plymouth Scamp, exc cond, now rust, well maint, new starter, tires, asking $900. Ken, Dorm x5-7320.

'72 Dodge Swinger, 97K, runs well, $800 or best. Richard, x3-7430 or 965-9721.

'73 Volvo 142E, 2 dr, 4 spd, 196K, sm dents & rust, gd interior. Commutes daily, nds some work. $600. Call x4085 Linc.

'73 Toyota Corolla, 2 dr, AM/FM, gd tires, nw battery, gd cond except nds choke adjustment, great gas mileage. Lvng, must sell. $800 or best. Call 862-7041.

'73 Suzuki GT550K, 15K mi, gd cond, $500. Call 735-0078 eves.

'73 Honda Civic, 3 dr, 4 spd, runs well, gd tires, 73K, $925. Call 254-3510 eves until 10:30.

'74 VW bus, camper conversion, $1,600 or best. Call 969-3266 evgs.

'75 Honda CB 400 4 cyl Super Sport. Well cared for, lks and runs great. Plus sissy bar, helmets, $625. Also: cover $15, full handlebar fairing $30. Luther x3-6746 or 864-6712.

'75 Toyota Corolla, chestnut brn, 49.5K, some rust, $1,750. Call 542-0303.

'75 Ford Gran Torino, gd radials, A/C, $500 or best. Call Ron Wand, x5623 Linc.

'75 Chevy Monza, exc cond in & out, air cond, R, 60K, great mpg, alarm, new tires, batt & exhaust, $2,200 or best. Tony, x3-7505 or 494-5264.

'75 Olds Starfire, no rust, p st & br, air cond, AM-FM stereo cassette, V-6, new trans, clutch, br, muff, batt, 80K, exc cond, $1,700 or best. Steve, 536-3931.

'75 VW beetle, 72K, yellow, v gd cond, gd htr. Ellen, x3-5981 or 492-1171.

'76 Honda Civic 2-dr htchbk, one owner, gd tires, 81K, runs well, $1,300 or best. Hal, 494-8279.

'77 Honda CVCC hatchbck, 5 spd, gd cond, runs great, 40 mpg, $1,500. Peter, x3-6891.

'77 MGB convert, exc cond, great on gas, AM/FM stereo cassette, nw soft top & extra hard top, vy gd tires, nw outside & in. $3,500 or best. Chuck, x8-3361 Draper or 1-774-2045 after 6.

'77 Chevy Caprice Classic, exc cond, v low mi, p st & br, air cond, cruise cont, AM-FM stereo cassetts, green, velour int, $3,950 or best. Donna or John, 625-4972.

'77 Datsun 210 sedan, new br & muff, 60K, must see, $2,300 or best. Bill, x3-2776.

'78 Ford Mercury Zephyr station wgn, radio, A/C, no rust, 60K, $3,100. Call 494-0373 after 5.

'78 Yamaha XS-1100E, maroon, plexiglass fairing, backrest, luggage rack, nw tires, well cared for, $2,200. John, x 3-2238.

'78 Honda Accord hatchbck, 2 dr, 5 spd, gold, 45K, $3,000. Avail 4/29. Call x3-4562 or 868-9804 after 7.

'78 Toyota Corolla hatchbck, auto, except well maintained eng & body, interior lk nw, great car for trips & commuting, $3,300 or best. Call 944-8960 eves or wkends.

'78 4-dr Rabbit, perf run cond, air cond, stereo & tape deck, $1,995. Rosemary, 524-7737 after 6 pm.

'79 Trans Am, t-tops, stereo cassette, nw Goodrich TA radials, low mlg, must sell. John, x4380 Linc or 663-8604 eves.

'79 Chevy Luv 4x4 pickup, exc cond, sunrf, AM/FM stereo cassette, aux lights, roll bar, 49K, 4 nw tires, $4,890 or best. Rick x2740 Linc.

'79 Toyota Celica GT, 38K, air cond, AM-FM cassette, rustprf, alarm sys, v gd cond, was asking $5,695, now only $5,400. Mike, X3-4765.

'80 Toyota Tercel, deluxe 2 dr coupe, lt blue metallic, Rusty Jones & polyglycoat & pinstripes, recent brk job, 4 nw Roadhandler radials, nw Diehard batt, AM/FM stereo, 63K orig owner hwy mi, nice cond in & out, $3,695. Jack x8-3992 Draper.

Housing

Camb, nr Harv Sq, hse to share, 1½ B, K w/deck, master BR, cath ceil LR, music studio, gdn, well equip & furn, $700/mo or $600 w/o studio, avail 6/20-8/12. Ruth or Earle, 876-7821.

Waterfront nr Quincy Mkt & North End, 1-BR furn apt, air cond, exc views, bldg atrium, elev, security guard, avail 6/1-9/1, $1,000/mo. X304064 or 367-3192.

Lg elegant downtown Rome apt & car to exchange for home nr Harv. Sq for sabbatical cpl. Call 628-4098.

Arl Ctr, summer sublet, avail 5/22, 1-BR apt in hse w/yard, exc bus ser, $320/mo incl util & pking. Call 646-9377.

Brighton, 1-BR apt, avail 5/20, 10 min bus to Central Sq, $335/mo. Call 254-5196.

Back Bay, 2-BR, 2B, furn apt, air cond, eat-in K, dish & disp, washer/dryer etc, asking $1,000/mo, negotiable, avail 6/1-8/31. Call 536-4982 evgs.

Bos, nr Pru, mod, sunny, studio apt, avail 6/1 w/option, $369/mo; also option for furn. X3-4225 or 267-8981.

Brkline home avail 6/25-9/11, 4 BR, 2½B, gar, yd, nr trans & shopping, facing pk, Scand furn, family, cpl only, $1,600. Call 731-2820.

Camb hse for sale by owner, 2 BR, study, wdstove, hrdwd flrs, open K, greenhse dining area, nice neighborhood, conv to Harv Sq. X3-2325 or 864-1450 evgs.

Back Bay, studio apt sublet 6/1-9/1, perf loc next to Public Gdn, 5 min walk to T, hrdwd fls, lg windows, fp, $285/mo + utils. Janie Vanpee, x3-3925 3-4771 or 437-9547.

Wayland, fully furn hse avail 9/1, 3 BR, 2 B, K, DR, LR, study, fam rm, exc schs, ideal for fam or 4 or 5, $1,000/mo. X3-2128 or 358-4668.

Winch, 9-rm hse, 2 B, mod K w/wdbrning stove, fp, quiet area, 15 mins from MIT, asking $155,000. Call 729-0006.

Camb 3-fam hse, 3-3-2½, walk to MIT, new ext, $85,000. X3-2647 or 497-5525.

Dorch, 5 rms, 3rd fl, unhtd, gas, nr Red Line (Andrew), quiet neighborhood, freshly painted, $360. Call 265-8536 after 7pm

West Gloucester, new garr ranch, 2 BR, 3rd fl office or den, lg LR, walnut K cabs, quiet neighborhood, nr 128 & 133. Jim Contant, x3-4765 or 283-3079.

Lynn, newly renov 6-rm, 2nd fl in 3-fam hse, htd, easy access to roads & T, 5 min to beach. Steve, 596-2727 evgs.

Bos, sum sublet, lg, furn, 1-BR apt, air cond, laundry, pking, stereo, piano, 10 min walk to MIT, quiet, sgl prof, no pets, avail 6/25-9/5, $645/mo, sec dep reqd. X3-7921 or 720-3210 evgs.

Oxford, Maine cott, on Lake Thompson, slps 6, quiet, woodsy, sunny beach area, exc swim, fish, boating, all convs, $200/wk. Call Mary, 646-7508 evgs.

Som, sunny 4-rm apt, mod B&K, prches, $350/mo unhtd, sec dep reqd. Patty or Bob 666-4983.

Brighton, 1-BR apt w/B&K, ht & water incl, $310. Avail now. X3-3910 or 426-5454.

Camb, 2-BR apt avail 5/1-9/1, 15 min to MIT, lg fr ud, $500/mo + utils. Call 354-7443 after 7pm.

Lg 2-BR apt, 15 min from MIT, sec bldg, top fl, priv pking, laundry, air cond, avail 6/1-9/1, $550 w/ht. Pete, x3-8177, Mike, x3-2272 or 628-6046.

Tang Hall vacancies for sgl grad males avail immed or 5/1. Audrey Pitts, x3-5148, or visit Housing Office, E18-301.

Arl, 1-BR sublet 5/29-6/18, $130/wk. Call 646-6907 evgs.

Brkline, Cool Crnr, sum sublets avail 6/1-8/25, 4 BR, 3 BR w/K, wl let on sgl rm basis. Wesley, ZBT, 738-7591, 734-3650.

Animals

Home needed for 6 mo old female dog, spayed, has shots, paper trained, vy quiet and gentle. Call 253-2903.

Old & beaut, declawed, spayed, healthy gray cat, victim of marriage, nds home & loving people, vy affectionate, $10; Chanel, pretty gold brown & wht, short hr spayed, 1½ yr old cat, looking for home, nds TLC, $15. Susan, x3-2285 or 646-0181 eves.

Siamese kittens, male, chocolate point, CFA registered w/pedigree, shots, litter trained, affectionate, $150. Alan, x7909 Lincoln or 665-5404 eves.

Lost and Found

Lost: *Scaling Concepts in Polymer Physics* by Pierre DeGennes, w/copy of journal article in it. Please return to Tim Harrigan, Rm 3-155M, x3-8118, or to Science Library.

Found: kitten, April 12, Bldg. 16. X3-4722.

Found: Gold chain, April 11, in Student Center. Bergmann, x3-7296 to describe and claim.

Wanted

Family in Paris to host a 19-yr old American girl this summer, May 28, exchange offered next winter or summer for French girl or boy. Maria, 965-5357.

Mature cpl, visit sci to EECS, seek furn 2-BR apt in Camb for fall term. I.S. Jacobs, GE Co. R&D, Box 8, Schenectady, NY 12301, or call (518) 374-4784 evgs.

Visit assoc prof seeks accommodation for '83-'84 yr; wd consider hse-sitting arrangement w/outgoing faculty member. X3-5105 or 277-5127.

Fl sz violin w/case & horsehair bow, wl pay $100 max; also folding music stand, $5. Marks' Mech E Handbook, old, $20. Elaine, Dorm x5-8694 evgs.

Hse or apt sublet for visit fac member, 7/1-8/15, fam of 3 w/car, pref in or nr Bos. Helen Slotkin, x3-5688 or 354-2778.

Furn 2-BR apt for visit prof, 9/1/83-6/30/84; 1-BR furn apt for visit prof. Call x3-5235 or 729-5837.

Prof woman w/3-yr-old daughter & au pair seeks 3-BR hse/apt, 7/1-10/1 or longer, nr T if pos; willing to pet-sit. Call 646-6511.

Alumnus fam looking for sublet/hsesit, pref Camb or nearby, 6/1-8/31. X3-2281, Virginia or Jane.

Rm or apt w/dbl bed to sublet 6/13 & 6/14, in MIT area. Bruno, 494-8596.

Furn 1-BR or studio apt for visit scholar, Sept-Dec or Jan. Swaminathan, 376-2995 evgs.

2-BR apt w/in walk dist to MIT or Red Line for MIT staff member, begin 5/1 or later, max $450-500/mo incl ht. Jim, x303751 or 492-4941.

Child caretaker for Commencement Day 8am-3pm, for children 6-14, reliable, exp, refs reqd. Child Care Office, x3-1592.

Camb or North Shore 2-BR apt, May or June-Aug or Sept, exc refs avail. Call 592-7126.

Camb, Brkline, Newton 2-BR apt, 6/1-9/15. X3-3848.

Roommates

Vegetarian, non-smoker to share 3-BR apt, Camb/Som line, w/male grad student and prof fem, $150/mo + utils. Call 628-1726, 8-10pm.

Rmmate for Back Bay penthse condo, priv sundeck, master BR w/B $600/mo or fr BR w/b, $500/mo avail July. Call 267-6553.

Fem rmmate for Camb Gdn St 2-BR townhse, furn, avail 7/1, $275/mo. X3-1952 or 497-5014.

Person or cpl to share Arl Hts hse, nr Camb, Bedford buses, rent negotiable, $250-$300 incl utils; grad students, profs or staff, no pets, tobacco, avail immed. Call 258-1735 or 646-2120 evgs.

Prof fem seeks same to share 6-rm hse in Lexington, yd & pond, nr Rtes 2 & 128, avail 5/1, $325 inc ht. Betsy, x3-3660.

Camb, Kendall Sq, 2 m, 1 f, seek 2 others to share hse for summer, share cooking & cleaning, washer/dryer, mod K. $175 + utils. Call 491-3496.

Hse to share, m or f w/1 f, spac, well furn, avail until mid-Aug, nr Red Line, gd, washer/dryer, $200. Steven or Karen, 288-1017.

Carpools

Ride sharing desired for commute to MIT from west, I begin in Holden, but could meet in Shrewsbury, Worcester, or other spot on route. I have a reliable car. Tom, x3-2691.

Riders wanted to and from Brookline, 9-5. Helen, x3-2710.

Miscellaneous

Exp typing on word processor, all kinds, exc rates. X3-2203.

Wl type theses, term papers, etc, reas rates. X3-7303.

Wl do hsework, exper, flexible hrs, refs. Call 776-6048.

Indian vegetarian cooking classes, beg & adv, being formed now; 6-wk course, $30. X3-3438 or 492-5162.

Typing: theses, term papers, etc. on IBM correcting Selectric, prompt, reliable serv at fair rates. Fran, 926-4276.

Working woman avail to hse-sit June-Aug, exp mgr of 3-fam hse, exc refs. Dottie, x3-8201.

Typing: theses, manuscripts, literary masterpieces; also wl type on your word processor. Linda, x3-5120.

Surplus Property

OFMS has excess MIT equipment for transfer within MIT. Unless noted, items are at the Equipment Exchange, 224 Albany St. open Mon, Wed, & Fri, 10am-1pm. After 30 days, items are sold to individuals. Where noted, bids and offers go to Earl C. Fuller, E19-451, x2779, with envelope so marked. Always include reference number.

Case #1036: Storage cab, grey metal 2½x2½x2, gd cond; Remington calculator, gd cond.
Case #T-121 $200 offer reqd, IBM Selectric typewriter.
Case #T-122 $200 offer reqd, IBM Selectric typewriter.
Case #T-123 $400 offer reqd, IBM Selectric II typewriter.
Case #T-125 $50 offer reqd, Royal manual typewriter.
Case #T-126 $200 offer reqd, IBM Electric Mag Card typewriter.
Case #T-127 $200 offer reqd, IBM Electric Mag Card typewriter.

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.

Pat Williams	**3-1594**
Ann Perkins	**3-6511**
Dick Higham	**3-4278**
Appointments:	
Deborah Reate	**3-4270**
Virginia Bishop	**3-1591**
Susan Gaskell	**3-4266**
Ken Hewitt	**3-4267**
Appointments:	
Lauren Stevens	**3-4268**
Sally Hansen	**3-4275**
Vera Ballard	**3-4277**
Kenneth W. Chin	**3-4269**
Appointments:	
Kate Young Caley	**3-4274**

Administrative and Academic Staff

Sr. Applications Programmer, Office of Facilities Management Systems, to participate in design and development of INSITE 4, a facilities management data base system to be written in PL/I for implementation initially on IBM's VM/CMS system. In addition, will participate in support of current version of INSITE 3 system, as well as offer support to consortium of INSITE users. Candidates must have bachelor's degree in relevant field, or an equivalent combination of education and experience. Two to four years PL/I programming experience, plus familiarity with advanced data structure concepts in online systems. Knowledge of IBM's CMS and data base systems highly preferred. A274

Applications Programmer, Electrical Engineering & Computer Science, to participate in development and support of relational database in administrative offices of department. Duties include: design and coding of new applications, maintenance and enhancement of existing management information systems, documentation of applications packages, as well as advising and assisting users. Requires professional programming experience plus interest in working closely with users. Bachelor's degree preferred. Database, PL/I, and Multics experience helpful. C083

Sponsored Research Staff

Research Associate, Nutrition & Food Science, to participate in development of recombinant DNA systems for industrial microorganisms. Will take responsibility for planning and direction of research program for group of graduate students and technicians. Involves generating research proposals for continued funding of current projects. Candidates must have PhD in Biology or Microbiology with experience in recombinant DNA technology. Experience in the following essential: gene cloning in prokaryotic and eukaryotic organisms, mRNA isolation and cDNA cloning, Northern, Southern and Grunstein-Hogness hybridization, and immunological screening. Three years postdoctoral research experience, including some industrial research background, plus record of publications in relevant areas, vital. Experience with gram (+) microorganisms preferred. R1047

Research Associate, Nutrition & Food Science, to participate in biochemical research into development of a novel, immobilized enzyme system for removal of potentially toxic chemicals, such as herapin, in extracorporeal therapy. Will conduct studies of toxicology and physical properties of degradated herapin; design daily approaches to experiments; carry joint responsibility for completion of research project; and supervise research team and graduate students. Candidates must have PhD in Biophysical Chemistry, plus detailed knowledge of latest developments in biochemical and physical biochemical techniques, including highly sophisticated laboratory techniques in: electron microscopy, Fourier transform nuclear magnetic resonance (NMR) and INFRARED (IR), high pressure liquid chromatography (HPLC), reverse phase liquid chromatography (RPLCO), ultra-violet-visible spectrophotometry (UV-VIS), light scattering photometry, liquid scintillation spectrometry, and advanced chromatographic techniques, isoelectricfocusing, electrophoresis, and diffusion and analytical centrifugation. Familiarity with physical methods such as differential scanning dilatometry, conductance, surface tension measurements and viscometry also necessary. Record of excellence in research as well as publications in scientific journals essential. Writing and analytical skills vital for preparing data for publication. R1046

Engineering Assistant (temporary), Center for Space Research, to assist engineering personnel in design, fabrication and testing of electrical and mechanical components for space flight hardware. Will also work with minicomputers, experiment simulators, and actual flight hardware; develop and write test plans for same and document results; as well as participate in some electrical and mechanical assembly. Requires 2 years technical school training or equivalent (minimum 3 years) directly related experience. Candidates must have ability to work with small electrical and mechanical machines and tools, capacity to develop and write test procedures. Good communications skills plus electronic design capability also essential. Familiarity with minicomputers and programming skills preferred. R1045

Research Associate in the Materials Processing Center. Will participate in projects concerned with solidification of metals, transport phenomena, thermodynamics, reaction nucleation, growth kinetics, etc. Candidates should have PhD or the equivalent in Materials Science or Metallurgy, along with capacity to carry on individual research. Theoretical understanding and analysis of experimental work as well as experience in instructing both graduate and undergraduate students in research work vital. Minimum of 1 year's related experience with training expertise and publications in areas described also needed. Writing skills essential for preparing research reports. R1044

Technical Supervisor, Plasma Fusion Center, for a fusion research program. Will provide maintenance supervision and systems integration of electronic hardware used in a large tandem mirror facility. Will work closely with research scientists, sr. engineers and technicians in troubleshooting, maintaining, and installing control systems, CAMAC units, multimegawatts SCR power supplies, megawatt RF system and microwave systems. Requires Associate's degree in Electronics plus 10 years applicable experience. Good skills in analogue and digital electronics, high voltage, high power systems, RF and microwaves essential, along with strong organizational and leadership ability. Applicants should also have experience with technician level work; familiarity with construction and troubleshooting techniques, very large electronic systems. Knowledge of vacuum systems, lasers, process controllers and minicomputers preferred. R1037

Applications Programmer, Laboratory for Nuclear Science, to participate in work of research group performing experiments on nature and interactions of elementary particles (experimental data from various electronic detectors and semi-automatic film scanners must be processed through complex chain of Fortran programs to determine physical

behavior of particles; behavior is then compared with various theoretical models to test validity of models and to suggest directions for improvement). Principle computer is DEC VAX-11/780. This programmer will modify programs to meet needs of new experiments; write routines to handle new concepts for analysis and fresh types of data. Will also advise physicists on program use. Applicants should have BS or MS in Physics, Mathematics, Electrical Engineering, or some related field, plus familiarity with Fortran. Experience in scientific programming as well as interest in group effort vital. R1036

Research Scientist—Theoretical, Plasma Fusion Center, to perform theoretical research and computation on problems relative to RF heating of plasmas for fusion energy generation. Include studies of nonlinear dynamics of high temperature plasmas with extensive, interactive use of symbolic computation (MACSYMA) and numerical codes on large computers (7600 and GRAY) within the plasma fusion community network (NMFEC). Requires PhD in relevant field with theoretical physics and applied mathematics background plus several years background performing advanced research on plasma heating problems of interest to national, magnetic fusion energy program. Skills in use of MACSYMA symbolic computation system and its interactive use with large scale numerical programs on the NMFEC network computers also vital. R1035

Research Scientist—Experimental, Plasma Fusion Center, to investigate x-ray emission from Alcator C discharges. Involves design and operation of diagnostic and data acquisition equipment, and writing appropriate analysis programs, including: carrying out of space and time resolved measurements of soft and medium energy x-rays arising from free-free and free-bound transitions in Alcator C discharges under conditions of Ohmic and RF heating and current drive; as well as performing energy analysis of these emissions and using resulting data to document and interpret the transport of medium-z impurities, including the effects of internal disruptions. Candidates must have PhD in Experimental Physics with a minimum of 3 years experience in diagnosis of x-ray emission from high temperature plasmas. Familiarity with x-ray imaging and filtering techniques used to obtain space, time and energy resolution of soft to medium energy x-rays emitted from plasmas needed also. Some training in atomic physics important. R1034

Systems Programmer for the Bates Linac Facility of the Laboratory for Nuclear Science. Will take responsibility for maintenance and stability of Bates computer systems, for maximizing their availability and utility to users, and for daily continuity of systems operation. Duties on VAX-11/780 and PDP-11 systems include: setting up of user accounts, management of public files and volumes, control of overall system performance, monitoring of system activity; correcting errors and failures; and providing users with consultation and assistance. Applicants should have BS in Computer Science or its equivalent, plus 3 years experience with VAX/VMS operating systems and 1 year experience with RT-11 operating system. Knowledge of VMS operating system internals and strong interpersonal skills essential. R1033

Technical Assistant, Biology, for biochemical work related to purification and characterization of proteins of bacterial viruses. Applicants must have BS or MS in relevant field, with formal training in chemistry, biochemistry, or molecular biology, plus 2 years laboratory experience. Experience with column chromatography, gel electrophoresis, and sucrose gradient centrifugation as well as good skills in using pH meters, spectrophotometers, and scintillation counters necessary. This individual will be expected to learn new experimental techniques quickly. Position offers opportunity to learn molecular genetics. R1032

Research Staff Engineer for the Haystack Observatory. Will develop digital circuitry for the Millstone Modernization Program, including radar timing generator, data acquisition subsystem, auxiliary data buffer (to collect and create format for many analog and digital signals), A/D Converter—D/A Converter Assembly, status data translator/Sender, custom parallel bus interface (to Harris minicomputer), and other related functions. Requires BS in Electrical Engineering as well as 2 to 4 years hardware development experience, including: application of microprocessors, analog-to-digital/digital-to-analog conversion, use of microprocessor development systems, digital circuit layout, and some programming background in Assembly and HLL. R1030

Sponsored Research Staff, Center for Cancer Research, to take responsibility for electron microscope facility. Duties include instruction of novices in electron microscope use; preparation of biological samples for electron microscopy; and participation in projects in Cancer Center which utilize electron microscopes. Techniques to be routinely used include: nucleic acid electron microscopy, ultra microtomy, and negative staining of particular samples. Facility contains 2 electron microscopes, dark room, and sample preparation room. Applicants must have BS in relevant field, with experience in use of electron microscope and related equipment. Position also requires familiarity with sample preparation techniques described, as well as background in cellular and molecular biology. Strong communication and interpersonal skills important for training variety of users. This individual will be expected to function independently and to modify techniques to suit specific research needs. R1029

Secretary/Staff Assistant

Administrative Secretary in the Foreign Languages & Literature Section of the Humanities Department. Will maintain expenditure records; handle financial matters including paying reimbursements, honoraria, bills, etc.; assist in coordination of faculty searches, reappointments, and promotions, including tenure cases; assist in coordinating English Evaluation Test for foreign students; type; file; answer phones; schedule use of classrooms; and perform other general office support duties as assigned. Requires 4 to 5 years direct/related experience, or an equivalent combination of education and experience. Strong typing skills essential; knowledge of word processing helpful. Good interpersonal ability as well as sufficient organizational skill to manage tasks with minimal supervision necessary. College background plus knowledge of French, German, Russian and/or Spanish preferred. Position involves meeting deadlines and handling confidential materials. B2240

Administrative Staff Assistant, Research Laboratory of Electronics, to provide administrative, secretarial and editorial support for 2 faculty members, 3 staff persons and 25 students. Will type and proofread technical material, correspondence, proposals, etc.; type from rough draft, dictaphone, or verbal instructions; draw diagrams and charts from sketches; renovate and maintain filing systems; perform library searches and collect other information; arrange meetings, seminars, exams and travel; monitor accounts; maintain office and laboratory supplies; order equipment, parts and related services; as well as type and photocopy laboratory and teaching materials. Requires 4.5 years direct/related experience, or an equivalent combination of education and experience. Excellent general and technical typing skills, plus experience in or willingness to learn word processing, essential. Command of English usage and spelling vital for editing duties. Some college with course work in English, Mathematics and the sciences preferred. B2238

Administrative Secretary, Mechanical Engineering, to provide administrative and secretarial support to Director of the Laboratory for Manufacturing & Productivity. Will provide similar support for Polymer Processing Program. Duties include: preparation of correspondence and reports on word processor; distribution of same materials; answering telephone inquiries and correspondence; compiling, editing and producing the *Polymer Processing Program Newsletter*; monitoring of monthly statements and handling of other basic accounting functions. Requires 4 to 5 years applicable experience or an equivalent combination of education and experience. Excellent general and technical typing skills essential, along with ability to organize detailed tasks efficiently and independently. Good interpersonal skills important. B2235

Administrative Secretary in the Center for Advanced Engineering Study, who will perform diverse secretarial and administrative duties for Associate Director and Administrative Officer with minimal supervision. Will process mail; type letters, memoranda, reports, etc. from rough or final draft; prepare correspondence for mailing; answer phones; maintain calendars; arrange appointments, meetings and travel; update files; provide reception; prepare weekly payroll; serve as key operator for photocopy machine, keeping related records; receive all filing for various center accounts; receive invoices from outside vendors and handle backup documentation; handle departmental keys; keep inventory of and order office supplies; update listing of center employees; obtain temporary office help when needed; maintain petty cash; as well as schedule use of 1 lecture hall and monitor MIT calendar of events for accuracy. Candidates must have 4.5 years direct/related experience, or an equivalent combination of education and experience. Excellent typing, organizational and interpersonal skills essential. This individual will be expected to exercise discretion in confidential matters. B2220

Sr. Secretary, to provide secretarial support for the Administrative Officer in the Office of the President. Will perform wide variety of office duties. Requires 2.5 years direct/related experience, or an equivalent combination of education and experience. Excellent typing, shorthand skills, plus command of English usage, essential. Strong organizational and interpersonal skills also vital for handling complex situations. Experience in or willingness to learn word processing important. Position involves occasional overtime. This is a busy, non-smoking office. B2244

Sr. Secretary, Linguistics & Philosophy, for departmental headquarters. Will answer phones; type correspondence, manuscripts, grant proposals, etc. for department head, faculty members and administrative officer; maintain student records and serve as liaison with other MIT offices and departments; schedule classes each term; assist with Bulletin copy; handle inquiries from students, visitors and others; maintain calendars; arrange travel; handle petty cash and student payroll; assist editor of linguistics journal in confidential processing of submitted manuscripts. Applicants must have 2 to 3 years applicable experience, or an equivalent combination of educaticn and experience. Excellent typing skills plus background in or willingness to be trained in word processing vital. Good command of English usage important. Position involves performing duties with frequent interruption. Some familiarity with academic environments helpful. B2243

Sr. Staff Assistant: Enrollment Services Assistant, Medical, to provide office support in the MIT Health Plan's Enrollment Services unit. Will take responsibility for explaining benefits and daily enrollment activities of Student and affiliate health programs; as well as provide assistance to Enrollment Operations Coordinator in processing applications. Applicants must have 2.5 years related experience, or an equivalent combination of education and experience. Moderate typing skills, plus excellent communications skills and capacity to handle detailed work, necessary. Capacity to handle variety of duties with minimal supervision also important. Experience with online computers helpful. B2242

Sr. Secretary, Sloan School of Management, to provide general secretarial support to Director and 2 other staff members in Office of Finance & Administration. Will answer phones; provide reception; arrange appointments, meetings and travel; maintain calendars; respond to routine inquiries; photocopy; update files; process documents for graduate appointments; produce semi-annual accounting report; prepare payrolls; oversee handling and maintenance of office machines and supplies; serve as liaison with Physical Plant; supervise student assistants; and provide similar support to Dean's office as needed. Applicants must have 2.5 years direct/related experience, or an equivalent combination of education and experience. Strong typing, proofreading skills essential. Excellent organizational ability also vital for setting priorities, and meeting deadlines. Facility with numbers and word processing experience necessary. Good interpersonal skills important for functioning in this busy, non-smoking office. B2241

Sr. Secretary—Technical, Mathematics, to perform general secretarial duties for 7 to 10 faculty members. Will type correspondence, teaching materials, manuscripts, etc.; answer phones; photocopy; file, as well as arrange meetings and travel. Requires 2 to 3 years related experience or an equivalent combination of education and experience. Excellent typing and dictaphone skills needed; technical typing experience preferred. Strong organizational skills important for managing diverse tasks with minimal direction. B2234

Sr. Staff Assistant, Center for Space Research, to provide secretarial support for small but busy group currently involved in research on space motion sickness. Will type on both word processor and from dictaphone; maintain calendars; arrange appointments, meetings and travel; set up and maintain files; prepare teaching materials; maintain student records; schedule examinations for students in small interdepartmental program; answer phones; greet visitors; respond to routine inquiries; as well as photocopy and perform various other general office duties. Applicants must have 2 to 3 years applicable experience, or an equivalent combination of education and experience. Excellent typing, organizational and general office skills essential. Strong interpersonal skills, capacity to order priorities independently, plus attention to accuracy of detail, also vital. Experience in or willingness to be trained in word processing preferred. B2225

Sr. Secretary, Biology, to provide secretarial support for 2 faculty members and associated laboratories. Will type scientific manuscripts, correspondence, etc.; handle routine correspondence independently; assist in preparing new research and fellowship proposals; monitor research accounts; prepare monthly forecasts for same; prepare teaching materials and class rolls; arrange appointments and travel; answer phones; maintain calendars; process mail; keep track of commitments and deadlines for these 2 faculty members. Candidates should have 2.5 years direct/related experience, or an equivalent combination of education and experience. Good typing, organizational and editing skills essential. Experience in or willingness to learn word processing necessary. Knowledge of MIT accounting systems helpful. This is a challenging position in a busy office. NON-SMOKER PREFERRED B2219

Sr. Secretary, Environmental Medical Service, to provide secretarial support in the Radiation Protection Office. Will type correspondence and forms related to radioactive materials licensing and control; handle monthly distribution and collection of film badges; maintain records for same; schedule appointments for office staff; maintain radioactive materials procurement records, as well as files on office and committee activities. Applicants must have 2.5 years related experience or an equivalent combination of education and experience. Position also calls for good typing and general secretarial skills, including word processing and minicomputer experience. Good communications skills important. Organizational ability for adapting to routine and new procedures. B2218

Technical Support Staff

Design Draftsperson—Electrical, Physical Plant, to assist in or take responsibility for design of systems under supervision of engineering personnel. Will crystalize ideas of engineer's functional design into an operating unit. Applicant must have graduated from a 2 year day course at a technical institute or its equivalent, and have 6 to 10 years directly related experience. Also requires wide knowledge of materials, equipment, industry standards, manufacturing practices, plus background emphasizing high voltage distribution systems, building and lighting systems, equipment controls and electronic instrumentation. Individual must have demonstrated outstanding skill in type of drafting described and have capacity to perform duties with minimal supervision. B2216

Office Assistant

Administrative Assistant in the Undergraduate Mathematics Office to serve as primary information source on departmental services. Will also prepare and schedule exams; oversee proctoring assignments; track student flow and maintain related records; perform some typing of correspondence, syllabi, notes and announcements. Candidates must have 4 to 5 years applicable experience, or an equivalent combination of education and experience. Good general office skills, including typing, necessary. Strong organizational skills important for setting priorities and managing workloads despite interruption. Experience in a student-oriented setting preferred. B2245

Administrative Assistant, Electrical Engineering & Computer Science, to perform various tasks to meet administrative needs of Educational Computer Facility consisting of large time sharing systems (DEC-20), VAXen and personal computers. Will organize efforts of student staff and volunteers; coordinate purchase orders and requisitions for service and supplies; monitor monthly accounting records; arrange preventive maintenance and emergency service; coordinate meetings; type memos, letters, etc.; and perform other general secretarial duties. Applicants should have 4 to 5 years related experience, or an equivalent combination of education and experience. Good typing and general office skills vital. Knowledge of methods, practices and terminology of computer usage important. B2239

Administrative Assistant (temporary: 11 mos.), Architecture, who will manage 11 month planning stage of new media laboratory and affiliated academic program. Will administer research projects, including international accords for pilot projects in computer-aided education with Columbia, Senegal, and Pakistan. Will assist faculty member involved in fundraising, international relations, curriculum development, and student admissions. Duties include office management, handling of payrolls, accounting duties, interpretation of policy, library research, writing of preliminary reports, and handling of unsupervised correspondence in both French and English. Position calls for assisting with completion of work begun at Centre Mondial, Paris, France. Candidates must have 4 to 5 years related office management experience, or an equivalent combination of education and experience. Demonstrated ability to interact with international personnel as well as bilingual fluency (French/English) required. Total fluency in telecommunications systems, including capacity to move freely from French (Azerty) and English (Querty) text processing also necessary. B2229

Administrative Assistant (17.5 hrs/wk), Office of the Dean for Student Affairs, to provide office and administrative support to the Graduate Student Council. Will coordinate and implement fall and spring student orientation; manage graduate activities, including financial planning, use of space, etc.; coordinate nominations and interviews for graduate seats on Institute committees; serve as liaison between council and MIT departments regarding graduate activities and issues of concern to graduate living groups; assist treasurer with maintenance of budget records and budget preparation; assist secretary with meeting notices, minutes and related files; arrange meetings and luncheons; and assist with council publications, surveys and elections. Requires 4 to 5 years relevant experience, or an equivalent combination of education and experience. Good secretarial and general office skills, including typing, necessary. Strong communication and organizational ability also essential for dealing effectively with diverse administrative tasks and various segments of the MIT community. Knowledge of MIT policies and regulations helpful. B2226

Sr. Office Assistant, Physical Plant, to prepare and issue purchase orders; process departmental requisitions for purchases; handle correspondence relating to purchase orders; may code or classify data; verify summaries, reports, and calculations; disseminate information regarding areas of responsibility; interact with other MIT departments as well as outside agencies regarding same; review and maintain files and records on purchase orders, invoices, etc.; and enter information on computer. Position may involve other financially oriented clerical duties as needed to support activities of others in department. Requires exercising independent judgement in applying departmental and Institute policies. Applicants must have finished high school or its equivalent, and have minimum of 1 year relevant experience, or an equivalent combination of education and experience. Accurate typing skills plus capacity to follow detailed instructions essential. Proficiency in use of calculators and computer terminals, with background in bookkeeping/accounting strongly preferred. B2224

Sr. Office Assistant, Physical Plant, to provide clerical and accounting support in Administrative Services area. Will process standardized forms on a daily basis; may code or classify data; verify summaries, reports, calculations; disseminate information regarding areas of responsibility; review and maintain files; monitor invoices and accounting statements; and perform other related clerical duties as assigned. Position requires exercising independent judgement in application of departmental and Institute procedures. Applicants must have 2 to 3 years relevant experience, or an equivalent combination of education and experience. High school graduation necessary. Accurate typing skills as well as ability to handle detailed duties essential. Proficiency in use of calculators and computers, plus background in bookkeeping and accounting strongly preferred. B2223

Accounting Clerk (17.5 hrs/wk), Biology, to perform accounting duties for a large laboratory. Will monitor spending among personnel; allocate expenditures against proper accounts; maintain existing and create new account files; monitor all accounts; process requisitions and purchase orders; collect related documentation; solve difficulties with problem purchase orders by dealing with outside vendors and MIT accounting; produce spending forecasts; order materials and services; approve invoices; maintain order log and other debits; as well as assist in preparation of budgets for grant proposals. Applicants must have completed high school and have a minimum of a year's directly related experience, or an equivalent combination of education and experience. Experience in working with numbers, plus capacity to handle detailed work under occasional constraints of deadlines, essential. Experience with or willingness to be trained in computer spread-sheet programs also needed. Familiarity with MIT accounting procedures helpful. B2230

Office Assistant: Order Processing Operator, MIT Press, who will input customer orders via CRT into computer. Will also update customer files and new customer codes; update postal changes for computer; assist with mail processing; and learn procedure for mail room operation. Applicants must have completed high school or the equivalent and have a minimum of a year's related experience, or an equivalent combination of education and experience. Strong typing skills essential for heavy typing assignments. CRT experience preferred. B2246

Clerical Assistant, System Dynamics Group, who will type correspondence; file; answer phones; proofread typescripts for typographical errors; photocopy; run office mailroom; and follow through on projects already begun. Requires high school graduation or the equivalent, along with accurate typing skills and attention to detail. Excellent telephone manner plus ability to set priorities independently. Some college preferred. NON-SMOKING OFFICE B2227

Service Staff

Building Attendant for the Office of Facilities Management Systems (part-time.) Will take responsibility for limiting access to and monitoring movement of stored items during assigned hours in this idle property and salvage equipment facility. Will verify authority of building users and coordinate access to departmental storage; interact with movers transferring materials and equipment from facility; maintain records on all items entering and leaving area; keep daily activities log; secure building; report needed building repairs; assure general orderliness in assigned areas; and perform other related duties as assigned. This individual must be able to perform duties with minimal supervision. Candidates should be prepared to undergo security check. H812

Director of Grants Management and Accounting for the Whitehead Institute, to develop and supervise grants management and accounting systems for biomedical research. Responsibilities will include: negotiation of indirect cost rate, review of proposals, monitoring of expenditures, preparation of periodic financial reports for all sponsored research, advising on potential funding sources, operation of accounting systems, including general ledger, as well as handling cash flow, accounts payable, accounts receivable, and payroll. Position offers unique opportunity to establish and develop this office and its support systems. Requires minimum of 3 years experience in managing grants from NIH, NSF, ACS and similiar agencies, along with solid background in accounting. Submit resume to: Mr. John Pratt, Whitehead Institute for Biomedical Research, Massachusetts Institute of Technology, E17-517, 77 Massachusetts Avenue, Cambridge, MA 02139.

The following positions were still available at **Tech Talk** deadline. Complete descriptions of all available positions are posted in the Personnel Office (E19-239), and at locations listed at the beginning of Positions Available section.

John J. Vacca

John J. Vacca, 76, of Watertown, a retired security guard, died April 19. Mr. Vacca, former New England bantam weight boxing champion, worked at MIT from 1947 until his retirement in 1972.

He is survived by two brothers, Anthony of Waltham and Michael of Arlington; and two sisters, Mary Deliano of Lexington and Eva Amico of Arlington.

Peter J. Scanlon

Peter J. Scanlon, 77, of Arlington, a retired carpenter at Lincoln Laboratory, died April 1. Mr. Scanlon worked at Lincoln from 1960 until his retirement in 1970.

He leaves his wife, Phyllis Redmond Scanlon; three daughters, Phyllis S. Dunn of Norwell, Mary S. Chicoski and Gail S. MacDonough of Wayland; a son, Peter J. Jr., of North Easton; seven brothers and a sister, and 11 grandchildren.

Cornelius M. Sullivan

Cornelius M. Sullivan, a staff engineer at Lincoln Laboratory since 1962, died suddenly April 9. He was 57.

Mr. Sullivan, a resident of Lynnfield who formerly lived in Hyde Park, is survived by his widow, Elizabeth H. Hammons Sullivan; four children, Brian, Susan, Russell and Carol Ann Sullivan, all of Lynnfield; two brothers and two sisters. Memorial contributions may be made to the Heart Fund.

Charles L. Lothrop

Word has been received of the death on April 1 of Charles L. Lothrop, a member of the research staff at the Center for Space Research from 1951 until his retirement in 1975. He was 71.

Mr. Lothrop, who lived in Whitefield, N.H., is survived by his wife, Mary.

ADMINISTRATIVE AND ACADEMIC STAFF:

C082, Dental Hygienist, Medical
A269, Applications Programmer I, Information Processing Systems
A268, Program Manager, Laboratory for Health Care Studies
A266, Applications Programmer, Information Processing Services
C081, Librarian I: Assistant Science Librarian for Processing, Libraries
C080, Librarian I: Department of Transportation Liaison Librarian (part-time), Libraries
A263, Managing Editor of Technology Review, Alumni Association
C078, Postdoctoral Associate, Nutrition & Food Science
C076, Postdoctoral Associate, Nutrition Food Sciences
A240, Sr. Systems Analyst, Information Processing Services

SPONSORED RESEARCH STAFF:

R1025, Technical Assistant (part-time), Center for Cancer Research
R1024, Research Specialist, Cell Culture Center
R1023, Computer Manager for the Research Laboratory of Electronics
R1022, Research Scientist, Spectroscopy Laboratory
R1019, Technical Assistant, Whitaker College of Health Sciences, Technology & Management
R1018, Manager of Communications Research Computer Facilities, Research Laboratory of Electronics
R1012, Research Associate: Statistician, Sloan School of Management
R1011, Instrumentation Engineer, Laboratory for Nuclear Science
R1009, Research Associate: Technical Manager, Electrical Engineering & Computer Science
R1002; R1003; R1004, Technical Assistant, Laboratory for Computer Science
R1001, Sponsored Research Staff, Haystack
R988, Experimental Physicist, Center for Space Research
R986, Postodoctoral, Center for Space Research
R984, Research Associate, Chemistry
R983, Research Associate, Materials Science & Engineering
R731, Research Associate, Technology Adaptation Program
R959, Research Scientist, Nutrition & Food Science
R957, Digital Logic Programmer, Laboratory for Computer Science
R955, Organic Chemist, National Magnet Laboratory
R943, Postdoctoral, Center for Space Research
R942, Postdoctoral Fellowship, Research Laboratory of Electronics
R927, Research Staff, Laboratory for Computer Science
R926, Research Staff, Laboratory for Computer Science
R917, Research Scientist—Experimental/Theoretical, Plasma Fusion Center
R896, NMR Imaging Scientist, National Magnet Laboratory
R825; R826; Sponsored Research Staff (postdoctoral), Laboratory for Nuclear Science
R873, Sponsored Research Staff (Engineer/Applied Physicist), National Magnet Laboratory
R856, Research Scientist, Artificial Intelligence Laboratory
R855, Research Scientist, Artificial Intelligence Laboratory
R835, Research Associate, (beginning 12-1-82), Physics

SECRETARY/STAFF ASSISTANT

B2214, Sr. Secretary (17.5 hrs/wk), Mechanical Engineering
B2192, Sr. Secretary, Laboratory for Computer Science
B2171, Sr. Secretary—Medical, Medical
B2132, Sr. Secretary, Biology
B2122, Sr. Secretary, Biology
B2111, Sr. Secretary, Medical

SERVICE STAFF

H798, Sr. Electronic Technician, National Magnet Laboratory
H797, Sr. Detailer, Plasma Fusion Center
H793, Technician B (Electro-Mechanical), Plasma Fusion Center
H785, Sr. Technician (Electro-Mechanical), Haystack
H771, Sr. Electronic Technician, Research Laboratory of Electronics
H779, Technician A (Electro-Mechanical), Center for Space Research
H768, Sr Electro-Mechanical Technician, Aeronautics & Astronautics
H767, Machinist A, Nuclear Reactor Laboratory
H708, Machinist A, Mechanical Engineering
H637, Engineer 2nd Class, Physical Plant

Gray sees need to reexamine MIT mission for coming decade

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times the larger framework of the Institute—to articulate questions and encourage answers which will help us decide what we may be and where we should go—which will restate for these times the essential elements of coherence, unity, and shared purpose."

The president's remarks about the university's future prospects were similar to those he presented before the MIT Corporation, the Institute's governing body, last month. He presented the same message to the Alumni Council at its April meeting Monday evening and plans a similar presentation for the Executive Committee of the Corporation in early May when other key groups will be in attendance.

Undergraduate mission

In examining and possibly reshaping undergraduate education, President Gray said, MIT will be able to draw on its traditional strengths—the quality and diversity of its students, the unity of the faculty in its responsibility for undergraduate teaching, the faculty's commitment of energy to and enthusiasm for university concerns, and what he called the "seamless" nature of the academic experience that eliminates barriers for faculty and students alike between schools and departments and disciplines.

Issues the university will be required to settle over the coming decade, the president said, have to do with "who studies here"—issues of preparation, cost, access and diversity—and "what is studied here"—the proper balance between an early start on a professional career and more general educational goals, "goals concerned with the liberal components—humanistic, scientific and social—of undergraduate studies."

"We need to come to some consensus of what that balance should be," he said, "because that balance has first order consequences for curriculum structure, for pace, for patterns of enrollment, and for the general campus climate."

Size and scale of 1980s

Issues of size and scale—of the student body, of the faculty, of the research enterprise—also will be of continuing concern as MIT moves through the 1980s, the president says.

Student body growth in the 1970s was partially driven by budget needs, he noted. But in the 1980s, he said, MIT will need to decide what its "right size" ought to be.

Likewise, the scale of research will be an issue for the university and this will be influenced by shifting needs of sponsors, by the desire to couple research to education, and by the role which special purpose laboratories (such as Lincoln Laboratory which has a single sponsor and a particular focus) might play in MIT's future.

Size and scale issues, President Gray said, will place a particular premium in the 1980s on strategic planning in undergraduate admissions and on academic planning processes. One issue that clearly will need rethinking, he said, is admission of transfer students to upper classes, something the Institute—unlike its peer institutions elsewhere—has not emphasized or sought in years past.

Intellectual scope

MIT, President Gray said, is especially well prepared to grapple with the larger problems associated with the third area of concern—what should be the scope and range of the university's intellectual enterprise. MIT has a strong tradition, he noted, of engaging and shaping questions that affect disciplines and relations between disciplines and this tradition will be a source of strength in examining future intellectual range. So, too, will be MIT's tradition of a single faculty and its 35 years of evolving interdisciplinary degree programs.

"In the coming years, we must become better at applying critical judgments to each domain of the intellectual enterprise," he said. "Our ability to redirect our resources will be crucial to our ability to undertake new ventures and to bring about change."

Research competition and cost

Cost of research, President Gray said, is emerging more strongly than ever as one of MIT's most crucial issues for the 1980s.

"Research is at the heart of the faculty member's life here," he said. "It is the matrix which sustains and informs our academic programs. The quality of the faculty has consistently attracted research support despite constraints on funding."

But growing competition from peer institutions, he said, is becoming more intense than ever before and the high cost of research at MIT, when compared by sponsors to costs at peer institutions, is a concern that will continue to be before MIT during the coming years.

Efforts in reductions

Efforts already are underway, he noted, to check research support costs—i.e., a three-year effort to reduce administrative and support budgets by as much as 15 per cent. Consideration will also be given to ways in which the research administration at departmental, laboratory and center levels might be reorganized or reduced.

Dr. Gray noted that MIT research costs in the last year or two have been temporarily driven up by the effects of recent accounting changes (i.e., handling of research assistant and teaching assistant tuitions and the switch to allocating indirect costs on the basis of modified total direct costs instead of salaries, wages and benefits alone). As the financial effects of these one-time-only changes diminish so, too, will their effects on research cost overall.

Despite these efforts, though, he said, the cost of doing research at MIT, while by no means out of control as some have suggested to him, are high and promise to continue that way.

"Work on all these problems will be ongoing and continuing during the 1980s, engaging the attention of all of us," he said, "for, in the end, it is we who are responsible for the university now and in the future."

Despite the rain Sunday, more than 270 members of the community completed the Third Annual Community Service Fund Road Race, shown here at the start at the Sailing Pavilion. Cambridge Mayor Alfred Vellucci started the race and presented trophies to the four winners: Steve Bratt (20:34) and Ann Dunjam (24:45) in the regular division and Sidney Yip (22:44) and Suzanne Sampson (27:38) in the master's division.

Engineering Academy elects 5

Five MIT faculty members, one of whom heads the Solid State Division at Lincoln Laboratory, have been elected to membership in the National Academy of Engineering.

They are Professors Thomas B. Drew of the Department of Chemical Engineering, Harry C. Gatos of the Department of Materials Science and Engineering and the Department of Electrical Engineering and Computer Science, Charles C. Ladd of the Department of Civil Engineering, Alan L. McWhorter of the Department of Electrical Engineering and Computer Science, head of the Solid State Division at Lincoln, and Kenneth A. Smith of the Department of Chemical Engineering, who is also associate provost and vice president for research.

Election to the academy is the highest professional distinction that can be conferred on an engineer and honors those who have made important contributions to the literature of engineering or who have demonstrated unusual accomplishments in new and developing fields of technology.

The election brings to 71 the number of MIT faculty who are members of the academy.

The NAE issued the following citations in announcing the election:

Professor emeritus Drew—Pioneering contributions to heat/mass transfer and nuclear engineering technology, educational leadership, and outstanding service to government and his profession.

Professor Gatos—Contributions to the advanced engineering of electronic materials and to engineering education.

Professor Ladd—Developing unifying principles governing clay behavior and innovative design procedures related to soft ground construction.

Professor McWhorter—Outstanding research and technical leadership in the fields of quantum electronics and solid-state devices.

Professor Smith—For diverse, creative, and fundamental research in fluid mechanics and rheology, heat and mass transfer, and for professional and educational leadership.

All of the professors elected are MIT alumni.

Composer to speak

Computer music composer James Dashow, visiting lecturer in music in the Experimental Music Studio at MIT, will give the last of the seminar/concerts in the Music and Technology Speaker Series next Monday, May 2.

Mr. Dashow is director of the Sciadoni Electronic Music Studio in Rome and is associated with the Centro di Sonologia Computazionale at the University of Padova, Italy.

The seminar preceding the concert will be at 7pm at the Center for Advanced Visual Studies (W11). His subject is "Nonharmonic Digital Synthesis and The Little Prince:Notes for an Opera" and he will play part of the opera's finale at the conclusion of the seminar.

The concert of his own electronic and computer music will be at 8:30pm in the Sala de Puerto Rico of the Student Center. He will be accompanied by Robert Annis on clarinet and Joel Moerschel on cello, both members of the College Ensemble.

Program for the concert, which will last about 50 minutes, will be: *Partial Distances* (1978), analog electronic music; *Effetti Collaterali* (1976) for clarinet in A with computer generated electronic accompaniment; *Conditional Assemblies* (1980), computer synthesized electronic music and *Mappings* (1974) for cello with analog electronic accompaniment.

The seminar/concert is being sponsored by the MIT Music Section and the Experimental Music Studio (EMS), with support from the MIT Council for the Arts which has also commissioned a composition from Mr. Dashow.

Johnson panel maps strategy

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nowhere as interwoven with that of our allies as in fields of scientific cooperation and high-technology trade, the panel warned that costs of protectionist policies and market fragmentation are probably greater than in almost any other economic field except energy. Paradoxically, said the panel, international trade practices are "more backward in advanced technology than in many other fields at a time when both nations and regions are looking more and more to advanced technology as a primary source of economic salvation."

As a first step, the panel called for a special cabinet-level, policymaking process, including a review of US domestic and foreign policies and trade practices that affect the nation's ability to maintain a competitive edge in world markets by introducing frontier technologies and concepts to manufacturing and distribution of products.

A second prong of US strategy should then be to foster an open international trading system. The cornerstone of US policy, urged the panel, should be free competition in international markets. Innovation, it pointed out, proceeds most rapidly and efficiently when new products have access to the widest possible markets.

MIT faculty members on the panel were Dr. Walter A. Rosenblith, former provost and Institute Professor; Dr. Carl Kaysen, David W. Skinner Professor of Political Science and director of the Program in Science, Technology, and Society; and Dr. Robert M. Solow, Institute Professor and professor of economics.

Others on the panel incude Richard N. Cooper, Mauritz C. Boas Professor of International Economics at Harvard University; Robert A. Charpie, president of Cabot Corporation; Theodore M. Hesburgh, president of the University of Notre Dame; William R. Hewlett, chairman of the executive committee of the Hewlett-Packard Company; Robert S. Ingersoll, former US ambassador to Japan; Allen E. Puckett, chairman and chief executive officer of the Hughes Aircraft Company; and Leonard Woodcock, former US ambassador to China.

BU musicians to play with Brass Ensemble

The 19-piece MIT Brass Ensemble, under the direction of Gordon Hallberg, will be joined by organist John Finney and members of the Boston University Percussion Ensemble for its final concert of the year Sunday, May 1, at 3pm in Kresge Auditorium. Admission is free and open to the public.

The program will include Concertante, a piece written for brass, percussion and organ by Boston area composer Daniel Pinkham. There will be pieces for brass choirs and organ by Gigout and Pachelbel. The program also includes work by Prokofiev, Reed, Nelhybel and Bozza.

Author to conclude chaplaincy series

Professor Philip Hallie, author of *Lest Innocent Blood Be Shed*, the story of a French Huguenot village that defied the Nazis to rescue Jewish refugees in World War II, will speak at MIT on Monday, May 2, at 7:30pm in Rm 9-150. His talk, "Village of Refuge in the Holocaust," concludes the 1982-83 MIT Chaplaincy Lecture Series.

Professor Hallie, who has degrees from Grinnell College, Oxford University and Harvard University, is Griffin Professor of Philosophy and Humanities at Wesleyan University. He has lectured widely on ethics and on the subject of human cruelty.

Scholars to share, videotape knowledge of arms control

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ment. The students are expected to come primarily from the faculties of 30 independent, four-year, liberal arts colleges taking part in the Sloan Foundation's New Liberal Arts Program, which recently began providing funds to those colleges to help them increase the awareness of technology among students who are not intending to follow technical careers.

Dr. Jack P. Ruina, professor of electrical engineering and computer science at MIT and director of the Arms Control and Defense Policy Program, is director of the summer session project, and is working closely with Dr. Paul M. Doty, Mallinckrodt Professor of Biochemistry and director of the Center for Science and International Affairs at Harvard Both have worked for decades on nuclear weapons and arms control issues and have served as advisors to national defense agencies and the White House.

Others who will lecture and lead discussions at the workshop are Harvard professors Albert Carnesale, Michael Nacht, Joseph Nye and Dorothy Zinberg, and MIT professors Ted Greenwood, William Kaufmann, Stephen Meyer and George Rathjens.

The effort to outline a proposed video course is under the direction of a managing council chaired by Carl Kaysen, David W. Skinner Professor of Political Economy and director of the MIT Program in Science, Technology, and Society. Professor Kaysen's interest in issues of weapons development, use and control stretches back more than 40 years to military intelligence work in World War II and was spurred by service on the National Security staff of the White House during the administration of John F. Kennedy. The other members of the council are Professors Doty and Ruina.

It was the early planning for the summer workshop that aroused interest in making double use of the people, writings, and film to be gathered.

"The idea took shape not only of instructing the workshop students for future college teaching, but also of embodying the background of nuclear arms decisions in television material that could instruct far larger groups of non-technical students in all parts of the country," said Victor K. McElheny, director of the Vannevar Bush Fellowships at MIT, who will assist Professor Kaysen in the project.

The managing council will exercise responsibility for the content of the video and related print material produced. The council will work with an advisory committee—now being formed—of 16 people, largely from academic institutions. The advisory group has broad geographic representation.

The television research and production for the project will be done by a team from WGBH-TV that includes producer Elizabeth Deane, working under the supervision of Zvi Dor-Ner, an executive producer, and Peter McGhee, the station's program manager for national productions.

The idea for the summer workshop grew out of the heightened public concern over the danger of nuclear war, Professor Ruina said.

That concern has stimulated interest at many colleges and universities in courses and seminars to educate students about nuclear weapons and arms control policy issues. Most of the newer programs, he said, are led by faculty members "who have had little opportunity to receive any formal instruction themselves in the many dimensions of nuclear issues, particularly those involving nuclear weapons technology and strategy, and their relationship with national defense and foreign policy decisions. Yet an understanding of such matters is essential for effective instruction in this field," Professor Ruina said.

The summer course will address such topics as nuclear weapons and their effects, weapon system technology, nuclear strategy, command and control, measuring the nuclear balance, nuclear proliferation, preventing nuclear war, and arms control.