

Valentine treat

The Faculty Club will hold a special "Valentine Day Dinner for Two," Friday, Feb. 14, 4:45-7:45pm. The menu will offer your choice of lobster or prime rib, hearts of romaine, vegetable and potato with strawberry shortcake for dessert. Dinner will be accompanied with a split of champagne and rose per couple. Reservations are recommended, x3-4896.

Opportunity knocks

The Personnel Office will hold evening interviews Thursday, Feb. 13, hoping to fill some of the more than 100 jobs now available.

If you have relatives, friends or neighbors who would like to work at MIT—particularly in a support staff position—please tell them about the varied and interesting jobs available. For further information or to make an appointment for an evening interview, call x3-4251.

Quit smoking

The MIT Medical Department will offer a five-week Smoking Cessation Program beginning Thursday, Feb. 20. Sessions will be held once a week, 12-1pm in the Medical Department second floor conference Rm E23-297.

The program is geared to smokers who are self-motivated to quitting, and based on behavior modification. "quit kits," a film, and other American cancer society and American Lung Association material will be used.

The sessions will be led by Constance Bean, coordinator of the Health Education Service. The class will be limited to 20 participants with preregistration required. The fee is \$25 for MIT Health Plan members and students; \$30 for all others. For further information and preregistration contact the Health Education Service, x3-1316.

Gray visits

President Gray will hold open office hours Thursday, Feb. 13, 3-5pm. Appointments may be made only on February 13 by stopping by the reception area in Rm 3-208 or calling x3-4665.

Looking ahead

The Athletic Department has announced that the Summer Day Camp will run June 23-August 15 this year—its 21st year of operation.

The program offers an active schedule of physical recreation and creative activities to children aged 6½-14. The camp is divided into junior and senior divisions and further into smaller groups of 10-12, according to age.

The camp uses the Athletic Department's extensive facilities and is staffed by qualified instructors. Activities include instructional swimming, sailing, fencing, tennis, archery, gymnastics, arts and crafts, etc. Each of the four two-week quarters of the camp also offers a special event. For further information or application forms, call Katie Briers, x3-2913.

MIT to celebrate its quasiquicentennial

By JOANNE MILLER
Staff Writer

MIT is scheduled to begin celebrating the quasiquicentennial of its founding this spring.

Quasiquicentennial?

"That's the 125th anniversary," said Humanities Librarian David Ferriero, with no great assurance in his voice. He found the word nestled between centennial and sesquicentennial in Roget's Thesaurus, but with no printed definition that it meant 125th anniversary.

By whatever name, MIT will mark its 125th year April 10. The charter for the Institute was granted on that date in 1861, although the start of classes was delayed until 1865 because of the Civil War.

To celebrate the anniversary, several special activities have been planned and other, regular occurring events will take on a "quasqui" appearance. A logo, now being devised by Jacqueline Casey, director of Design Services, will be used widely on

publications, pennants and T shirts throughout the anniversary year.

A community-wide ball is being planned for Saturday, April 26, in the Athletics Center. The ball will be preceded by an afternoon symposium on the world economy, led by MIT's most recent Nobel laureate, Institute Professor Franco Modigliani. The symposium will be held 1:30-3:30pm in Huntington Hall, sponsored by the MIT Sustaining Fellows Program, a group composed of alumni and others who provide substantial annual support to the Institute. Watch for further details.

In early April a special magazine will be issued focusing on pivotal points in MIT history—points when national or world events brought change to MIT and those changes, in turn, affected the nation or world. The publication also will include a timeline of important dates and happenings in our history.

It is hoped that the annual community
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MIT announces Housing Assistance Loan Program for faculty members

By CHARLES H. BALL
Staff Writer

MIT has launched a major effort to help faculty members, particularly junior faculty members, finance the purchase of homes.

The primary purpose of the program is to attract and retain faculty members whose decision about teaching at MIT might be adversely affected by the high cost of housing in the Boston area.

"This program to assist faculty members with housing is the most attractive package in the country," said Provost John M. Deutch, whose office took the lead in developing the program, with the office of Treasurer Glenn P. Strehle.

"We have been increasingly concerned about the ability of faculty members, and especially younger faculty, to find affordable housing in a market that has gone sky high," said Professor Deutch. "We not only have to be

competitive in salary," he said, "but also in lifestyle. We think this program will enable us to do that, while at the same time protecting the financial interests of the Institute."

The provisions of the Housing Assistance Loan Program (HALP) program, approved by the Executive Committee on February 7, will be spelled out in detail in brochures prepared for interested persons.

Essentially, it facilitates the purchase of homes by faculty by providing HALP aid in the form of second mortgages and, in a new provision now available to faculty, in the form of contingent interest mortgages. The practical effect is to increase a buyer's purchasing power.

For faculty members at the lower end of the salary scale, under \$40,000, this could mean an increase in purchasing power of 64 per cent beyond what they could otherwise borrow to
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Community invited:

McNair memorial service today

By ROBERT C. DI IORIO
Staff Writer

MIT will honor its fallen astronaut, Dr. Ronald E. McNair, at a memorial service today (Wednesday, Feb. 12) at 2pm in Kresge Auditorium. The entire MIT community is invited.

Members of Dr. McNair's family are expected to attend.

Dr. McNair, 35, who received the PhD in physics from MIT in 1976, had maintained close ties with the Institute and with the Boston-Cambridge community. His last formal visit here was just two years ago, not long after his first flight on the space shuttle, which occurred in January 1984.

Following remarks by Dr. Clarence G. Williams, special assistant to the president of MIT, who will preside, the Rev. Leroy Attles, pastor of St. Paul's African Methodist Episcopal Church, Cambridge, will give the invocation. Later in the program, the Rev. Attles will offer closing remarks and the

benediction. Dr. McNair was a member of St. Paul's. Members of the MIT Gospel Choir will sing at the service.

Speakers, listed in the program as "friends of Ronald E. McNair," include Dr. Paul E. Gray, president of MIT, who will represent the university at the service; Dr. Shirley A. Jackson, research physicist at AT&T Bell Laboratories, the first black woman to receive a PhD at MIT; Professor Michael S. Feld, director of the Spectroscopy Laboratory, who was Dr. McNair's PhD thesis adviser; Dr. S. James Gates, Department of Physics and Astronomy at the University of Maryland; Dr. William W. Quivers Jr., Physics Department, Wellesley College; Dr. John B. Turner, associate dean of the MIT Graduate School and assistant provost; Dr. Michael E. Fant, president of BAMIT, Black Alumni of MIT, and Gregory C. Chisolm, a graduate student in the Department of Mechanical Engineering. Drs. Jackson, Gates, Quivers and Fant and
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Bakalar hosts Calder exhibit

"Alexander Calder: Artist and Engineer" is the new exhibit in the Bakalar Sculpture Gallery in the List Visual Arts Center, continuing through April 13, 1986.

The exhibition has a strong double-connection to MIT. This noted sculptor originally was trained as an engineer, at Stevens Institute of Technology, and his monumental stabile, *The Big Sail*, is one of the most well known of all the modern sculptures on the MIT campus.

The Bakalar exhibition brings together works illustrating different kinetic systems he first investigated as a student and subsequently refined and applied in the series of

abstract, moving sculptures or "mobiles" which established his reputation.

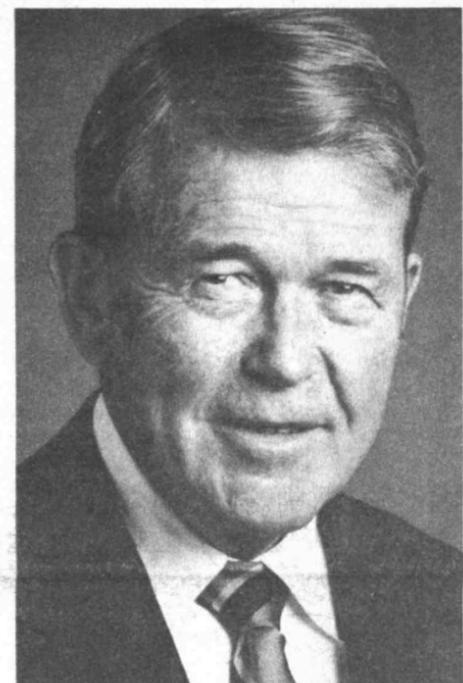
Calder's early constructions are dependent on small motors which activate individual elements in regular, predetermined patterns. Later works—floor, wall or ceiling-mounted—are wind-driven, responding to air currents generated by the passage of spectators or mere errant drafts.

Guest curator of the exhibition is Dr. Joan Marter, associate professor of art history at Rutgers University, an authority on 20th century sculpture with a particular interest in
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W.R. Hewlett to be speaker at graduation

William R. Hewlett, vice chairman of the board of Hewlett-Packard Co., will deliver the commencement address at MIT's 120th graduation exercises on Monday, June 2.

The identity of the commencement speaker was announced last week by President Paul E. Gray.



"I am delighted that Mr. Hewlett will be able to join us for this important occasion," Dr. Gray said.

Mr. Hewlett received the master's degree in electrical engineering from MIT in 1936. Three years later he and David Packard, an engineering classmate during their undergraduate days at Stanford University—Mr. Hewlett received the BA from Stanford in 1934 and the EE in 1939—formed Hewlett-Packard Co. Their first product was a resistance capacity audio oscillator based on an imaginative design developed by Mr. Hewlett when he was in graduate school here. Their first "plant" was a small garage in Palo Alto, Calif. The enterprise was initially capitalized with \$538.

Today, Hewlett-Packard is an international manufacturer of measurement and computation products and systems used in industry, business, engineering, science, health care and education. The company, still with headquarters in Palo Alto, employs 82,000 people worldwide and had sales in its 1984 fiscal year of \$6.04 billion.

Mr. Hewlett has been continuously active in the company's management with the exception of the years he served as an Army officer during World War II. He was on the staff of the Army's Chief Signal Officer and then headed the electronics section of the New Development Division of the War Department Special Staff.

In 1947 he was named vice president of the company. He became executive vice president in 1957, president in 1964 and chief executive officer in 1969. Under a previously announced plan for management succession, he resigned as president in 1977 and retired as chief executive officer in 1978. Until 1983 he was
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Laser Center cited

The International Society for Optical Engineering has presented its President's Award to the MIT Laser Research Center and praised its success in meeting research needs in the field of lasers. The center is part of the George R. Harrison Spectroscopy Laboratory.

The award, presented last month, recognizes the MIT center and two other laser centers for "the achievement of research quality of the highest caliber in projects aided by the centers during their first six years of operation." The other centers are at the University of Pennsylvania and in San Francisco where the University of California, Berkeley, and Stanford University operate a joint facility. The MIT center is notable, the award said, for the breadth of laser equipment and scientific support available to users.

INSTITUTE NOTICES

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

Announcements

Course VI-A Student Open House - Wed, Feb 12, 2:30-4pm, Rm 34-401. All student affair, informal. Meet current VI-A students; inside information on VI-A companies; learn about housing, transportation, locale, etc; help in deciding in which VI-A companies to interview. Refreshments served.

February Degree Candidates - Prepaid postcards enclosed with February Degree Notice must be returned. Please indicate whether diplomas are to be mailed, called for in person, or if attendance at Commencement is planned (Mon, June 2).

Graduate Students - Applications for advanced degrees in June 1986 must be returned to the Registrar's Office, Rm E19-335, no later than Fri, Feb 21. \$20 fee after this date.

Graduate Students - Graduate Student Council activities Committee now accepting requests for financial support of graduate student activities. Call GSC Office, x3-2195 for information. Final date for receipt of requests by the GSC is Tues, Feb 18.

Career Planning and Placement Company Recruitment Presentations* - General Dynamics, Feb 12, 5-7pm, Rm 4-153. First Investors Corporation, Feb 12, 6-8pm, Rm 4-149. RCA/Sharp Electronics, Feb 12, 7:30-9:30pm, Rm 1-132. TRW, Feb 19, 4-6pm, Rm 4-153. Mentor Graphics, Feb 19, 7-9pm, Rm 1-136. Tandem Computers, Feb 20, 6-8pm, Rm 1-132. Lincoln Lab (MIT), Feb 20, 7-9pm, Rm 4-153. ESL, Feb 20, 7-9pm, Rm 4-149. Varian Associates, Feb 23, 7-9pm, Rm 1-132. General Motors, Feb 24, 4-6pm, Rm 4-149. Recruit USA, Feb 25, 12-5pm, Student Ctr West Lounge. Hewlett-Packard, Feb 25, 5:30-7:30pm, Rm 34-101. Schlumberger Off-shore Services, Feb 26, 7-9pm, Rm 4-153. Rohn Corporation, Feb 26, 7-9pm, Rm 4-149. Hughes Aircraft, Feb 27, 7:30am-5:30pm, Ashdown House Dining Room. Intel Corporation, Feb 27, 8am-5pm, Lobby 13.

Students Interested in Study or Travel in Israel - Can obtain information, Wed, Feb 19, 10am-1pm, Lobby 10.

Children's Dental Health Month Bulletin Board - MIT Dental Service/Pediatric Clinic board in reception area of Pediatric Clinic, Medical Bldg first floor. The bulletin board expresses the role that diet, home care, fluoride, sealants and regular checkups have in prevention.

Serials in the MIT Libraries, 26th Ed - Microfiche listing published, three times a year, of approximately 22,000 titles includes information on holdings, dates, call numbers, and title changes. The 26th edition contains over 300 new titles and is published in two sections: 1)an alphabetical list (8 fiche) and 2)a keyword index (8 fiche). *Prepayment required.* Price: \$20; \$5/MIT staff and students. Send check payable to MIT to Office of the Director, Rm 14S-216.

Free Museum of Science Admission for MIT Students - With MIT student ID, provided by MIT chapter of Tau Beta Pi, the Engineering National Honor Fraternity. Also, reduced admission to special exhibits.

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

Rune - The magazine of arts and literature at MIT is now accepting submissions of prose, poetry and graphics for its 11th anniversary issue. Three copies of written submission may be sent to *Rune*, Rm 14E-310. Special arrangements for pick-up of graphics submissions may be made with Don (247-2740) or Olga (x5-6563 dorm). All work will be returned if requested. Deadline: Feb 23, 1986.

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

Nightline** - a student-run hotline open every evening of the term, 7pm-7am. If you need information about anything or you just want to chat, give us a call. We're here to listen. x3-7840.

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

Club Notes

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

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

Tool & Die - MIT's humor magazine** - meets every Weds, 7pm, Rm 50-309 (Walker). Everyone welcome.

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

MITLUG* - The greater Boston DEC user's group meeting, Wed, Feb 19, 1:45pm, Rm NW16-213. Questions, answers & discussion of DEC hardware, operating systems (except VMS) and site management (peripherals, services, vendors, etc).

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

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

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

MIT Go Club** - Meets M/Th, 5-7pm, Rm NE43 3rd flr Playroom. Play the ancient oriental game of skill. Knock to get in if the door is locked.

MIT Hobby Shop** - Complete supervised facilities for wood-working and metalworking, Rm W31-031, M-F, 10am-6pm; Wed, 10am-9pm. Fees: \$15/term students; \$25/term community. Info, x3-4343.

MIT Yoga Club* - Rejuvenate your mind and body with Kundalini Yoga, the science of awareness, M-T-W, 5:15pm, Burton Dining Hall. Beginners welcome. Th Seminar Class with Dr. Gurucharan Singh Khalsa, 5pm, Rm 24-624. Info: Fred Martin or Jeff Tollaksen, 247-0506 or x3-3157.

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

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

MIT Wu Tang Club* - teaches northern Chinese kung fu, Tues & Thurs, 8pm, Burton Dining Hall; Sat, 10am, Athletic Center. Beginners welcome. For info call Meilin Wong, x5-8713 dorm.

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

MIT Masters Swim Club** - Structured, coached workouts for graduate students and other members of the community who are not eligible for varsity swimming. Practices W/F, 8:30-10pm; Sun, 4-5:30pm. \$100/9 weeks starting Jan 22.

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

MIT Guild of Bell Ringers* - meets Mondays, 3:30-9pm, 2nd floor Lobby 7, for change ringing on handbells. We also ring the tower bells at Old North Church. Beginners are welcome. Contact Steve Costenoble, x3-3664 for more information.

Religious Activities

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

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

Tech Catholic Community* - Roman Catholic Masses: Sun, 9am, 12noon, 5pm (& 10pm, 2/16-3/16); Weekdays: T/Th: 5:05pm & Fri 12:05pm (except 2/18). Ash Wednesday, Feb 12: Masses at 12:05pm, 7:30pm & 10pm. Penitential Service: March 11, 7pm. All Services in MIT Chapel. Morning Prayer: M-F, 8:15am, Chapel Basement. Bible Study: Sun, 10:35am, Ashdown Hulsizer Rm & Tues, 8pm, Chaplaincy Library. Chaplaincy Office: x3-2981.

MIT Hillel Shabbat Services* - Feb 14: Conservative-Reform Services, 5:30pm, W2a (Hillel); Shabbat Dinner, 6:45pm, Rm 50-007 (Kosher Kitchen). Feb 21: Orthodox Services, 5:15pm, Rm 50-010; Conservative-Reform Services, 5:30pm, W2a; Shabbat dinner, 6:45pm, Rm 50-007. Dinner reservations due by Thurs at 5pm, \$6.50 prepaid with Validine or cash. **Special MIT Shabbat, Feb 28:** with visiting schools: Bowdoin College, Simmons College, Wellesley College and Brown University. \$16 tuition due Wed Feb 19.

Lutheran Ministry and Episcopal Ministry** - Weekly service of Holy Communion: Wed, 5:10pm, MIT Chapel. Supper following at 312 Memorial Drive. For further info, call x3-2325/2983.

Baptist Chapel* - Baptist Student Fellowship Services, Sun, 7pm, MIT Chapel.

MIT Islamic Society* - Daily prayers, Ashdown House (basement), 5 times a day. Call x5-9749 dorm, for schedule. Friday prayer, Ashdown House 12:30-1pm, Khutba starts at 12:30pm, congregation at 12:55pm.

Meditation and Discourse on the Bhagavad Gita* - Swami Sarvagatananda, MIT Vedanta Society/Ramakrishna Vedanta Society of Boston, meets Fridays through May 23, 5:15pm, MIT Chapel.

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

MIT Graduate Christian Fellowship* - Come meet other Christian faculty, staff and grad students, Tech Sq Prayer Meeting, Tues, 1:30-2pm, Rm NE43-368; weekly lunch gatherings, Weds, 11:55-12:55, Student Ctr Twenty Chimneys. For information contact Burt Kaliski, x3-5866 or Roz Wright, x3-8926. A fellowship group also meets Weds, 7:30am, Rm E51-307.

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

Campus Crusade for Christ** - Family time, 7:15pm, Fri, eves, Rm 37-252. Fellowship, scripture teaching, prayer, singing, refreshments & fun. Tues, prayer time, 7:30-9am, W20-441, Student Center. Call x5-9153 dorm.

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

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

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

Edgar Cayce Study Group* - Tuesdays, 6:30-9pm, Edgar Cayce's Search for God material will be used as the basis for group discussion & meditation. For info: Douglas McCarroll, 497-0819 12-9pm or Scott Greenwald, x3-7423.

Graduate Studies

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

Howard Heinz Endowment Office Research Grants on Latin American Issues. To interdisciplinary teams with at least one political scientist and/or economist. Also, one team member must be based at an institution located within the Commonwealth of Pennsylvania. Information and applications: Marty Muetzel, Howard Heinz Endowment, 301 Fifth Ave, Pittsburgh, Penn 15222, 412-391-5120. All applications must be submitted no later than February 14, 1986; awards announced by July 1, 1986.

Armenian General Benevolent Union (AGBU) Hirair & Anna Hovnanian Fellowships - two fellowships, each in the amount of \$3,000 given annually to assist Armenian-American students specializing in government, international affairs, or international law. Applicants must be graduate students with high academic standing. Written requests for application forms must be submitted to the Armenian General Benevolent Union, 585 Saddle River Rd, Saddle Brook, NJ 07662 (tel: 201-797-7600) by February 15. Decisions will be communicated to the applicants during July.

Other Opportunities

Summer Programs for Minority Students Interested in Health Professions - 6-10 week summer sessions offer room, board, stipend, and training for gaining entrance to medical school and to other health-related professional programs.

Baffled by Lotus? Here's help

Mystified by Lotus 1-2-3? For would-be users of business' most popular software comes sympathetic help in unraveling the sometimes elusive program.

Getting Started with Lotus: Creating Spreadsheets, Graphs and Charts, was recently published by the MIT Sea Grant Program developed out of Sea Grant Administrative Officer Larry McKinnon's experience with the spreadsheet software.

"I had trouble interpreting existing manuals, especially in creating graphs, writing formulas, and manipulating data," Mr. McKinnon said. "Especially graphs," he emphasized. The manual "represents hours of experiments and long conversations with Lotus support personnel."

Over a period of a year, he kept detailed notes on his problems and solutions, which he now finds invaluable in his work.

When Mr. McKinnon discovered that co-workers and other Lotus users were having similar problems applying the software, he decided to publish his notes.

The result is a set of clear, step-by-step instructions for creating spreadsheets, writing and using formulas in spreadsheets, and creating line graphs, bar graphs and pie charts using Lotus on an IBM PC XT hard disk system. Mr. McKinnon and Sea Grant editor Lynne Newman Lawson also describe how to sort data in a spreadsheet



and how to generate mailing labels from an address list.

Simple introductory exercises and plentiful examples enhanced with a straightforward graphic design make this manual easy to use for the newly enlisted, but the book also contains helpful hints for the more experienced veteran.

The 50-page manual is available for \$10 from the MIT Sea Grant Program, Rm E38-302. —Lynne Newman Lawson

Five win new graduate fellowships

Five MIT graduate students are among the first to be named National Graduate Fellows, Jeanne Richard, associate dean of the Graduate School, has announced.

Selected were: Brian A. Cromwell of Brookline and Stuart W. Elliott of New York City (economics); Laura Hastings of Cambridge (political science); Jay A. Lebed of Brookline (philosophy), and Anthony Levitas of Cambridge (political science).

Dean Richard noted that the total MIT grant is \$174,808 for the period of January 1 through June 30, 1988.

This marks the first year of funding for the National Graduate Fellows Program, with an appropriation of \$2.5 million. In total, 82 fellows were selected from 1,618 applicants

pursuing graduate studies in the arts, humanities and social sciences.

Fellows will receive stipends of up to \$10,000 per academic year based on financial need. In addition, grants of up to \$6,000 per academic year are provided for annual tuition and fees.

The program is designed to reward students who have demonstrated superior scholarship and ability in academic achievements and show exceptional promise in their chosen disciplines.

The National Graduate Fellowship Board, a presidentially appointed group of distinguished educators, oversees the program and determines the fields in which fellowships are to be awarded.

Deadlines begin mid-February. For further information, contact Preprofessional Advising, Rm 12-170, x3-4737.

International Opportunities

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

International Education Services in Tokyo, Japan seeks Americans with a degree and two or more years experience in advertising, public relations, engineering, business administration, pharmacology, linguistics and language who would like to teach English to Japanese adults for one or two years in Japan. No Japanese language requirement.

The Mitsui Bank, Ltd, in Tokyo is expanding its international and securities businesses. They seek new staff members who could make a contribution to this effort and are willing to hire foreign nationals. Proficiency in Japanese is required (reading, writing, understanding and speaking) and an initial two to three years of employment in Japan should be expected before being assigned to an overseas branch office.

Internships

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

NOTE: The Office of Career Services has added a new directory to their Career Library: *Getting Work Experience, the College Students' Directory of Summer Internship Programs that Lead to Careers.* It can be found in the Reference section of the Career Services Office.

Internships Offering a Stipend:

Air Products and Chemicals, Inc has announced their paid summer internship for students majoring in chemistry, chemical, mechanical, materials science engineering in all degree levels, and computer science students at Bachelor and Master's level. They also seek Bachelors in business administration and MBAs. Students should have completed their junior year but outstanding sophomores will be considered on an individual basis. Deadline to apply: March 1, but they prefer to receive them earlier.

The Ford Foundation Summer Internship Program. Twenty-five internships, with five located in their overseas offices in Lima, Mexico City, Cairo, Nairobi and Dhaka. Salary for NY based interns: \$1,600-2,000/mo; overseas interns receive \$1,000/mo plus housing. Deadline: March 7.

GTE Laboratories in Waltham, Mass is taking applications for their Industrial Undergraduate Research Program, (June 9-August 15). They are interested in upper division undergraduates in science, mathematics, and engineering. There will be a tour of the GTE Lab facilities on Feb 21. Application deadline: March 10.

State University of New York at Stony Brook Summer Institute in Policy Analysis and Public Management for Minority Students. The program is an intensive eight-week course of study in policy analysis, quantitative methods, computer applications, and communication skills designed to prepare students for graduate study in public policy analysis and management. They provide free housing, tuition, and books plus a stipend of \$1,000. All application materials must be received by March 31, but early application is strongly recommended.

Student Jobs

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

Clerical positions available; no experience necessary, will train. Hours: flexible; salary: \$4.50/hr. Contact Mark Johnson, Metropolitan Collection Bureau of Coolidge Corner, 1352 Beacon St, Brookline, MA 02146, 232-7820.

File clerk, with other office duties. Hours: 2 hours/day, 5 days/wk. Salary: \$5.25/hr. Contact Lester Kuhl, Productivity Improvement Associates, 100 Memorial Dr, 864-5555.

Monitor Company, a Cambridge management consulting firm, needs several students for part time research positions. The job includes library research, computer data entry, and telephone interviews. We are especially interested in sophomores and

juniors and have immediate openings. Hours: flexible. Salary: \$5/hr. Contact David Belluck or Mark Pocharski, Monitor Company, University Place, 124 Mt. Auburn St, Cambridge, MA 02138, 492-3640.

General assistance needed in a busy neurobiology laboratory. Hours: 5-15/wk, flexible. Pay: \$5.50/hr. Duties varied, and include: mounting thin tissue sections on microscope slides, cleaning glassware, preparing solutions, on micro help, etc. Patience, manual dexterity and ability to do delicate work are necessary. Prefer continuation into the summer with possibly extension of hours. Contact: Henry Hall, x3-5780, Rm E25-618.

UROP

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

Eloranta Summer Fellowship Program. Several \$4,000 research fellowships for MIT undergraduates will be awarded this spring for work to be done during the summer. Areas of study may be in any field: science, engineering, humanities. Travel is encouraged. Originality is rewarded. Deadline is March 31, 1986. Contact the UROP Office for more details.

Nuclear Engineering UROP Awards. Several awards are given to encourage research with faculty in the Nuclear Engineering Dept. Freshmen are encouraged to apply. Contact: Prof Ronald Ballinger, x3-5110, Rm 24-215 for more details.

Bank Acquisitions. Intelligent, mature, analytical, highly motivated, organized, practical UROP'er, knowledgeable about the "real world" and with excellent communication skills wanted. Must be familiar with personal computers or willing to learn how to use them. Projects include: competitive analysis of specific banks, research on the industry structure of banking in New England, investigation of industrial banking firms. Hours flexible, 10-20/wk. Contact Margaret Mubiru-Musoke, x3-5049.

Building a Computer Language for Geographic Information. Student needed to help build a Geographic Information System (GIS), a database manager for cartographic information (maps). Project has both conceptual and practical programming work, involving the design and building of a computer language which will allow for interaction with the GIS. All programming is in UNIX and C. You will have to read up about databases, GIS and AL PAY or credit. Contact: Prof David H. Marks, Dept of Civil Engineering, x3-1992, Rm 1-290 or Navin Chandra, x3-3880.

Fluid Dynamics in Animal Cell Culture. Student needed to conduct investigations into fluid dynamics as needed in order to optimize the design of large-scale culture vessels. Tasks include: learning cell-culture techniques, characterizing the rheological behavior of cell-culture media using a standard viscometer, and investigating the use of thickeners for the protection of fragile animal cells. Introductory laboratory and chemical engineering courses are required. Position open to sophomore levels and above, for spring and continuation into summer. Hours: 10-20 hours/wk at \$5.50/hr. Matt Croughan, x3-6433, Rm E17-324 or Prof Daniel Wang.

TECH TALK



February 12, 1986
Volume 30 Number 21

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Carroll Wilson Awards announced

For student work on societal problems

An international committee of 54 colleagues and friends of the late MIT Professor Carroll L. Wilson has established an endowment for awards in his honor to support research and study by MIT graduate and undergraduate students on important societal problems with international dimensions. The first award(s) will be announced in May. Application deadline is March 31.

Professor Wilson, a member of the MIT Class of 1932 and a member of the faculty from 1959 until his death in January 1983, was the first Mitsui Professor in Problems of Contemporary Technology. He spent much of his career seeking solutions to world-scale problems. The unique process he developed for making global assessments brought together industrial and government leaders from a dozen or more countries. His underlying goal was to improve relations between countries by strengthening their organizations and people through the management and application of scientific, engineering, economic and political analysis to programs of action.

Cochairmen of the Carroll L. Wilson Awards Committee are Professor Umberto Colombo, chairman of Italy's ENEA, the National Commission for Nuclear and Alternative Energy Sources; Dr. Saburo Okita, former foreign minister and currently chairman of the Institute for Domestic and International Policy Studies in Japan, and Professor Howard W. Johnson, honorary chairman of the MIT Corporation.

The executive director of the Carroll L. Wilson Awards Committee secretariat is Robert P. Greene ('55), assistant director for administration and finance of the MIT Media Laboratory. Other secretariat members are Riccardo Galli in Europe, Scott M. Spangler in North America and Kenichi Matsui in Japan.

Each spring a prize committee, drawn from the members of the Carroll L. Wilson Awards Committee and MIT, will evaluate proposals

and identify one or more promising young members of the MIT academic community to receive \$5,000 awards in Professor Wilson's memory. The awards will support important activities with international dimensions that are not easily funded through normal channels. They will finance, for example, self-designed unique programs of study, innovative research or projects, extra- or interdisciplinary study and research, or international experiences.

In addition, efforts will be made to connect the award recipients with former colleagues of Professor Wilson to stimulate the development of mentor relationships and to maintain and use the worldwide network.

Application deadline for the first award(s) is March 31. Application forms and additional information are available from June A. Ferracane, Rm. E15-405; Susan L. Kendall, Rm. 3-209, and Frank McGrory, Rm. E40-471.

The members of the 1986 Prize Committee are Sir William R. Hawthorne '39, chairman, former master, Churchill College, University of Cambridge, United Kingdom, and senior lecturer, Department of Aeronautics and Astronautics; John S. Glass '60, director of investor relations, Millipore Corp.; Mr. Johnson; Professor Samuel J. Keyser, associate provost, MIT; Dr. Okita, and Constantine B. Simonides '57, vice president and secretary of the MIT Corporation.

The awards committee plans to hold a Wilson Memorial Dinner in Cambridge each February. The prior year award recipients will attend and present a brief report on their activities. These reports will form the body of an annual report that will be circulated widely.

Mr. Johnson, for many years a close personal friend as well as a professional colleague of Professor Wilson's, said his work "influenced for the better both policy and research priorities in many countries over the last two decades, but perhaps (his) major contribution was the imaginative method he developed for tackling monumental problems."

Band to reprise works from tour

The MIT Concert Band will present its annual winter tour finale concert on Saturday, Feb. 22, at 8pm in Kresge Auditorium. The concert will feature the Boston premieres of Thomas McGah's *Black Sun* and John Bavicchi's Concerto for Clarinet and Wind Ensemble, with Sherman Friedland as guest soloist. Admission is free and the public is invited. (Tickets will be available in Lobby 10 from February 17 to February 21.)

The MIT Concert Band goes on its annual winter tour during the last week of the January Independent Activities Period. This year's tour took the band to Florida, with concerts at the Walt Disney World International Festival, the New College of the University of South Florida in Sarasota, and high schools in Gulfport, Titusville, Gainesville, and Brooksville. The Music Section provides support for the Band's annual tours. Additional support for this year's tour was provided by the Undergraduate Association Financial Board, the Office of the Dean of the School of Humanities and Social Science, President Paul Gray, the Council for the Arts, the Office of the Dean for Student Affairs, the Office of Admissions, and the MIT Educational Council.

Black Sun (1985) by Thomas McGah was commissioned by the Concert Band. The composer writes, "My composition *Black Sun* is not a tone-poem, nor an attempt to musically represent anybody. Rather, it is an unfolding

of moods (mostly somber) and colors (mostly dark)."

The title is drawn from Geoffrey Wolff's biography of Harry Crosby (*Black Sun: The Brief Transit and Violent Eclipse of Harry Crosby*), because of the similarity between the music already composed and the description of Harry Crosby's life.

Sherman Friedland will be the guest soloist for the Boston premiere of John Bavicchi's Concerto for Clarinet and Wind Ensemble, Op. 87. Mr. Friedland is professor of clarinet and director of the symphony orchestra at Concordia University in Montreal. He has performed widely throughout the United States and Canada, including appearances on the CBS television series *Camera Three*. The Clarinet Concerto was written for Mr. Friedland, who has performed Bavicchi's music extensively over the years. Mr. Friedland's regular performances of new music began more than 30 years ago when he was one of Concert Band Director John Corley's students at Brookline High School.

Mr. Friedland will be giving the New York premiere of Bavicchi's Sonata for Clarinet and Piano, Op. 57, in Carnegie Hall on March 6.

The band's two assistant conductors, Edward Ajhar '86 and Charles R. Marge '84, will conduct at this concert. Mr. Ajhar and Mr. Marge conducted many of the rehearsals for the winter tour while Mr. Corley was recovering from triple-bypass surgery. Mr. Ajhar will conduct Pedro Sanjuan's Canto Yoruba (1942), performed in honor of the 100th birthday of this Spanish composer. Mr. Marge will conduct Percy Grainger's Children's March (1918) and Ron Nelson's three-movement Medieval Suite (1982).

The program will conclude with a piece that was not performed during the tour, Robert Russell Bennett's Symphonic Songs for Band (1958).

The MIT Concert Band was founded in the fall of 1948 and is noted for its performance and commissioning of original compositions for winds. The Band's 80 musicians are students and recent alumni of MIT and Wellesley College, nearly all of whom are science and engineering majors. In 1953, the MIT Concert Band became one of the first ensembles to devote itself entirely to original works for band, in the belief that the wind band is an important means of musical expression and that its repertoire is deserving of performance.

Koto music tonight

An evening of unusual music, a performance of both modern and classical Japanese koto music by three musicians who recently appeared at Carnegie Hall in New York City, will be presented tonight (Wednesday, Feb. 12) at 7:30pm in Rm 10-250. The concert is sponsored by the Japan Society of Boston, the MIT-Japan Science and Technology Program and the Center for International Studies. Admission is \$5 for students and \$7.50 for the public.



Recently appointed to the Technology Review staff was Marc S. Miller, right, while Elizabeth Fullon, left, and Sandra Hackman have been promoted.

—Photo by Calvin Campbell

Technology Review names three

Three staff changes have been announced at Technology Review, the MIT Alumni Association's national magazine of technology and policy, by John I. Matill, editor:

—The appointment of Marc S. Miller '69 to be a Senior Editor.

—The promotion of Sandra Hackman, Senior Editor, who now has increasing responsibility for soliciting and editing major articles.

—The promotion of Elizabeth Fullon to Assistant Production Manager, with full-time duties interfacing between editors, art director, production manager and printer.

Dr. Miller, who received the SB degree in history and literature from MIT in 1969, also has MA and PhD degrees in American history from Boston University. He has been managing editor of Southern Exposure magazine and research director of the Institute for Southern Studies in Durham, N.C., since 1977. The magazine is a bimonthly journal of politics and culture published by the Institute. From

1975 to 1977, as assistant director of the MIT Oral History Program, he conducted research projects in the social history of science and technology.

Ms. Hackman, who received a BA degree in psychology from the University of Massachusetts in 1975, has been with Technology Review six years and a Senior Editor two years. Before coming to MIT, she was an editor of educational materials for the Education Development Center in Newton and other organizations.

Ms. Fullon, who received a BA degree in mass communication from the University of the Philippines in 1978, has been with Technology Review since 1981, serving as Assistant to the Editors and more recently as Production/Editorial Assistant. Previously she worked as an administrative secretary for the Jewish Vocational Service in Boston, as private secretary to the Philippine Ambassador to Israel and as a feature writer for the Women's Journal in Manila, the Philippines.

Five noted writers to visit this spring

By CHARLES HENRY FULLER
Writing Program Administrative Officer

The MIT Writing Program will bring five distinguished writers to the Institute during the spring semester, including 1978 Nobel Laureate Isaac Bashevis Singer. The others in the series include novelists Gloria Naylor and David Bradley, and poets Robert Creeley and Michael Harper.

These writers will participate in a variety of readings, seminars, and lectures, emphasizing their craft and development as artists.

Poet Michael Harper, Israel J. Kapstein Professor of English at Brown University, is the author of the highly praised collection *Healing Song for the Inner Ear*, which appeared this past fall, as well as *Images of Kin* (winner of the Poetry Society of America's Melville Cane Award), *Dear John*, *Dear Coltrane*, and others. A writer "passionately identified with the history of his people," The New York Times Book Review notes that "it is Harper's achievement to have projected his most difficult and complex insights and feelings [into his work]." He will offer a reading on Thursday, Feb. 20, at 8pm in the Student Center Mezzanine Lounge.

David Bradley is the author of two novels, *The Chaneyville Incident* (1983 PEN Faulkner Award and others) and *South Street*. His essays have appeared extensively in prominent magazines and journals, including *The American Book Review*, *Esquire*, and *New York Times Review*. A professor at Temple

Hillel presents Halle

Institute Professor Morris Halle will present the 1986 "Texts from Tech" lecture today (Wednesday, Feb. 12) 12:30-1:30pm in Rm 37-252. The series, sponsored by Hillel, features distinguished representatives of the MIT faculty who use the tools and methods characteristic of their particular academic discipline to interpret the Bible. Dr. Halle's talk is entitled "The Perspective of a Linguist: Syllable Counting Verse and Pattern Poetry in the Old Testament."

Professor Alan Guth, Department of Physics, inaugurated the "Texts from Tech" series in 1983 with some novel theories of cosmogony, departing in some detail from the traditional Big Bang theory. Other faculty members have presented the perspective of a toxicologist, an economist, and a mechanical engineer, among others. The first eight lectures are available on tape. For information contact Hillel, x3-2982.

University, he is an Executive Board member of Associated Writing Programs and lectures frequently on historical fiction. Bradley's seminar, "Creative Lying and the Myth of the Media: A Comparison of Fiction, History, and Journalism," will be presented on Tuesday, March 4, at 4pm in Rm E51-144.

Gloria Naylor is the author of two novels, *The Women of Brewster Place* (winner of the 1983 American Book Award for First Fiction) and *Linden Hills*, which Kirkus Reviews describes as "a haunting homiletic—with a cohesive strength of statement concerning black aspirations within a tarnished American dream." She recently adapted *The Women of Brewster Place* for the PBS series *American Playhouse*. Naylor will read from her work and lecture on her development as a young writer on Tuesday, March 11, at 7:30pm in Rm 10-250.

Poet Robert Creeley's books include *Hello, Later* and *Mirrors*. His new poetry collection, *Memory Gardens*, is scheduled for publication this May. William Carlos Williams found in Mr. Creeley's work "the subtlest feeling for the measure that I encounter anywhere except in the verses of Ezra Pound." Robert Creeley, the David Gray Professor of Poetry and Letters at the State University of New York at Buffalo, will offer a reading from his work and discuss poetry as an art form. This presentation will be on Thursday, April 10, at 8pm in the Mezzanine Lounge.

Isaac Bashevis Singer, 1978 Nobel Laureate, is considered by many to be the quintessential storyteller of this century. His works, representing more than 60 years of creative effort, include *The Collected Stories of Isaac Bashevis Singer*, *Old Love*, *The Pentinent* (1974 National Book Award), *Sosha*, *Love and Exile* (memoirs), among others. His short stories and novels, largely translated from the Yiddish by the author, are firmly rooted in Jewish tradition. "Singer explores the ambiguous tightrope of existence," states Irving Malin in the Introduction to his *Critical Views of I.B.S.* "He is a frightening, essential writer. He asks the right questions and makes us unsure of our usual answers." Mr. Singer will offer a public reading and lecture in Kresge Auditorium on April 28 at 8pm.

These readings and lectures are free to the public. For more information, call the Writing Program at x3-7894.

Rabinowitz Fellowships are established

Bernard Rabinowitz, an MIT graduate and president and chief executive officer of Atlantic Industries, has established graduate fellowships in technology and policy. They will support interdepartmental work linking science and engineering with the humanities and social sciences.

"We are most grateful to Mr. Rabinowitz," said Professor Richard de Neufville, chairman of the Technology and Policy Program, "for his strong personal support of our efforts. His help will make it possible for more students to make the extra effort that is necessary to combine both technical competence and a good understanding of humanities."

The Bernard Rabinowitz Fellowships will be awarded to graduate students doing research in technology and policy under the cooperative supervision of faculty in both a technical department and in a department of either the School of Humanities and Social Science or the Sloan School of Management.

Mr. Rabinowitz, who received the SB in chemical engineering in 1944, founded Atlantic Industries with his brother and has developed the company into a worldwide leader in the manufacture of dyestuffs and colorants. He has served as chairman of the New Jersey Health Coordinating Council and is a member of the advisory board of the Technology and Policy Program.

The Technology and Policy Program is a graduate interdepartmental program whose role is to educate young men and women for leadership on technical issues. Now in its tenth year, it enrolls about 30 new students each year. Its graduates work worldwide both for private companies and public agencies.

THE INSTITUTE CALENDAR

February 12-March 2

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.

MISS THE TECH TALK DEADLINE?

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

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

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

Seminars and Lectures

Wednesday, February 12

The Black Women in the Political Process* - Dr. Helen G. Edmonds, author, former visiting scholar in the MIT Writing Program, Black History Month at MIT Lecture, 12noon, Student Ctr Mezzanine Lounge. Bring your lunch; beverages provided.

The Perspective of a Linguist: Syllable Counting, Verse and Pattern Poetry in the Old Testament* - Prof Morris Halle, MIT Hillel Texts from Tech 1986 Seminar, 12:30-1:30pm, Rm 37-252.

Subduction Processes** - Dr. Selwyn Sacks, Dept of Terrestrial Magnetism, Carnegie Institution of Washington, Dept of Earth, Atmospheric, and Planetary Sciences Colloquium, 4-5pm, Rm 54-918.

Indiana Jones and the Temple of VLSI: How Film Sound is Made and What We are Doing About It* - Dr. James A. Moorer, vice president, The Droidworks, an affiliate of Lucasfilm, Ltd and Convergence Corporation, Arts and Media Technology Forum, 4:30pm, Bldg E15 Bartos Theatre.

Thursday, February 13

The Size of the Galaxy** - Prof James Moran, Harvard-Smithsonian Center for Astrophysics, Physics Colloquium, 4pm, Rm 10-250. Refreshments served, 3:30pm, Lobby of 10-250.

An MIT Education for the 21st Century** - Prof Samuel J. Keyser, associate provost, Educational Policies and Programs, School of Engineering Center for Technology, Policy and Industrial Development/Whitaker College Program in Health Policy Seminar, 4-5pm, Rm E25-401. Refreshments served, 3:30pm.

Design for Construction Automation* - Dr. Alexander H. Slocum, Dept of Civil Engineering, Construction Engineering and Management Seminar, 4pm, Rm 1-190.

Mergers in the Communications Industry* - Richard H. Churchill, T.A. Associates; Benjamin Compaine, Harvard Program on Information Resources Policy; Thomas Rogers, House Subcommittee on Telecommunications, Consumer Protection and Finance, MIT Communications Forum Seminar, 4-6pm, Bartos Theatre, Rm E15-070.

They Came Before Columbus* - Dr. Ivan Van Sertima, Prof of African Studies, Black History Month at MIT Lecture, 7:30pm, Student Ctr Mezzanine Lounge.

Friday, February 14

The US Air Force and Technology Innovation* - Col. Robert Haffa, chief, Long-Range Planning Division, Headquarters, USAF, MIT Defense and Arms Control Studies Program Seminar, 11am-12:30pm, Rm E38-615.

A Methodology and Architecture for Chemical Plant Fault Diagnosis** - Bernard L. Palowitch, Jr, Chemical Engineering Seminar, 2pm, Rm 66-110.

Viscoelastic Flow Through an Axisymmetric Sudden Contraction** - Susan Muller, Chemical Engineering Seminar, 3pm, Rm 66-110.

Congressional Perspective on the Magnetic Fusion Budget** - Jack Dugan, staff director, Committee on Science and Technology, House Subcommittee on Energy Research and Production, Plasma Fusion Center Seminar, 4pm, Rm NW17-218.

Data Assimilation, Dynamical Forecasting, and Mesoscale Ocean Dynamics** - Dr. Alan Robinson, Center for Earth and Planetary Physics, Harvard University, Center for Meteorology and Physical Oceanography Seminar, 4pm, Rm 54-915.

Tuesday, February 18

Interface Phenomena in Xerography: Particle Charging and Adhesion* - Dr. Daniel Hays, Xerox Corporation, Laboratory for Electromagnetic and Electronic Systems Seminar, 4pm, Rm 34-401A. Coffee served, 3:45pm.

Free Enterprise** - Ray Shamie, businessman, MIT Students for Individual Freedom Seminar, 8pm, Rm 4-270.

Wednesday, February 19

Mediating Science-Intensive Policy Disputes** - Prof Lawrence Susskind, Dept of Urban Studies and Planning, School of Engineering Center for Technology, Policy and Industrial Development/Whitaker College Program in Health Policy Seminar, 4-5pm, Rm E25-401. Refreshments served, 3:30pm.

Analysis of Mammalian Tumor Vascularization in the Development of a Therapy to Prevent Metastasis** - Anthony D'Amico, PhD candidate, Nuclear Engineering Dept, Nuclear Engineering RST Seminar, 4pm, Rm 24-121. Refreshments served, 3:45pm.

Chemical Geodynamics and a Marble Cake Mantle** - Prof Donald Turcotte, Dept of Geological Sciences, Cornell University, Dept of Earth, Atmospheric, and Planetary Sciences Colloquium, 4-5pm, Rm 54-918.

The Black Woman: Revisions of a Distorted Image* - Helen Boulware Moore, PhD, psychologist and director, Supportive Instructional Services, Simmons College, MIT Women's Studies Freedom, Fiction and Family: Black Women Today Lecture, part of MIT Black History Month '86, 7:30pm, Rm 9-150.

Thursday, February 20

Localized Inflation, Black Holes and Child Universes** - Prof Alan Guth, Physics Colloquium, 4pm, Rm 10-250. Refreshments served, 3:30pm, Rm 10-250 Lobby.

Integrating Optical Storage: Videodisc, CD and CD-ROM* - Eric Brown, LaserData, Inc; James DeVries, Laser-Video, Inc; Brian Croxon, Newport Systems, MIT Communications Forum Seminar, 4-6pm, Bartos Theatre, Rm E15-070.



THE VERMEER QUARTET, one of the country's finest string ensembles, will perform in Kresge Friday, Feb. 21, at 8:30pm. The program will include Mozart's Quartet No. 4, K. 458, *The Hunt*, Berg's Lyric Suite and Dvorak's Quartet Op. 34. Originally formed at the Marlborough Music Festival in Vermont in 1970, the quartet is composed of Shmuel Ashkenasi and Pierre Menard, violins; Richard Young, viola, and Marc Johnson, cello. The quartet members are artists-in-residence at Northern Illinois University, Dekalb. The concert is open to the public, free of charge.

Friday, February 21

The Enchanged Motion of Atoms in Silicon** - Yaneer Bar Yam, Center for Materials Science and Engineering Colloquium, 12:15pm, Rm 9-150. Lunch provided, 12noon.

A Model of Hindered Transport of Macromolecules in Microporous Membranes** - Marc G. Davidson, Chemical Engineering Seminar, 2pm, Rm 66-110.

Optimal Identification of Tubular Reaction Profiles and Catalyst Activities** - Prof W. Fred Ramirez, Dept of Chemical Engineering, University of Colorado, Chemical Engineering Seminar, 3pm, Rm 66-110.

Plasma Investigations on Space Station* - Dr. Bill Roberts, Marshall Space Flight Center, NASA, Plasma Fusion Center Seminar, 4pm, Rm NW17-218.

Instability and Large-Amplitude Meandering of a Barotropic Jet** - Prof Glenn Flierl and Dr. Steve Meacham, MIT, Center for Meteorology and Physical Oceanography Seminar, 4pm, Rm 54-915.

Solving the Sorites Paradox* - Prof Crispin Wright, Princeton/St. Andrews, Dept of Philosophy Seminar, 4pm, Rm 37-212.

NSBE Banquet Keynote Address* - Dr. Lincoln Hawkins, chemical engineer, National Society of Black Engineers Banquet, 6:30pm, Student Ctr Mezzanine Lounge. Free/NSBE members; \$3/all others.

Monday, February 24

Women and Children in Poverty** - Prof Teresa Amott, economics, Wellesley College; member, Economic Literacy Project for Women, Women's Forum Program, 12noon, Rm 34-340.

Ultra-High-Speed Electronics* - Prof Clifton G. Fonstad, MIT, Electrical Engineering and Computer Science Colloquium, 4pm, Rm 34-101. Refreshments served, 3:30pm.

A Framework for Evaluating the Risks Posed by the Release of Microorganisms into the Environment** - Dr. Harlee Strauss, Center for Technical, Policy and Industrial Development, Dept of Civil Engineering Division of Water Resources and Environmental Engineering Seminar, 4pm, Rm 48-316.

A Molecular Approach to Learning by Selection of Synapses** - Prof Jean-Pierre Changeaux, College of France and the Institut Pasteur Molecular Neurobiology, Paris, France, Whitaker College of Health Sciences, Technology, and Management Distinguished Lecture in the Brain Sciences, 4:30-6pm, Rm 10-250.

Medical Technology and Increasing Inequity* - Dr. Victor Sidel, Montefiore Medical Center, Albert Einstein College of Medicine, NY, The Technology and Culture Seminar at MIT, 4:30pm, Rm 9-150. Informal supper and discussion to follow.

Tuesday, February 25

The Changing Political Culture of Israel* - Prof Gadi Wolfsfeld, visiting scholar, Political Science Dept, Center for International Studies Seminar, 12:15-2pm, Rm E38-615.

Technology and Policy Aspects of Hazardous Waste Management** - Prof David Marks, Dept of Civil Engineering, School of Engineering Center for Technology, Policy and Industrial Development/Whitaker College Program in Health Policy Seminar, 4-5pm, Rm 4-149. Refreshments served, 3:30pm.

A 4MBIT dRAM with Cross-Point Trench-Transistor Cell** - Ashwin Shah, Texas Instruments, Inc, VLSI Seminar, 4pm, Rm 34-101. Refreshments served, 3:30pm.

Trends in Supercomputing* - Kenneth G. Wilson, James A. Weeks Professor of Physical Science, Cornell University, Laboratory for Information and Decision Systems Colloquium, 4pm, Rm 9-150. Reception, 3:15pm, Rm 9-150 Lobby.

Wednesday, February 26

Cenozoic Stratigraphic Architecture of the Oregon-Washington Cascade Range: A Sedimentologist's Perspective** - Gary Smith, Dept of Geological Sciences, University of Washington, Dept of Earth, Atmospheric, and Planetary Sciences Colloquium, 4-5pm, Rm 54-918.

Thursday, February 27

The Cosmological Constant** - Prof Laurence Abbott, Brandeis University, Physics Colloquium, 4pm, Rm 10-250. Refreshments served, 3:30pm, Rm 10-250 Lobby.

What is an Intelligent Building?* - Norman Kurtz, principal, Flack & Kurtz, consulting engineers, Construction Engineering and Management Seminar, 4pm, Rm 1-190.

The American Workplace in the Information Age* - Vary Coates, Office of Technology Assessment; Harley Shaiken, University of California-San Diego, MIT Communications Forum Seminar, 4-6pm, Bartos Theatre, Rm E15-070.

Women and Contemporary Islam: Some Recent Perspectives* - Prof Afaf Lutfi al-Sayid-Marsot, Modern Near Eastern History, UCLA, Bustani Middle East Seminar, 4:30pm, Rm E38-615. Prof Philip Khoury, history faculty, will chair.

Friday, February 28

High Density Suspension Culture of Mammalian Cells Using Gravity Sedimentation Cell Recycle** - John G. Aunins, Chemical Engineering Seminar, 2pm, Rm 66-110.

Theory of Thermodynamic Properties and Phase Separation of Micellar Solutions** - Dr. Daniel Blankshtein, MIT Dept of Physics and Ctr for Materials Science and Engineering, Chemical Engineering Seminar, 3pm, Rm 66-110.

Trapping and Acceleration of an Electron Beam by Two Counterpropagating Laser Beams* - Prof A. Gover, National Synchrotron Light Source, Brookhaven National Lab, and Tel Aviv University, Plasma Fusion Center Seminar, 4pm, Rm NW17-218.

Films

What are Pina Bausch and Her Dancers Doing in Wuppertal?* - Documentary by Klaus Wildenhahn, award-winning German filmmaker, MIT Film-Video Section/Goethe Institute/Harvard Film Archive screening, Feb 12, 8pm, Harvard Carpenter Ctr for the Visual Arts. Mr. Wildenhahn will be present. Admission: \$3.

A Film for Bossak and Leacock* - Documentary by Klaus Wildenhahn, award-winning German filmmaker, MIT Film-Video Section/Goethe Institute/Harvard Film Archive screening, Feb 13, 7:30pm, E15 Bartos Theatre. Mr. Wildenhahn will be present. Free.

Yorkshire: Parts 1 and 2* - Documentary by Klaus Wildenhahn, award-winning German filmmaker, MIT Film-Video Section/Goethe Institute/Harvard Film Archive screening, Feb 14, 7:30pm, Rm E15-054B. Mr. Wildenhahn will be present. Free.

Community Meetings

Alcoholics Anonymous (AA)** - Meetings every Tues, 12-1pm, Rm E23-364. For info call Ann, x3-4911.

Al-Anon** - Meetings every Fri, noon-1pm, Health Education Conference Rm E23-297. The only requirement for membership is that there be a problem of alcoholism in a relative or friend. Call Ann, x3-4911.

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

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

Overeaters Anonymous* - Meetings every Mon, 12-1pm, Rm E23-297. This is not a lunch time meeting, so please do not bring any food. For info call Judy, x3-2481.

MIT Chapter of the American Association of Retired Persons, Inc*** - Luncheon meeting, Tues, Feb 25, 12noon, Student Ctr Mezzanine Lounge. Mr & Mrs Lawrence Beckley of Winchester will give a "bird's eye view" of one of their hobbies: wood carving and hand painting of birds. Price: \$5/pp. Please reserve by Feb 19. Checks payable to MIT Cambridge Chapter #2893, AARP mailed to Rm 20A-023.

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

Commodore Users Group** - meets monthly at noon time. For more info, call Gil, x8-3186 Draper.

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

Wives' Group - Morning Group: Feb 12**, Computer Museum - info: Hilary Langley, 641-4251; **Feb 19**, The Peabody Museum at Harvard - info: Hyeyon Kim, 227-1526. Meet at 9:15am, Eastgate. Children welcome. **Afternoon Group: Feb 12**, American Writing Today - Prof John Hildebidle, MIT literature faculty; **Feb 19**, Watching Television, Understanding America - Prof Arthur Kaledin, associate prof, history, MIT. All meetings 3-5pm, Student Ctr Rm 491. Babysitting provided in Student Ctr Rm 407.

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

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

Alumni Activities

Will Mechanical Computer-Aided Engineering Revolutionize Product Design?* - Philippe Villers, president, Cognition Inc, MIT Club of Boston Luncheon and Talk, Feb 26, 11:45am, Hillcrest Restaurant, Waltham. Cost: \$10/club members & guests; \$12/non-members. Reservations: call x3-2000 up to 10am, Feb 26.

MIT Activities Committee

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

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

Cinderella. Sat, Feb 22, 2pm, New England Life Hall. The fairy godmother and pumpkin-turned coach brought to life in this lively Boston Children's Theatre production. Tickets: \$4.25 (reg \$5), available in Rm 20A-023.

Rap Master Ronnie. Thurs, Feb 27, 8pm, Next Move Theatre. The master satirist, Garry Trudeau, immerses us into playful-but-thought-provoking-satire with this musical revue. Tickets: \$18 (reg \$19.50) available in Rm 20A-023.

Flower Show. Sat-Sun, March 8-16, Bayside Expo Center. More than 3 1/2 acres of beautifully landscaped gardens to brighten up these icy days. Tickets: \$5/adults (reg \$6), and \$1/children ages 6-12 (reg \$2), available in Rm 20A-023.

Preservation Hall Jazz Band. Sun, March 16, 3pm, Symphony Hall. Don't miss an afternoon of good old-fashioned foot-stompin', hand-clappin' jazz. Tickets: \$17 (reg \$18.50), available in Rm 20A-023.

L.L. Bean Overnighter in Freeport Maine. Fri-Sat, March 21-22. Freeport, home of L.L. Bean and 72 more unique stores, restaurants, and factory outlets - including Corning, Dansk, Hathaway, Carters, Cannon, White Stag, Anne Klein, Ralph Lauren, London Fog - and much more. Overnight accommodations at the Freeport Inn (dinner - at the Inn or Muddy Rudder, and breakfast included), with continuous shuttle service from the Inn to the Muddy Rudder & Freeport. Bus leaves West Garage, Fri, March 21, 3pm; returns Sat, March 22, 5pm. Only \$46/pp/dbl occupancy only. Reservation can be made in Rm 20A-023.

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

Museum of Science Tickets. Available for only \$1. Pay another \$1 at the door, for a total savings of \$3/pp/adult; \$1/pp/child (reg \$5/pp/adult; \$3/pp/child).

City Books are coming. Look for them in mid-February. Only \$75 each.

Ski-Key Books. Containing valuable discount lift ticket coupons for the greater New England area are here! Only \$9 ea.

New! The Greater Boston '86 Books are here! 2-volume, 820-page discount coupon book offers discounts on fine and casual dining, theatre, comedy shows, opera, ballet, museums, hotels, car washes, cleaners, and more... for the greater Boston area and beyond (inc areas in the Metro West, South Shore, North Shore & north of Boston). A limited supply now available for only \$20 ea (reg \$30 ea).

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

Social Activities

Live Music Coffeehouse** - MIT Hillel Graduate Students coffeehouse, Sat, March 1, 8-11pm, Student Ctr Mezzanine Lounge. Classical, jazz, pop and folk music, \$1 cover; free refreshments.

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

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

Movies

American Pictures* - Black History Month at MIT multimedia experience on the American underclass, Feb 11, 5:30pm, Rm 26-100. Refreshments served.

The Third Man** - LSC Classic Movie, Feb 14, 7:30pm, Rm 10-250. \$1/MIT-Wellesley ID.

Desperately Seeking Susan** - LSC Movie, Feb 14, 7&10, Kresge Auditorium. \$1/MIT-Wellesley ID.

Risky Business** - LSC Movie, Feb 15, 7&9:30, Rm 26-100. \$1/MIT-Wellesley ID.

Pinocchio** - LSC Movie, Feb 16, 3:30 & 9:30pm, Rm 26-100. \$1/MIT-Wellesley ID.

Whiskey Galore** - LSC Classic Movie, Feb 21, 7:30pm, Rm 10-250. \$1/MIT-Wellesley ID.

Monty Python and the Holy Grail** - LSC Movie, Feb 21, 7&9:30, Rm 26-100. \$1/MIT-Wellesley ID.

1984** - LSC Movie, Feb 22, 7&9:30, Rm 26-100. \$1/MIT-Wellesley ID.

The Sting** - LSC Movie, Feb 23, 6:30&9:30, Rm 26-100. \$1/MIT-Wellesley ID.

M** - LSC Classic Movie, Feb 28, 7:30pm, Rm 10-250. \$1/MIT-Wellesley ID.

A Soldier's Story** - LSC Movie, Feb 28, 7&10, Rm 26-100. \$1/MIT-Wellesley ID.

Moving in Boston: The Black Experience* - Black History Month at MIT/Museum of Afro-American History African Meeting House movie and discussion with the museum curator, Feb 27, 3:30-5:30pm, Student Ctr Mezzanine Lounge. Refreshments served.

The Breakfast Club** - LSC Movie, March 1, 7&9:30, Rm 26-100. \$1/MIT-Wellesley ID.

The Deer Hunter** - LSC Movie, March 2, 7pm, Kresge Auditorium. \$1/MIT-Wellesley ID.

MIT Arts in the News

A Sampler of Press Clippings
Compiled by the Council for the Arts at M.I.T.

February 1986

Esquire
THE ESQUIRE
1984 Register
Man At His Best

The Best of the New Generation

Men and Women Under Forty Who Are Changing America

Arts & Letters

1984 Register

Sound artist

Christopher Janney Cambridge, Massachusetts
Born March 14, 1950

Using electronic wizardry, Christopher Janney experiments with the relationship of sound and movement. His piece *Soundstair* makes use of a series of electronic sensors placed along the edge of any existing stairway. The sensors activate progressive musical notes, so when a dancer moves up and down the stairs, it sounds as if he is walking on the keys of a musical instrument. His *Tone Zone* uses a synthesizer, a video camera, and an electronic sensing device rigged up so that whenever the dancer moves, the synthesizer lets out a sound that reflects the speed and location of the movement. The dancer thus creates his own musical patterns by choosing the moves in the dance. Janney received a B.A. from Princeton in 1973 in visual arts and architecture and in 1978 was one of the first students to receive an M.A. in art from MIT. His work has been exhibited at the Boston Institute of Contemporary Art, at New York's Symphony Space as part of John Cage's seventieth-birthday celebration, and at other locations in the U.S. and Europe.

THE WALL STREET JOURNAL.

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WEDNESDAY, SEPTEMBER 19, 1984

Computers Take Center Stage

By HOLLY HILL

The playwrights sit at their home computers, one in New York, the other in London. The New Yorker is writing a passage and hearing it played back in diverse human voices available from the computer's speech-generating capacity. The Londoner is toying with different versions of a scene. Variations in movements are shown by the colored, simulated human figures on the screen for immediate comparison and evaluation. Simply by pointing at the computer, the dramatist can dictate changes in characters' physical attributes. By calling one another via computer, the playwrights can collaborate across the ocean.

Although this scenario is at least one and perhaps several decades away, the betrothal of computer technology and the performing arts was proclaimed recently in Waterford, Conn., by the Media Arts Program of the Eugene O'Neill Theater Center. On the occasion of its 20th anniversary, the O'Neill was looking to the future while celebrating its past.

"This undertaking is part of the second generation of the O'Neill Center," said Ian Calderon, director of the Media Arts Program. "We want to position the artist and the creative technician as a collaborative working unit to find new alternatives in the working-process of the performing arts."

Massachusetts Institute of Technology research associate and award-winning playwright Marvin Denikoff, a Media Arts Program guest at the O'Neill, explained: "We are talking about the use of computers for everyone involved in the performing arts—writers, directors, designers, and even producers."

Mr. Denikoff, who conducted a series of seminars at the center, advised his listeners, "Read 'computer' as expansively as possible in terms not merely of word processing but of graphics capability, language understanding, computation, and networking around the country and throughout the world."

The O'Neill and MIT are collaborating on a "Theater and Computers" program (also dubbed "Computers and Entertainment") conceived by Nicholas Negroponte, director of MIT's Media Laboratory. With the enthusiastic support of George White, the O'Neill's founder and president, the program was developed by O'Neill Media Arts directors Calderon and Del Tenney. This month MIT is scheduled to open its new lab, offering master's and Ph.D. degrees in media technology, in an I.M. Pei building that will include two theaters.

Smaller lab centers will be created at the O'Neill's quarters in Connecticut and Manhattan, where playwrights, screen and television writers, and eventually others, can be trained in the use of increasingly versatile computers. "This is a long-term research effort in which we may experiment with 50 brilliant ideas and find one or two which will make major qualitative differences to the development of performing arts," Mr. Denikoff said. "As we go along we will milk off successful experiments for immediate use."

"The ideas I'm talking about are evolutionary," Mr. Denikoff warned his audiences. "This is just the beginning. There are several philosophical goals of the program in addition to the qualitative improvement of the product through technology. Another aim is cost reduction. Right now, for example, we can generate a graphic image of a set in the lab. Imagine being able to try out sets, costumes and everything else before even hiring a company of artists and technicians."

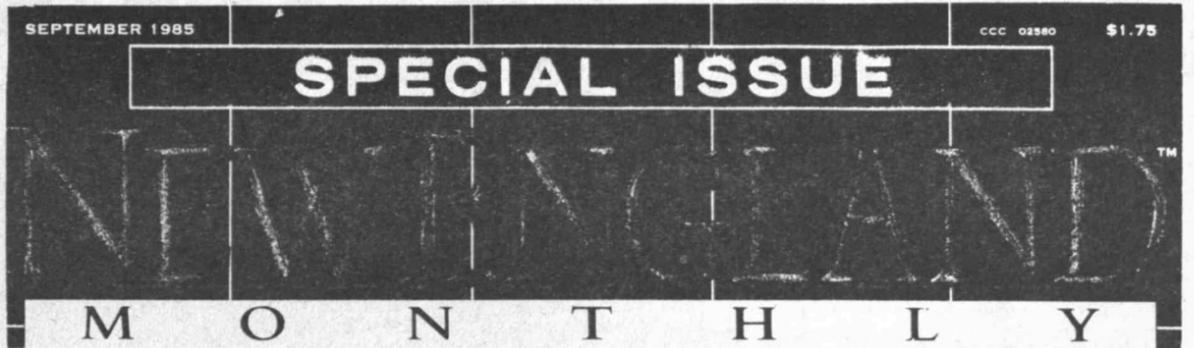
"The computer will also be able to do a cost model of potential expenses and savings before choices are made and anything is built. Here we are talking about a real possibility of cost cutting which would be a tremendous boon to both commercial and nonprofit arts. We also foresee computers offering such support services as libraries and secretarial help, as being partners in the development of scripts, as facilitating collaboration with colleagues."

"This is all great, but the big question is: Can individuals afford it? We must get to the point where advanced computers are both affordable and reliable or the real computer revolution will never happen in any field. Our aim is enabling people to have portable home computers which can hook up to a network as wide as an individual needs and desires."

"When discussing computers with artists," Mr. Denikoff remarked with a chuckle, "you often get a reaction of rejection and fear. This is born of a genuine concern that the humanities and computer science are a bad mix, and a real fear of learning to use machines. The performing arts have long considered that they had a monopoly on eccentrics, but you haven't lived until you've seen a lab full of long-haired, strangely dressed scientists still working on a problem at 4 a.m."

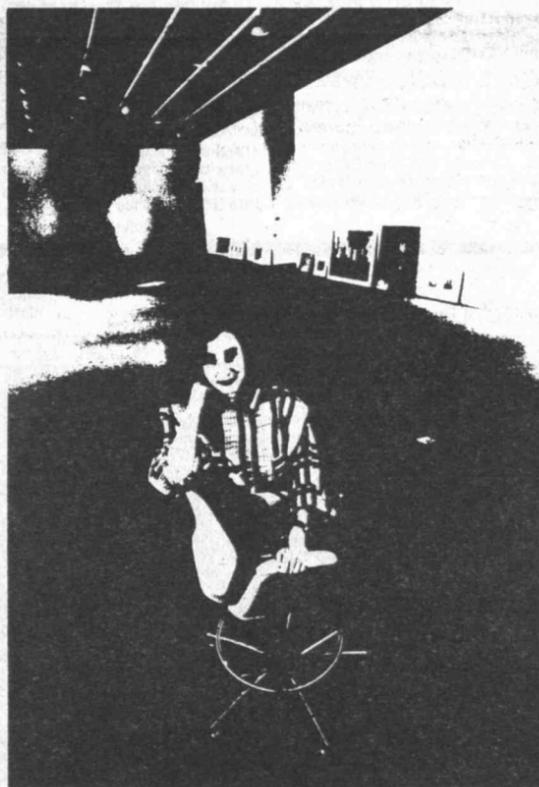
"... We at MIT see 'Computers and Entertainment' as a collaboration between communities of equals."

Ms. Hill writes about theater.



NEW ENGLAND
MONTHLY

LOCAL HEROES

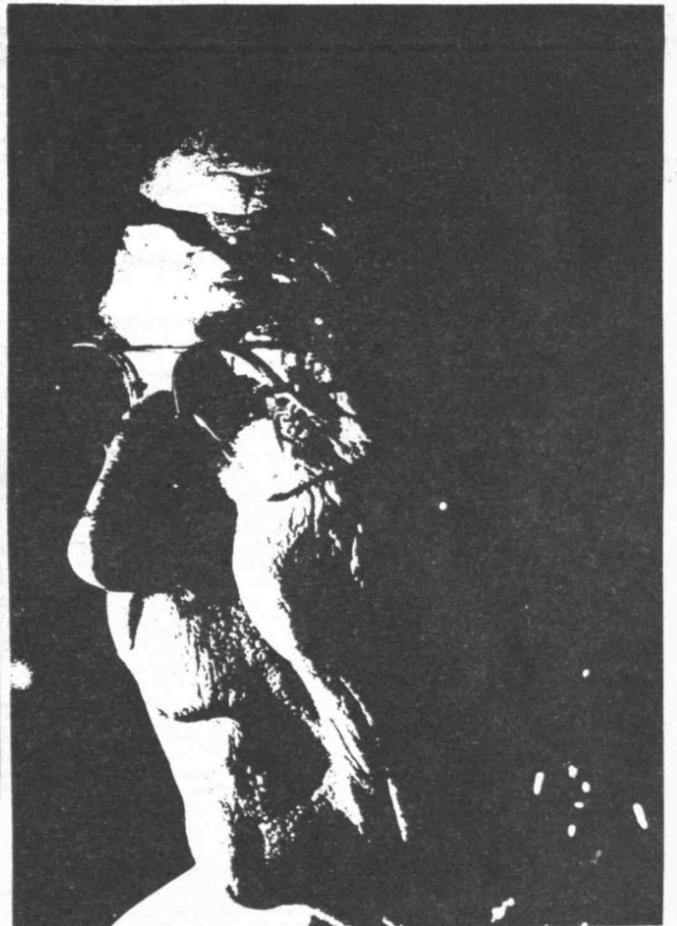


Kathy Halbreich Museum director, 36, Concord, Massachusetts. Her exhibits at MIT's new Albert and Vera List Visual Arts Center reflect some of the most provocative thinking anywhere about art and its relationship to society.

WRITING RECENTLY in *The New York Times*, art critic John Russell praised "the radical energies" of Kathy Halbreich, who has managed to rise to a level of great influence in the art world without having gone through what some call "the curatorial mafia" — without, in other words, collecting degrees in art history or training in other major museums. In fact, Halbreich (who arrived at MIT in 1976 as a part-time fund-raiser), doesn't like to think of the List center as a museum at all. "Museums are about a firmer set of values," she says. "They purport to give answers. I'm trying to raise questions." This spring, for example, the center's artist-in-residence (medical doctor Tom Kovachevich) "performed" an exhibition that demonstrated how artistic discovery resembles a diagnosis.

A visitor to the List center walks along a knife blade between art and technology; even the uninitiated can feel the edge. "Things are going on at this university that can lengthen or shorten our lives," says Halbreich. "This gallery makes MIT look at itself. Art has that power; it is our mirror. It can help us understand."

PHOTOGRAPH BY RICHARD HOWARD



Harold Edgerton Inventor, 82, Cambridge, Massachusetts. Best known for inventing the strobe light, he has received the National Medal of Science and scores of other awards for a lifetime of creative science in fields as varied as visual art and national defense.

DOC EDGERTON has captured a bullet in flight and stilled a hummingbird's wings. He has helped reveal the fury and beauty of particles too small, or events too fast, for human perception. He has joined Jacques Cousteau in a prolonged search for the Loch Ness monster. He has invented scores of commercial and scientific devices and founded a design and manufacturing firm, EG&G, that is now a Fortune 500 company. So why shouldn't we believe him when he tells us his latest sonar device has discovered the ship sailed by Ulysses, sunken deep in the Mediterranean Sea? "You know," he says, pointing to a blurry spot on a sonar photograph, "Ulysses only returned for a day and then set out to sea again because he couldn't stand to be around his wife." We scribble dutifully, then pause. It's a joke, of course.

Edgerton's fabulous stroboscopic photographs — of a bullet passing through an apple, of a milk drop exploding into a crown of perfectly symmetrical droplets — have graced the dormitory walls of his adoring students for twenty years. And yet in his own office at MIT those famous shots share wall space with an almost hokey portrait of his two sons taken when they were young. Maintaining a sense of wonder in the face of age and cynicism, says Edgerton, is a matter of learning "not to be infected by other people."

PHOTOGRAPH BY JOHN GOODMAN

THE NEW YORK TIMES, SUNDAY, APRIL 28, 1985

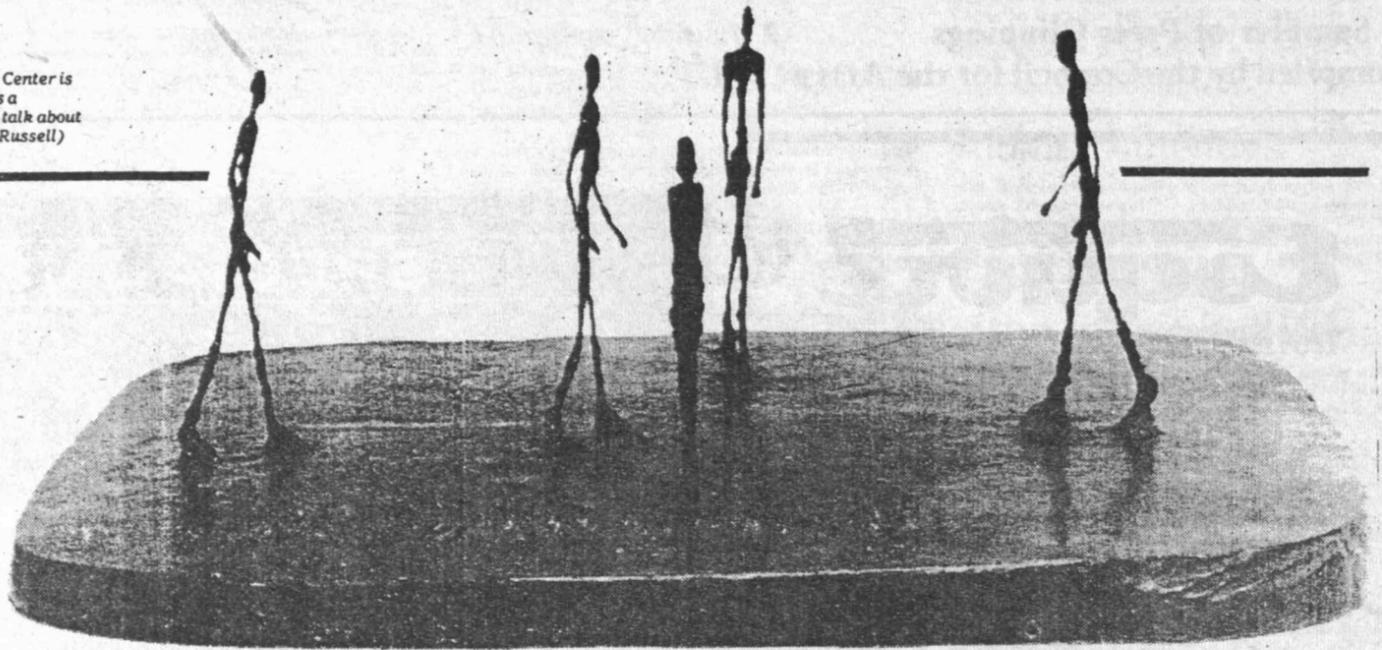


"The point of the Center is to give the students a language in which to talk about their feelings." (John Russell)

ART VIEW

JOHN RUSSELL

Art Breathes Freely at M.I.T.'s New Center

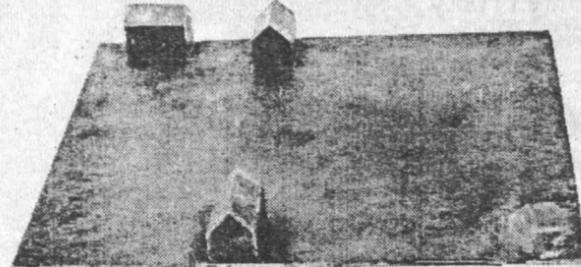


A first sight of the new Albert and Vera List Visual Arts Center in the Massachusetts Institute of Technology aroused memories of a poignant but nonetheless blissful sort in this particular visitor. It should, however, be said at once that the new Center is a great addition to M.I.T., and an addition of a new kind. Designed by I. M. Pei & Partners, it includes contributions by Kenneth Noland, Scott Burton and Richard Fleischner that are not so much independent works of art as an integral participation in a joint endeavor. The List Center is dignified at this moment, moreover, by examples of contemporary art that have been chosen with the kind of commitment that comes about when one person, and not a panel or committee, does the choosing. Though not yet quite complete — Fleischner's landscaped sculpture has to proceed at nature's own pace — the Center is already a very pleasant place in which to see both major and minor works of art, and in which to tell one from the other.

By the 1960's, public art at M.I.T. was getting to be a pioneering activity, and by 1982 a booklet came out in which four walking tours were mapped and flagged, with particular attention to sculptures by Picasso, Tony Smith, Louise Nevelson, Henry Moore, Alexander Calder, Ellsworth Kelly, Michael Heizer, Isaac Witkin and others. Concurrently, the courtship of art and science was conducted above all in the Center for Advanced Visual Studies that was founded in 1965 by Gyorgy Kepes.

It is nothing against M.I.T. that some of these activities have already dated. Trial and error are as fundamental to art as they are to science. The interest of the Albert and Vera List Visual Arts Center lies in the fact that, although it epitomizes M.I.T.'s ambition to get the arts to come together, it is devoted primarily to works of art in which technology has played no part. We are not obliged, in other words, to stand and stare at a lot of goofy machines and wait for something significant to come of it. Each of the works from the List collection that make up the inaugural show was made by one person, with one pair of hands, working alone. Even Robert Rauschenberg, who in the 1960's gave so much of his time and his generosity to the organization known as Experiments in Art and Technology, is represented by an easel painting called "Summer Rental" (1960) that neither hums, talks, moves, nor waits for us to activate it.

Though dominated by Jasper Johns's "Diver" (1962), one of the most complex and enigmatic images of its date, the inaugural exhibition gives equal time to painting and sculpture. Arp, Giacometti, Dubuffet and Max Ernst are there, alongside a monumental sculpture in wood and creosote by Robert Grosvenor and a no less monumental



sculpture by James Surlis called "I Saw a Man With Shovels in His Hands Scooping Fire." Differences of age, date, scale and medium, though often extreme, are never gratuitous. Quality, not polemic, dictates them.

Particularly arresting, for this visitor, was something that I had often wished to see but never thought would come about: This is the juxtaposition of Giacometti's celebrated "Citysquare" of 1950 with an untitled sculpture of 1979-80 by Joel Shapiro. (Shapiro is in a quiet way the animating force of the show.) When the Giacometti was first shown in Paris, it rhymed to perfection with the existential anguish that seemed fundamental to life in Europe just after the end of World War II. Crossing and recrossing a macadamized void, Giacometti's intent, loping figures, each rapt in his own isolation, were almost too much to bear. This was — or so it seemed then — an image that was one of a kind, and inimitable.

But then Joel Shapiro came along and brought a new density and impregnability to that American staple, the plain little house that sat firm and straight in an empty space. It wasn't "architecture," but it was the barn, the homestead and the ark inside which Americans for several hundred years had battered down the hatches and waited for better times. Shapiro's houses generally came in isolation, and many of them were no bigger than a small-sized shoe. But in the piece in the List collection there were three of those houses, and they sat lopsidedly on a rectangular base that could have stretched on and on into infinity. Once again, there was no "architecture,"

At M.I.T.'s new List Center, Alberto Giacometti's "Citysquare," above, is juxtaposed with Joel Shapiro's untitled bronze, left. The latter seemed as fundamental to the late 1970's in this country as the Giacometti had seemed to the Paris of 1950. Nor were they dwarfed, as art.

any more than there was town planning in the asymmetrical manner of their placing. But somehow those houses seemed as fundamental to the late 1970's in this country as the Giacometti had seemed to the Paris of 1950. Nor were they dwarfed, as art.

This is an instance of the ways in which the M.I.T. student is led to consider the range, the power and the possible echoes of art. M.I.T. is a teaching institution, and Kathy Halbreich, who is director of exhibitions at the Center and has already a long list of provocative exhibitions behind her, is someone who believes that young people need to have bridges built for them, and a frame of reference set. The point of the Center is not to make exhibitions that will impress people from out of town. It is to give the students a language in which to talk about their feelings, so that they are not haunted by sensations of inadequacy — by fear of feeling, in a word.

This is not to say that the romance of art and technology has been erased from this department of M.I.T. Performance art, of a kind that often calls for elaborate technological equipment, is an integral part of the Center's activity. In March, Stuart Sherman, movie maker, sculptor and performance artist, worked on a piece that aimed to be, in effect, a brief condensation of the theater of Anton Chekhov. In April, Thomas Kovachevich, doctor, sculptor and performance artist, wrought strange marvels with paper membranes that were activated by environmental conditions. Others will follow, in monthly rotation.

THE NEW YORK TIMES, SUNDAY, SEPTEMBER 29, 1985

Looking Inward, M.I.T. Seems Ready To Strengthen Arts and Humanities

By COLIN CAMPBELL
Special to The New York Times

CAMBRIDGE, Mass., Sept. 28 — The signs of change are scattered and preliminary. Yet the Massachusetts Institute of Technology has been buzzing with questions about its educational mission, and seems to be giving a new lift to the arts and humanities.

It would be incorrect to say that M.I.T., an institution long pre-eminent in the teaching of science and engineering, is going soft. Nor is it true, said Samuel J. Keyser, the new associate provost for educational programs and policy, that the 9,400-student institute aspires to become a center of universal knowledge. "M.I.T. is not a university," Dr. Keyser insisted.

But he and other administrators and professors say that M.I.T. has entered a period of serious reappraisal.

Indications of Wider Focus

Several developments point to a broadening of focus that could lead to emphasizing liberal arts not only for their own sake but also as a way to round out the education of engineers, the increasingly predominant group of students. These developments include:

Recent appointments that suggest the school is depending less on male engineers to fill important administrative jobs. The new director of admissions, Michael C. Behnke, who arrived last May, was educated in American studies. The new dean of the humanities and the social sciences is Ann F. Friedlaender, the first woman to occupy so powerful a position at M.I.T. Dr. Keyser, the new associate provost, is a linguist.

One of the several new committees looking into undergraduate education is investigating the possibility of admitting some students who are interested mainly in the liberal arts and who are not especially good at mathematics and the sciences. This would be quite a shift for M.I.T., which has expected high entrance scores on the mathematics portion of the Scholastic Aptitude Test even of students interested in non-scientific majors. Another committee is wondering about the school's requirements in the humanities, which tend to be rather unstructured.

On Tuesday, M.I.T. will begin three days of ceremonies and symposiums as part of the official dedication of the Jerome B. Wiesner Building, a \$29 million structure designed by I. M. Pei that will be the institute's center for the study of technology and the arts.

Although M.I.T. has long been known for its dedication to architecture and the visual arts, and although its passion for music is even older, it is less widely known that the school has fostered a rapidly growing student interest in drama. "There's been a real change in the undergraduates in the last five years," said Robert N. Scanlan, the director of the drama program. About 120 students, more than ever before, are taking part in the drama program, which stresses practice and experimentation over theory, and Dr. Scanlan, whose background includes two seasons as a stage director for the Provincetown Playhouse, confesses to being baffled by the trend.

Just why these changes are happening now is a question that is only beginning to be asked.

Beginning of the Dialogue

In May, for example, about 50 teachers, deans and other interested people held a two-day retreat in Woodstock, Vt., to discuss the institute in the most open-ended way. Some people at the meeting, which was free-wheeling enough that Dr. Keyser took along his trombone, said they felt that graduates of M.I.T. were too narrow, too technical and insufficiently concerned with social questions.

"This was just the beginning of a dialogue," Dr. Keyser said. Some professors, moreover, feel quite differently about the institute's purposes. But in any case, Dr. Keyser said, "you can bet your bottom dollar that whatever happens here will be interesting and will be watched."

"One of the things that I've been concerned about," Dr. Keyser said, "is the social, political and economic implications of technological innovation. I wonder if we are introducing that sufficiently — I mean the wise use of science and technology."

Concerns like these have been a staple at M.I.T. in recent years. The institute's official responses have in-

cluded such additions to the curriculum as a program in science, technology and society. Faculty responses have included the intense interest here — some of it highly critical — in the Reagan Administration's proposals to study a space-based antimissile system.

Education of an Engineer

Paul E. Gray, the president of M.I.T., said in an interview that he saw several reasons, including two kinds of problems, for the recent ferment and reappraisal at the school.

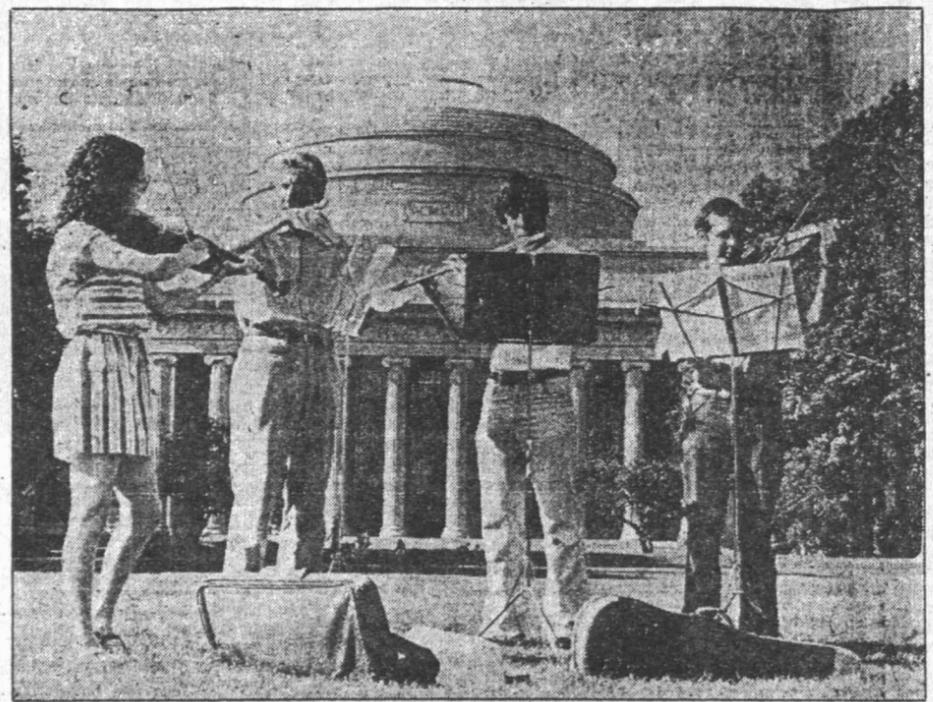
First, he said, the question of "how we ought to construe the education of an engineer" has not really been answered, despite the thought given to it over the last century. If the world of knowledge were to be roughly divided into the hard sciences and technology on one side, and the social sciences, arts and humanities on the other, Dr. Gray said, "We have not, I think, succeeded in putting the two sides together in ways that satisfy the faculty." There have been complaints, for instance, that courses in the humanities and social sciences are too specialized and do not accomplish the kind of integration the school wants.

In the second place, Dr. Gray said, "Enrollment has shifted from almost everything else into engineering," particularly into electrical engineering and computer science. To a great extent this shift has reflected job markets and the developing balance of modern technology. But it has also made M.I.T. lopsided, Dr. Gray said.

Fifteen years ago M.I.T. undergraduates were about equally divided into three subjects: engineering, science and the social sciences and humanities. Now two-thirds of the undergraduates are in engineering, and one-third in everything else, from physics to political science.

"I'm not trying to roll that back," Dr. Gray said of the surge of interest in computers, "but I do think we should be concerned with the vitality of other departments."

Something else has been happening. For the first time in memory, key members of the School of Engineering, "which is really the tail that wags the



For art's sake: Chamber ensemble practicing outside the Great Dome of Killian Court at the Massachusetts Institute of Technology. Prof. John Buttrick, second from left, conducts Heidi Bussan, Charles Marge and Daniel Goodman, right.

dog here," according to Travis Merritt, director of undergraduate humanities, have been complaining that their students are being too narrowly educated. "This is the first time the emphasis to raise the humanities has come from the engineers," Dr. Merritt said.

Dr. Friedlaender, the new dean of humanities and social sciences, said that Gerald L. Wilson, dean of engineering, had expressed concern that M.I.T.'s engineers were learning to solve well-defined problems but were not learning to frame the problems in the first place. "So Wilson came to me and said, 'Look, I think we have a real problem here,'" Dr. Friedlaender recalled. The two deans agreed that an increased emphasis on the humanities and social sciences might help.

"How do humanists think?" Dr. Friedlaender asked. "How do social scientists think?" The questions are of more than ornamental interest, she said, for the answers involve matters of power, prestige, social policy and other practical matters that engineers need to be concerned with. Engineers as a group, for example, had an enormous stake in the success of the nuclear energy program, Dr. Friedlaender said, but the program has taken a terrible beating in the larger society and many engineers could not cope with the debate.

Dr. Friedlaender describes herself as an academic "with a foot in each camp." She holds appointments both as an economist and as a civil engineer.

By most accounts, M.I.T.'s recent soul-searching has been pleasant and cheerful. Dr. Friedlaender said that may be because the discussions have only just begun. But she said she felt that support for broader education at the school had grown remarkably wide.

"Here's M.I.T. in the forefront of science and technology," Dr. Friedlaender said. "Can't we help define what the new liberal education can be?"



The top 10s

The Herald's team of top arts and entertainment critics pick the year's best in music, movies, theater, dance, art and video.

DANCE

By IRIS M. FANGER

THE LINE dividing theater and dance blurred in 1985 when dancers like Adrienne Hawkins and Wendy Perron used dialogue and directors Robert Wilson and Andre Serban relied on rhythm and stage patterns, as choreographers do. Indeed, the best of theater/dance of 1985 was often a multiarts affair.

Here are a list of choices for 1985, some theater, some dance and some a mix of the two:

Lily Tomlin at the Wilbur in "The Search for Signs of Intelligent Life in the Universe" by Jane Wagner. Tomlin gave the best performance in the best piece of material, a success hopefully will usher in more pre-B'way tryouts.

"Henry Lumper" by Israel Horowitz at Gloucester Stage Company. A flawed but noble New England epic was given a stunning production, directed by Grey Cattel Johnson.

"CIVIL WAR" by Robert Wilson at American Repertory Theater. This theater piece was neither entertaining nor enlightening in a rational manner, but its subliminal effects could not be ignored.

"Dreamland Burns" by Squat Theater, the emigre group from Poland, now settled in New York,

produced an unwieldy, multimedia, stream-of-consciousness production that brimmed with theatrical creativity.

"Sullivan and Gilbert" at Huntington Theater Company. The singing and staging of 18 G & S songs in the manner of D'Oyly Carte was like manna from heaven for deprived Gilbert and Sullivan freaks.

"STILL DANCE; a recollection," collaboration at MIT between Beth Soll, choreographer and J. C. Hotchkiss, photographer. This innovative work failed to be recognized, because it fell between dance and visual art. "STILL DANCE" unfolded in a series of oversized photo collages, breaking the barrier between an artform that disappears in time and an artform bound by space.

Elisa Monte's "VII FOR VIII" for the Boston Ballet with Christopher Aponte and Stephanie Moy as lead couple. For a change, the Boston Ballet left the 19th-century fairyland and found some street smarts in this high-energy, contemporary piece.

Gerri Houlihan and Susan Rose as co-performers and co-choreographers in "Duet" for the Boston Dance Project, who produced a new work that combined the best quirks of long-limbed Houlihan and the perky Rose.

National Dance Institute's "Event of the Year" at the Opera House. Who could resist 225 future dancers of America leaping on a diagonal across the stage?

BOSTON SUNDAY GLOBE DECEMBER 29, 1985

the highs 1985 and lows

DANCE

HIGHS

Danceworks in choreography by Susan Rose.

"Severe/Clear," choreographed by Dana Reitz. The Boston Ballet's "Don Quixote."

American Ballet Theatre's "Romeo and Juliet."

The joint program by choreographers Beth Soll and Wendy Perron. Eiko and Koma.

By Christine Temin
Globe Staff

Flights of fancy

Beth Soll, Boston's preeminent modern choreographer, offered a beautiful and uncharacteristically lyrical new work, "Still Light," on a program that also included post-modern flights of fancy by New Yorker Wendy Perron. Soll's work has mellowed of late, and I don't care for her most recent pieces, but she remains the most individualistic presence on the Boston scene.

PHOTOGRAPHY

HIGHS

"Berenice Abbott" (MIT Museum).

"Aaron Siskind: Fifty Years" (Museum of Fine Arts).

"Boston Now: Photography" (Institute of Contemporary Art).

"Robert Frank" (Robert Klein Gallery).

"Masterworks from The Polaroid Collection" (Clarence Kennedy Gallery).

"Diane Arbus: Magazine Work 1960-71" (Wellesley College Art Museum).

"Larry Stark: A Retrospective" (Andover Gallery).

"Photographs from the Computer" (Project Arts Center).

By Kelly Wise
Special to The Globe

An index to the quality of photographic exhibitions this year is that there were at least 25 strong shows. Viewers have been treated to hand-tinted photographs from the Chinese Imperial War; the eerie pinhole perspectives of Bar-

bara Ess; masterly work by 20th-century fashion photographers; nude self-portraiture; searing documents of war-torn El Salvador; Aaron Siskind's tactile abstractions; stirring reportage of World War II and its aftermath by Carl Mydans; an inside view of the lives of the rich; and imaginative color images generated by computer artists.

It was a year for large traveling retrospectives originating outside of Boston. The runaway entry in this category was the Berenice Abbott retrospective at the MIT Museum. Portraits of James Joyce, Eugene Atget and Violette Murat from Abbott's days in Paris, vernacular images of Manhattan ethnic neighborhoods, architectural photographs of a city caught up in massive urban renewal, illuminating and elegant scientific photographs, and quiet scenes from rural Maine — all testified to the indubitable talent of this neglected genius.

THE CHRISTIAN SCIENCE MONITOR

AN INTERNATIONAL DAILY NEWSPAPER TUESDAY, SEPTEMBER 11, 1984

Choreographer at the cutting edge: Beth Soll's world of wit and wonder

By David Wick
Staff writer of The Christian Science Monitor

"When I was younger," says Beth Soll, her hands waltzing through the air as she talks, "I would just go around skipping and dancing [down the street], and people would come up to me and say, 'Isn't that wonderful?' And I would turn to them and say, 'You can do it, too.'"

The Boston-based choreographer has been catching people by surprise ever since.

Her dances, while complex, are considered by local observers to be some of the most provocative, entertaining, and deeply thoughtful being created today. She is part of the "Next Wave," a movement of choreographers, musicians, and other artists whose work is marked by splashy multimedia collaborations (mixing dance, music, theater, video) infused with neoclassical attitudes (viewing art as a search for truth). Increasingly making itself felt in music videos, on Broadway, and at theaters around the country, "Next Wave" stands at the cutting edge of contemporary art.

Mrs. Soll is right there with it. As for neoclassical attitudes, she calls her approach to dance "a spiritual discipline." And as for multimedia collaborations, she can choreograph dancers waltzing with cloth dolls while a live guitarist and a recorded tape loop play the same haunting theme. She has also created a parody on ballet that includes a full on-stage orchestra playing avant-garde music, dancers and orchestra members singing an old summer camp song, and a jungle-like painted backdrop.

If that sounds confusing to you, that's because it is. Soll, who has been creating dances here for the past 11 years, evokes reactions from awe to anger.

"There are very few people who are lukewarm about Beth — they either like something in her work and get hooked on it, or they hate it," says Iris Fanger, director of the Harvard Summer Dance Program and a close follower of her career.

But Beth Soll is not concerned. "I never expect any one to see what I see. That's not my goal. I'm just dancing alone in a room."

Happily, she's not. Her work, the new and old, the avant-garde,

won her five grants from the National Endowment for the Arts. She has performed in Boston, New York, Paris, and Budapest. And she has won considerable critical acclaim.

"Her use of space is quite exquisite and painterly," says Liz Thompson, director of Jacob's Pillow, the famous Massachusetts dance center. "She is very intelligent ... a considerable talent."

Christine Temin, dance critic of the Boston Globe, calls her "the finest and most original choreographer I've seen in New England — very challenging, always growing."

"She has a very classical view of art," Mrs. Temin continues, "that it's not just entertainment — but is here to enlighten, to seek for higher truths."

"This makes a lot of artists blush nowadays, but with Beth it is very genuine, and you feel it."

Seated before her in an office at the Massachusetts Institute of Technology, where she is director of the dance program, one senses the deep commitment Soll has to her work and the integrity that springs from it.

"Something I just love about dancers is that no matter where they are or what they do, they go to the studio and work every day. Sports people ask me, 'Isn't all the warm-up and practice boring?'"

"No! Of course not. That's the whole thing!"

A small, handsome woman with short dark blond hair and a round, expressive face, Soll herself is a person of great contrasts. At times she will be quiet and thoughtful, listening carefully to the questioner. Then suddenly an idea will catch her with a rush of words and a flurry of hand motions. She explains how to watch her dances:

"You have to be open to things, taking it all in," she says, her arms spread wide and back like a dove, with eyes looking up, flickering around. "But," she adds, turning quickly forward, the eyes narrowing, "you have to observe intensely."

At one point in the interview, a sound created by construction workers outside the window — a "bong, bong" caused by objects dropping on metal — catches her ear. She leaps up in midsentence almost as if to start dancing.

Soll, in fact, uses everyday events as one of the ma-



In "Duet": a fascinating blend of the classical, avant-garde

resources for her work. "She loves to observe life — and that comes out in her dances," says Ruth Birnberg, a fellow choreographer who collaborated with her on a recent work, "Duet for Four Figures."

Along with the everyday motions, Soll employs movement covering the entire gamut of styles — from classical ballet to jazz to modern. The resulting dances are densely layered, complex beyond common conception, and, best of all, full of experiment.

This often translates into humor as, for example, in her work "Masque: Attempts to Fly." To strains of Vivaldi, she enters, looks hesitatingly about, then mimics a man trying vainly to fly. The audience roars with laughter. At other times she produces works of wonder and intrigue. In "Dances of Paradise and Everyday Life" the Soll dancers alternately float like angels and sit around having typically human conversations. Said critic Temin about this dance: "Someone could — and probably should — write a doctoral dissertation on all that happens ..."

As for her own history, Soll says, with a girlish smile, "I was just born wanting to dance." Her actual training began at age nine in Ithaca, N.Y., where she grew up. As a teen-ager she studied at the Kurt Jooss School in West Germany, followed by studies at the University of Wisconsin back home. Both Mr. Jooss and Mary Wigman, German modern dance pioneers, are strong influences on her work. Soll moved to Boston in 1974, from where she has been building her career ever since, and this year she starts an eight-member company.

But she is not driven by a need for great popular success. "The more success — 'success' I have," she says, "the more I'm convinced how distracting it is. It interferes with my mission," she says — what she means by "mission" or "truth."

INTERVIEW



Soll: dance as 'a search for truth'

The Boston Globe

Tuesday, July 17, 1984

REVIEW | MUSIC

Harbison Variations a welcome substitution

CASTLE HILL MUSIC FESTIVAL — Chamber music with Bruce Creditor, clarinet; Rose Mary Harbison, violin; and Leslie Amper and Yehudi Wyner, pianos. At the Crane Estate, Ipswich, Sunday.

By Derrick Henry
Special to The Globe

Despite sweltering weather and nearly wholesale changes to the original program, Sunday's Castle Hill concert emerged as a satisfying and stimulating 90 minutes.

Unquestionably the highlight of the evening was John Harbison's 23-minute Variations for Violin, Clarinet and Piano (Rose Mary Harbison, Bruce Creditor and Leslie Amper), a most welcome substitution for Messiaen's "Quartet for the End of Time." Harbison, who was born in 1938 and has served on MIT's faculty since 1972, is fast becoming one of the best-known composers in America.

His Variations, like all the half-dozen or so Harbison works I have heard, are intensely individual, although I'm still not sure I could recognize a new Harbison piece if challenged. Written in 1980, the Variations consist of a theme, 15 variations organized in three sets of five (each with two canonic movements), a finale and quiet epilogue. The theme itself, delivered by violin and clarinet without piano, is rhapsodic and memorable, while the variations that follow are clearly distinguished from one another by means of such basic tools as instrumentation, tempo, texture and mood. Harbison's over-the-top might be characterized as

ture but with an enriched harmonic language, tonally rooted and never abstruse. Now and again, it brought to mind such composers as Copland, Stravinsky and the Berg of the violin concerto, although Harbison's absorption of his influences is such that he could hardly be accused of sounding derivative. This music is by turns ruminative, virtuosic, foot-tappingly rhythmic and witty. The Variations follow a logical and engrossing progression, leaving the listener thoroughly contented.

Complicated unison passages between violin and clarinet — one of Harbison's many striking coloristic effects — were struck with such unanimity by the performers as to effectively make for one new instrument rather than two familiar ones. It was characteristic of an eminently persuasive interpretation. Harbison's 1975 song cycle "Book of Hours and Seasons" may be heard at the Marblehead Summer Music Festival Aug. 5.

Rounding out the Castle Hill program was Brahms' autumnal Clarinet Sonata in E Flat, Opus 120/2, in a straightforward, unfussy performance with Bruce Creditor admirably replacing Michael Sussman as the protagonist (Leslie Amper was the overly stiff and wooden pianist), and Beethoven's gently lyrical G Major Violin Sonata, Opus 96, a last-minute substitution for that composer's stormy C Minor Sonata, Op. 30/2. Rose Mary Harbison and Yehudi Wyner gave the Beethoven a warm and generously inflected reading (there was even a bit of portamento), beautiful in sound, rather on the leisurely side.

16 THE BOSTON PHOENIX, SECTION FOUR, FALL PREVIEW, PART 2, OCTOBER 1, 1985



MIT Experimental Music Studio's Barry Vercoe: computerizing Handel

Tech of the town

Experimental music at MIT

by Michael Bloom

There is a bright and colorful new building on the MIT campus in which some of the most intelligent and creative people in Boston will be using computers to make magic. The Jerome and Vera Wiesner Building, about a block from the Charles River on the east end of the campus, is now the site of MIT's diverse artistic applications of computers, including the Experimental Music Studio, which, since 1973, has

been one of the world's leading computer-music centers. Known as the Center for Arts and Media Technology, the complex of arts and research facilities will have at its disposal some of the most advanced computer systems ever devised for the purpose of pure creativity. It will be a veritable electronic playground for the arts.

The studio used to be squeezed into one laboratory on campus, with an

additional pantry-size room for the computers. The new studio space includes several offices, several acoustically insulated listening rooms, a workshop, a terminal room, and a recording studio that is half again as large as the studio's old space. The machines, including the old Digital PDP-11/50 that runs the Music11 software (written at MIT in the '70s) and the studio's new VAX, have been moved to the computer room of the Media Lab, on the third floor. The VAX keeps track of the sound files, that is, the digital information that describes timbres, and performs other support functions. It is about four times as powerful as the machine it replaced, which allows several composers to work simultaneously. The studio is also anticipating several new micromini computers in order to develop new software, including some Hewlett-Packards and a Digital Micro-

VAX. It is also attempting to negotiate the purchase of a Sogitec 4X computer, an extremely efficient number-cruncher developed and used at IRCAM (Institut de Recherche et Coordination Acoustique/Musique, one of the few facilities to rival MIT's), in Paris.

Other new hardware is expected to arrive soon, much of it through corporate grants. Sony's MCI professional audio-equipment division is contributing a complete analog-recording set-up, which will be equivalent to that in IRCAM's studio. Yamaha will provide synthesizer modules, including elaborate equipment from its DX7 line. Perhaps the most eagerly awaited hardware is a state-of-the-art automated digital mixing board made by CompuSonics, a Cambridge audio company. Because part of the Media Lab's purpose is to make these

new technologies practical, the studio will use this board to pioneer techniques that, as digital technology increasingly dominates the marketplace, will ultimately be used throughout the recording industry.

Besides being more spacious, the new site makes possible synergistic cooperation between various studies going on in the Media Lab. Several different disciplines in the arts and humanities, each of which attacks the man-machine interface in its own way, rub shoulders in the Wiesner Building: the Visible Language Workshop, the Film and Video Lab, the Architecture Machine Group, and the Learning Technologies Center. Each confronts technical issues similar to those of the studio: computers are programmed to shape and supervise works of art. Together the disciplines will create a fertile breeding ground for technology in the arts.

The building has been designed to facilitate this cross-fertilization. Cable conduits will link the various laboratories together, and in the core of the building is a four-floor-high cube designed to exploit the possibilities of all the in-house media technologies. Every laboratory in the building can feed signals into this space for research purposes or for elaborate mixed-media presentations.

Once it has adjusted to its new quarters, the studio will resume its program of commissioning new music by electronically sophisticated computers — an easier task now that the facility allows for various projects to be carried out simultaneously. The concentration of topnotch hardware, useful software, and talented people should ensure the electronic music studio a productive future for many years to come.

The Wiesner Building will be dedicated on Wednesday, October 2, at 5 p.m.; the ceremony will include an "electronic unveiling" — whatever that is. The celebration will also feature several other events emphasizing the artistic functions of the building, culminating in an October 3 all-day symposium on media technologies, chaired by computer visionary Nicholas Negroponte. □

Boise, Idaho

Monday, July 29, 1985

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The Idaho Statesman

122nd year, 4th issue

A Gannett newspaper



Artist adorns night sky with rainbow creation

— Page 6D

Central Idaho blazes keep tired crews busy

— Page 1C

Sky artist

Otto Piene paints sky with lights

By JUDY MCCONNELL STEELE
The Idaho Statesman

Otto Piene understands both the beauty and the terror of the sky.

For Piene, creator of the Sun Valley Neon Rainbow and director of the Center for Advanced Visual Studies at the Massachusetts Institute of Technology, the sky first took on meaning when he was a young boy in Germany during World War II.

"I was a child soldier," the artist explained during an interview in Sun Valley before the attempted Friday launching of his neon rainbow. "At age 15, I was drafted into the anti-aircraft flak. We were firing big guns at big airplanes. The sky was a constant threat to my existence."

Good weather and clear skies meant enemy planes would be flying. "I was habitually yearning for rain, storms, black sky, deep clouds," Piene said. "A bad sky was good. A good sky was bad."

But the end of the war triggered a complete reversal in Piene's response to the sky. He started creating art that used clear skies and good weather.

His early work, with several other artists known collectively as Group Zero, included light "ballets" and outdoor participation events. More recent pieces have included a neon rainbow created for the closing ceremonies at the 1972 Olympic Games in Munich, Germany, 25 sky events staged on the National Mall in Washington, D.C., and a series of international "sky art" conferences.

Light pieces created by Piene and fellows of the Center for Advanced Visual Studies went on display last week in a museum in Hamburg, Germany. And Piene's Berlin Star, a flying sculpture, will be exhibited during the Salzburg, Austria, Festival in August.

Whatever the actual art form, Piene takes his work out into nature as often as possible. His pieces are created to interact with wind, light and other natural elements in which they are placed.

"I'm not trying to beautify nature ... but to somehow juxtapose the art against nature," Piene said.

Sometimes, as Sun Valley learned Friday evening, nature plays too heavily with one of Piene's pieces.



Dave Shippee/Statesman

Otto Piene: "I'm not trying to beautify nature. . . but to somehow juxtapose the art against nature."

His Sun Valley Neon Rainbow was scheduled to be lit Friday from the top of Dollar Mountain after a dinner and a concert by the Utah Symphony on the terrace and ice rink of the Sun Valley Lodge. But winds buffeted the piece so badly that leaks in the main helium tube and breaking neon rods and wiring forced Piene to cancel the lighting at 10 p.m.

A second attempt at lighting the rainbow was planned for Saturday night. On Saturday, however, the rainbow was to have been shortened from its original 620-foot length and brought halfway down the mountain, protecting it from the mountaintop winds.

Variables, such as Friday night's cancellation, are part of art, as far as Piene is concerned. That includes people as well as nature.

Volunteer workers, who help with on-site construction of many of Piene's pieces "certainly

fit into my concept of the art," he said. "The real information starts when everyone starts touching things. They're being told to 'do this, do this.' And they start understanding what the whole project means," he said.

Spectators, particularly if they are responsive to a piece, also are part of the art process, Piene said.

"I like people that really do pay attention and try to understand what's going on, rather than just rolling down the car window and saying, 'Hey, what is this?'"

Piene's works are meant for serious contemplation, but also for fun. In fact, the artist doesn't really spend time thinking about the differences between his art and entertainment.

"If pressed, I make that distinction," he said. "I think entertainment is when you press for effect, when you try to impress the audience by all means."

The motivation behind the event also is different, the artist said.

"One is done for art, the other for profit. There are lots of shades in between," he said. "I'm not saying I don't work for money, because I do. I'm a professional artist. But my main goal is doing what I want to with my art."

While Piene has permanent work in collections and museums, his focus has been on temporary environmental pieces like the Sun Valley Neon Rainbow.

Whatever the form, Piene will probably continue to combine artistic creation with natural elements and technology. It's a mix some people find hard to tolerate.

"Often, especially when I go to Europe, people say, 'Your entire attitude toward science and technology is overly positive, overly optimistic. Science is killing art,'" the artist said.

"I say, 'Don't you know why that is? Because we're so stupid, we're letting technology get out of hand.' Technology is manmade. We should be aware of how we can do something human, humanistic, sensible and even sensitive with it."

Piene, who has reservations to travel on the space shuttle sometime in the future, would like to see science and art combine forces in space.

But, for the moment, he is concentrating on sky sculptures that, while firmly tethered to the ground, reach into the sky he knows so well.

The Boston Globe

TECHNOLOGY

Monday, May 20, 1985

Seeing Leonardo for what he is

By Don Lessem
Special to The Globe

The now-drab Mona Lisa was brightly colored by Leonardo da Vinci five centuries ago. And so it looks in a computer-enhanced rendition made by applying satellite photo technology.

Infrared images of painting beneath the surface of a damaged Van Gogh self-portrait helped Fogg Art Museum restorers determine that the slashed and folded canvas had been touched up by the artist's friend, Paul Gauguin.

Two of the Rembrandts on display at New York's Metropolitan Museum of Art are not Rembrandts at all, as irradiation of the paintings has confirmed.

These are among the most dramatic revelations of technology's growing role in the hidebound world of art restoration that has made museum conservators intimately familiar with:

- Neutron activation analysis. This is an elaborate process of time-lapse photography of irradiated paintings. Each photo in the series illuminates all areas where each different pigment in the work was applied, and in so doing provides glimpses of painted-over images, whether as indications of fraud or merely masterly changes, at all levels of a painting. Developed in 1965 by MIT research professor Heather Lechtman, neutron activation has been used in only one ambitious Metropolitan Museum project to date (in which it revealed three purported Rembrandts to be fraudulent or erroneous attributions). But it may soon be used again in art research centers in Washington, D.C. and Berlin.

FORTUNE

THE DRO...
WHAT IT WILL DO FOR B...

TECHNOLOGY

MIT'S FAR-OUT COMPUTER LAB

Backed by more than 40 big corporations, the new Media Lab at the high-tech mecca on the Charles River is trying to make computers more useful for businesses and consumers. Some of its machines talk, some make music, and some create electronic newspapers. ■ by Brian Dumaine



As the conductor waves his baton, a sensor follows his hand and keeps a computer-operated synthesizer in time with the two musicians.

► **THE CONCERT HALL.** In another corner of the Media Lab, Barry Vercoe, a professor of music and technology, and his colleagues have programmed a computer to play the harpsichord part of a Handel trio sonata on a synthesizer and to follow the tempo set by a conductor. When the conductor slows his baton, a sonar sensor following his hands tells the computer to have the synthesizer play more slowly. The synthesizer can react as quickly as a live musician and plays in nearly perfect sync with a violinist and flutist. Yamaha, a maker of synthesizers and electronic pianos, and a potential sponsor of the Media Lab, is interested in the technology.

In the world envisioned by the Media Lab many musicians and composers will use computers to play and write music more creatively. Marvin Minsky, the artificial intelligence guru, who is also a respectable pianist, wants to study what goes on in the mind when someone writes music or listens to it; he believes that understanding how people think about music will ultimately lead to smarter machines. "After all," says Minsky, "the mind is just a hundred big computers with programs." The computer of the future could have helped George Gershwin, for instance, who wrote brilliant melodies but had difficulty orchestrating them.

► **THE STAGE.** Marvin Denicoff, an artificial intelligence expert and an award-winning playwright, thinks a computer could help a dramatist write plays. In his vision, still very much on paper, the playwright would draft a scene and then set up a stage on his computer screen by drawing on a rich database of stock characters, sets, and costumes. He would then instruct his electronic actors to speak and move in any way he wished until he was satisfied with the scene. The playwright could also use a computer to show his finished play to potential investors.

The Media Lab is already working on the technology that could make Denicoff's electronic actors a reality. Patrick Purcell, an associate professor of computer graphics, is developing a suit that emits infrared signals to be read by four light sensors connected to a computer—which then generates a stick figure on its screen that copies every movement. With the help of computer graphics, the stick figure could be dressed up to look like anyone from William Shakespeare to Elizabeth Taylor. NHK, the Japanese counterpart of the British Broadcasting Corporation, has already picked up this technology and created a computer-animated host for a new show on the 21st century.

THE BOSTON GLOBE WEDNESDAY, JANUARY 16, 1985

ARTS & FILMS

Computer art comes of age

REVIEW | PHOTOGRAPHY

PHOTOGRAPHS FROM THE COMPUTER - By David Em, Thomas Porett, Sonia Sheridan, Alice Kaprow, Rob Haines, Ron MacNeil, Francis Olschafskie, Tyler Peppel, Gregorio Rivera, Joan Shafran and Lee Silverman, at Project Arts Center, 141 Huron av., Cambridge, through Jan. 26.

By Kelly Wise
Special to The Globe

Subtle patterns of dots and broken lines; glowing, livid, and pastel color schemes; textures; games with words; image elements that are fractured, reassembled, distorted, and repeated in varying forms - computer art has come of age. The current exhibition of the work of 11 computer artists (most of whom are connected to local institutions dedicated to the creation of alternative forms of imagery - Lightspeed and MIT's Visual Language Workshop) is the first hit of the new season.

Although one might expect from computer art rather graphic and linear imagery, these artists demonstrate wide flexibility in the choice and creation of subject matter. Much of the work is skillfully composed and original. For the most part, the imagery is limited to a fairly flat surface, though David Em with his "Transjovian Pipeline" that zig-zags at us from a glittering firmament and Francis Olschafskie with his touching Vietnam imagery reach more deeply into the illusion of photographed space.



Ron MacNeil's Polaroid print, "Ronface."

"Keybread" by Lee Silverman presents a rough grid of white plates each with an offering of bread. The background is a mud black and lettered over the face of the image, like a concrete poem, is a legend advising us to "pose some questions... consider the moment like the past, and perceive a future expectation like no other." Robert Haines also integrates words into his work. Starting with a self-portrait, he adds the word "Sync" and beneath it, "Sync." Dotted lines make a

dom appearance. Intertwine with cross hatching, and unite with patches of color - royal blue, brown, and green - and together all but obliterate the self-portrait. Both images take double delight in the process of making computer art and in the art itself.

Two images with unusual configurations and blazing colors are Sonia Sheridan's reversal color print "Drawing in Time" and Gregorio Rivera's "Caroline Hunt's Shirt." In the former, the artist (Sheridan) is one of the most ad-

venturous progenitors in contemporary photography) is depicted facing her computer monitor, pencil raised from its tip and crossing the dark space to emblazon art upon the monitor. In Rivera's image a multi-colored shirt is stretched beyond itself to become a pattern of crocheted lines and dots and squares, against a black background.

A number of the artists incorporate a face or faces in their imagery - Porett, Shafran, Kaprow,

MacNeil, and Haines. MacNeil's two large Polaroid prints of himself, one in which his face has been subdivided into irregular squares with one eye asymmetrical, are sleek and commanding.

Texture and its elaboration in unusual color become the subjects of two of the artists. Tyler Peppel creates an image with Superman and a reclining woman in a desperate plight, which appears like a screened, textured picture puzzle. Its colors are frayed khaki green, rose, and golden-rod. Fran-

cis Olschafskie's photographs are like no other in the exhibition. They are documentary in nature, humanly poignant, and political. In one, a soldier in a field uniform gently touches the back of a smiling Vietnamese youth. The two figures hover near the foreground, as though commanded to present themselves, while the background is tinted a russet-peach, dense like fog, that holds - perhaps in celebration of a sacrificed life - images of diminishing size of the radiant youth.

1985年(昭和60年)10月4日 金曜日

文化創造の世大実験
米仏メディアラボの旅から

MITの芸術政策

学生の制作活動に対し奨励金

美術品購入に 建築費の1%

NEW ENGLAND ENTERTAINMENT DIGEST

DEC. 21, 1985 to JAN. 9

G & S Notes

The N.E. Gilbert & Sullivan Society, which is headed by Charles V. Berney, reports it plans to collaborate with the Mass. Institute of Technology in Cambridge to celebrate the anniversary with a Gilbert Sesquicentennial Symposium next year, Nov. 20-21.

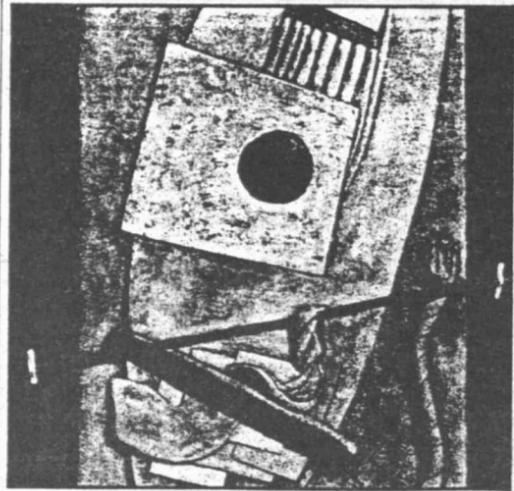
Warren Colson, former NEGASS president and current treasurer, says the program will consist of invited and contributed papers from the scholarly

community interspersed with performances of excerpts from the Savoy operas and other works by Gilbert.

The MIT Council for the Arts has already okayed a grant of seed money to get the project underway. The NEGASS executive board is setting up a special fund for the symposium with contributions from members most welcome.

NEGASS is reached by writing in care of PO Box 453, Natick, MA 01760-0005.

ARTS • ON • VIEW



"Still Life with Weights and Rope" by Carol Keller is on view at The MIT Museum.

December 26, 1985 The Tab,

City Life

PAUL HIRSHSON

His vision of a tunnel becomes a documentary

Barry Strongin says he's "drawn to dark, cavernous spaces," but that's only one reason he spent 18 months, off and on, down deep under Harvard Square where workers were digging a monumental tunnel to extend the Red Line northwest. Strongin, who is 25 and a teaching assistant at Harvard, had a more specific purpose for going underground: He was making a video documentary of the work on the tunnel, one of the largest construction projects in Massachusetts in recent years.

He made the film, in part, as his thesis in earning his master's degree from MIT in visual studies. It also won him two awards, including the Wiesner award, named after the former MIT president, Jerome B. Wiesner.

Strongin decided to make a documentary on the tunnel and the workers there, he said, because "I used to spend hours looking down into the excavation in Harvard Square, and I would think, 'What does a tunnel look like?' So I decided to find out."

In February 1983, he began sporadically climbing down into the tunnel with his hand-held video camera. He finished his project on Labor Day 1984. It took him six months to edit the nine hours of tape he had filmed down to the 40-minute finished product called "Scenes from the Underground."

The 3.2-mile tunnel, incidentally, took six years to build and cost \$574 million. The extension adds three stations to the Red Line, which now stretches from Braintree to the Arlington-Belmont line. The tunnel is essentially complete, but two stations — part of the Harvard Square station and the Alewife station — won't be opened until spring.

Strongin, who favors the cinema-verite style of documentary, said, "I was looking for something unusual... looking for people who would reveal something of themselves."

And his film does that. It is not so much a record of how a tunnel is built, but more of the thoughts and feelings of the men working there. There was no script and no narrative and much of the film shows workmen talking directly to the camera, explain-

CURTAINS | 10 years of Shakespeare at MIT

Bard's happy high-tech home

By Arthur Friedman

SHAKESPEARE GOES TECH... The MIT Shakespeare Ensemble marks its 10th anniversary this month with a production of "Romeo and Juliet" on the Ensemble's stage in the Sala de Puerto Rico at MIT's Student Center.

Since its first season in 1974-75, the Ensemble has staged two full-scale Shakespeare productions annually. Its offerings have included Shakespearean history plays ("Richard III" and "Henry IV Parts I and II"), early and late comedies ("Two Gentlemen of Verona" and "Much Ado About Nothing"), tragedies ("Othello," "Macbeth," "King Lear"), problem plays ("All's Well That Ends Well" and "Measure for Measure"), and a romance ("The Tempest").

That Shakespeare should have found so comfortable a roost in America's foremost citadel of test tubes and computers is a tribute not only to his universality, but to the pluck and perseverance of scores of MIT students, faculty, and administrators, who made the Ensemble's decade-long survival possible.

First-year Ensemble apprentices (who must be connected

'The Ensemble's 'King Lear' (1979) was a surprisingly solid attempt to scale Shakespeare's Everest.'

with MIT) spend the year in vocal and physical exercises, scene analysis, and the study of Shakespearean verse and acting. During this time, they may go straight into the acting company to play roles of varying size.

An actor who plays the title role in "King Lear" may appear during the same season as Ben- volio in "Romeo and Juliet."

Of course, the quality of the student performers varies as wildly as the productions themselves.

The Ensemble's "King Lear" (1979) was a surprisingly solid attempt to scale Shakespeare's Everest. The peak was never reached, but it was approached: "Measure for Measure" (1981) and "The Two Gentlemen of Verona" (1983) were round,

unvarnished stagings that remained relatively free of the comic gimmickry that insecure directors often impose on Shakespeare's comedies.

But coarse acting, the plague of amateur companies, also infects the Ensemble's work (I'm thinking of the recent "Richard III" and "Malvolio"). And sometimes this coarseness is abetted by directors all too willing to settle for easy laughs.

The Ensemble's past directors — Murray Biggs and Larry Lane — and its current director — Derek Campbell — believe in Shakespeare strongly enough to want to share him with the community in program after program.

This year, for instance, the Ensemble embarks on two new educational projects; a Scene Study Workshop program in conjunction with the Cambridge Public School System, and a semi-annual Production Workshop for high school students that will give them "an appreciation and understanding of the elements of Shakespearean production."

For its service to MIT, to the Boston community, and to Shakespeare, the MIT Ensemble deserves a happy birthday indeed.

The Boston Globe

Sunday, January 13, 1985



Documentary maker Barry Strongin works on a tape at MIT.

GLOBE PHOTO BY ROSEMARY CUNDARI

ing their jobs or talking about their families or their experiences on the job.

The film conveys a strong sense of what it's like to work on a noisy, dirty and dangerous job: The men curse freely, but laugh just as freely. It shows them joking around, hamming it up for the camera, and it also shows them straining to lift heavy equipment and sweating over a pump that won't work.

Some of the images are riveting, such as sparks flying from welding and cutting operations and the look on one exhausted man's begrimed face when he says, "I must look pretty horrible; I feel pretty horrible."

"Scenes from the Underground" got its first public showing the other night at MIT before about 100 people crowded into a small screening room. They were a mixed group, mostly MIT students and faculty, and some railroad-tunnel buffs.

The audience seemed appreciative and laughed at some of the intended — and unintended — funny spots. At one point in the film, a worker on a clean-up crew grabs the microphone away from Strongin and starts introducing his co-workers in the manner of a master of ceremonies.

At another point, a worker, who talks for several minutes as he sweeps up part of the tunnel, abruptly stops and says, "Hey, what can you see through that thing [the camera]?" He walks around behind it, comments on the view, then reappears and continues sweeping and talking.

Strongin said that when he first went down to the tunnel without his camera, the workers were happy to talk to him, but when he reappeared with camera in hand, they were reluctant to say anything. "There was a kind of hostility, probably because of the camera, and it took a while to get past that, and to get them to

trust me," Strongin said.

Neither the workers in the film nor officials at the MBTA or at the Perini Corp., one of the prime contractors, have seen the documentary yet, and Strongin said he is thinking about setting up a showing for them. It is not the only filmed record of the tunnel, however. The Perini Corp. has made its own video documentary of the tunnel project and the MBTA has made still photos of the work.

Strongin now is looking for another project to work on, something that will give him the same success and satisfaction the tunnel did. He said one gratifying aspect of his film was the workers' pride in their jobs that shows through clearly. In fact one man, after talking about how he has been working all night and most of the day on a difficult job, said: "I love it. I don't do it for the money; I do it for the fun."

ARTS & FILMS

A Student Loans program with high interest at MIT

By Marty Carlock
Special to The Globe

They're majoring in aerospace engineering, economics, materials science engineering or computer modeling of biological systems, but today they're engrossed in art. They're walking around the Hayden Gallery at MIT, pencils and pads in hand, deliberating, taking notes, coming back to look again at particular works.

They are MIT students, and every September they have an opportunity to borrow, for the academic year, works of art owned by the Institute.

The works are distributed by lottery, they're free, and competition for them is fairly fierce: 1200 applications last year for about 220 prints.

These are not just any prints. Called the MIT Student Loan Collection, they're an assemblage of works by major contemporary artists. The collection now numbers 270 (some more important pieces are reserved for loan to groups, not individuals) and is valued at around \$135,000. As the name implies, the Student Loan Collection is designated solely for student borrowing, and is considered separate from MIT's permanent collection of contemporary art.

Engineering student Pam McHatten and economics major Amy Bertin are looking for something colorful: "We've just repainted our room - Institutional white," McHatten explains.

Annual lottery

For their first choice, they settle on "Birdman," a whimsical figure by Joan Miro. They get three choices, so they add Hamlin Davis' color-flecked "Distended" and one of Karl Gerstner's formal color studies - "the pink and green one," Bertin says.

Graduate student Ken Albert also likes "Birdman," but it's his second choice. Robert Motherwell's calligraphic black-and-

white "Africa" is first.

Whether roommates McHatten and Bertin or Albert get to live with "Birdman" this year will be decided Friday when MIT's Committee on the Visual Arts (CVA) holds its annual lottery. "We draw every single card," says CVA's Jill Aszling, and it takes them all day.

If all the works of art were assigned before all 1200 or so chits were drawn, the lottery could stop there, but that has never happened, Aszling says. "There are always certain predictable choices that everyone wants."

The Gerstner serigraphs, vibrant rectangular compositions, are popular - biology major Pam Keller is using up her three choices on three versions of his work. Landscapes by Neil Welliver and the calligraphic works of Chryssa also go quickly.

Not mass produced

There are 20 or 30 more works this year, thanks to alumni donors. Philanthropists Albert and Vera List, whose contributions form the bulk of the loan collection, continue to select and donate new prints annually. Alumnus Alan N. May gave three collages this year, with a stipulation that they be available for student loans. "We wouldn't have put them into the rental collection if there hadn't been a specific stipulation," Aszling says. "They're unique. But I think the students will like them."

Some oversized works are reserved for large public spaces, and may be bid for by groups - dorms, fraternity houses and such. Many of the works are poster-sized or better, and most are prints; a few are drawings. All are original.

Not to be confused with commercial reproductions, which are run off in batches of thousands, these prints are produced by traditional artists' printmaking techniques: etching, lithograph, silk-screen and the like. An edition of



Student considers a print at MIT's Hayden Gallery.

GLOBE PHOTO BY FRANK O'BRIEN

duplicates runs from a few dozen to a few hundred, the printing is often supervised by the artist, and the results have greater value than commercial reproductions.

MIT's student art loan program began with about 100 prints given in 1966 by friends as a tribute to Catherine N. Stratton, a prime mover in visual arts policies at the Institute. There was no money for maintenance, however, and after half a dozen years, the program halted. Impetus to reactivate the program came in 1977

when the Lists gave about 150 more prints, plus funds to frame and maintain them.

MIT charges the students no rental fee. Alumni have endowed the art loan programs so that the CVA now has a few hundred dollars a year to reframe, replace glass and insure the works.

The staff provides an instruction sheet (avoid hanging in sunlight, above heating vents, in bathrooms) and a handout about printmaking techniques. Responding to a request from a stu-

dent borrower last year, the CVA has begun developing art-appreciation notes about the individual artists; about half are done, Garrels estimates.

Loss is minimal, says Assistant Curator Gary Garrels, adding, "The students are extremely responsible." He thinks they may have lost one print, years ago; another was irreparably damaged when a steam valve burst; a couple have fallen off walls.

Names such as Oldenberg, Warhol, Motherwell, Calder and

Rauschenberg are among the artists, but they're being pulled out of rental status as their works increase in value. "We realized a year or so ago that we had a rental Jasper Johns in the \$7,000-\$10,000 range," Garrels says. Now a work is removed from the rental collection when its value exceeds \$1500.

MIT tries to keep the rental collection up to date, Garrels says, and has recently added such "hot young printmakers" as David Salle, Keith Haring, Jennifer Bartlett and Elizabeth Murray.

Students who strike out early in the drawing - that is, whose three choices have all already been taken - are put into an "alternates" category and invited to select a work from the few that have no takers or were won but not picked up.

Senior Jay Slagle has been lucky - he's had a CVA loan all three of his years at MIT. He wanders the gallery picking out his old friends: a Vasarely op-art piece, freshman year ("I had heard the name"); bold color splashes by Jack Bush that hung in his sophomore room ("a lot of my friends laughed at it, called it 'monkey art,' but it's so simple and powerful").

Last year he had a color etching, "The History of Printmaking," by Warrington Colescott. "I wish I could have kept it," he muses.

He's not alone. Every year letters arrive at the CVA offices from student art borrowers. Some have suggestions; one just wanted to say thanks. For instance:

"After trying unsuccessfully for three years to get a painting on loan, I finally got an Andy Warhol picture. What a joy it was! Just bringing it to my apartment was exciting... everybody on the street kept stopping me to inquire and comment about the picture... It really added life to what was a drab hole in the wall."

Cambridge Chronicle Thursday, November 1, 1984

Media artists enlists MIT students for event

Media artist Dov Eylath will present "Catch 22", a live video performance, in Kresge Auditorium of the Massachusetts Institute of Technology, Monday, Nov. 5, casting the first 240 students to arrive as impromptu actors of the event.

Eylath, a fellow at the Center for Advanced Visual Studies, explained the details: from 8 to 8:30 pm students arriving at each of the two auditorium doors will be asked to read brief scripts from cue cards. This continues until 120 students

have been filmed at each door.

At the same time 11 students from Eylath's class, Advanced Electronic Imagery (4.857 Special Problems in Environmental Art), will be quickly mixing the video film on stage

while the audience is entertained by music composed for the event by Boston area musicians John Walker and Jeff Wadsworth of the pop rock band "Ey Ey Ey."

The resulting film, which will be "more poetic than narrative...but definitely about MIT" according to Eylath, will be shown on a large screen. The entire event is expected to last about 90 minutes.

The idea is that students create a performance for another group of students who are also involved as

participants, Eylath said. "They are as much the artists as I am," he said.

One of the students, Jarleth Waldron, was commissioned by WCVB-TV (Channel 5) to make a documentary on the Eylath class and the "Catch 22" performance.

In addition to Waldron, the mixers will be: graduate students Ellen Sebring, Sara Baker, Uriel Levi and Chee Mok; undergraduates: Seth Quittner, Roger Walco, Edward Korczynski, John Cooke;

and cross-registered from Harvard: Theo Zimmerman and Martha Swetloff.

The event has been produced with a grant from the Council for the Arts at MIT, with support from co-sponsors, the CAVS and MIT's Educational Video Resources.

The class which engendered the project has been supported by time and state-of-the-art facilities donated by Video Visuals of Newton, Video One, Century III, WNEV-TV (Channel 7), all of Boston; and WCVB-TV of Needham. The class meets for four hours at MIT every Friday and goes to off-campus sites during other times of the week.

Eylath, who is now working on a textbook about electronic imagery, has staged similar video events some 40 times over the last five years, many of them in Europe. A companion piece, "Catch As Catch Only Can," was produced for London's Institute of Contemporary Art.

Two years ago he produced "TV Fetish," the first full length video art program ever broadcast by the British Broadcasting Company.

The artist was commissioned to produce the opening and closing sequences for "Night Shift," broadcast from 3-3:30 am following every Friday night's programming on WCVB-TV, Channel 5, devoted to student work from throughout New England.

Eylath's class was asked to make electronic backdrops for performances by various bands who appear on Night Shift.

The Boston Herald Thursday, December 13, 1984

Personal triumph for emerging artists

STUDENT art shows can be fun. Student artists don't have to care whether critics or buyers like their work. They're free to express themselves in rebellious, unsaleable items such as holograms, slow-motion videos, six-dimensional sculptures and didactic "environments," and serve these up with such fierce integrity you've got to smile.

The student show "12 Emerging Artists from MIT" currently on display at Gallery East, at the Art Institute of Boston is such an exhibit. What a critic might find awful here - such as interminable videos about sexual fantasy and underwater sculpture - is redeemed by the sheer moral force of the artists, for whom every work is a personal triumph.

The MIT artists, who are enrolled in the school's Center for Advanced Visual Studies, have lots of fun making fun of technology. Jennifer Hall's golden TV "altar," with its computer-animated video show, and the big, bitter photos by Walter C. Dent that portray TV as God, are good examples of the harmless hypocrisy involved when a technologist mocks technology.

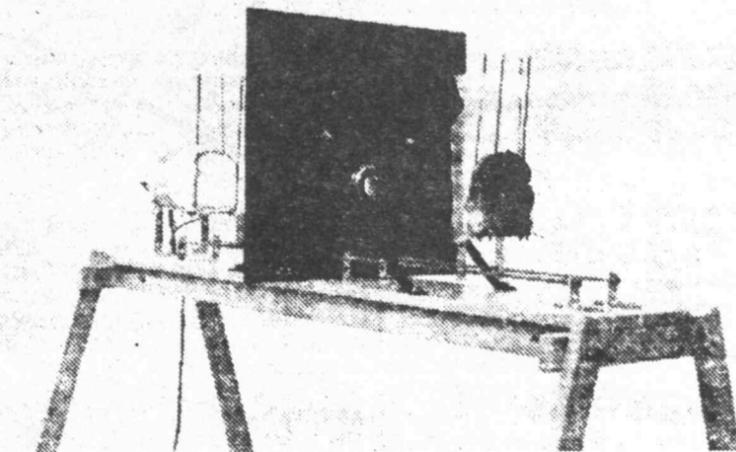
ART

By CATHERINE RANKOVIC

The artists who take a less critical, more classical approach are more effective. There's Betsy Waldron's five holograms, including the startling "Solar Roadway," and Sara Baker's "I Thou," a super-sized eye made out of blue fluorescent tubing, with a mirror for a pupil. Eric Beglieter's "Hypercrystal," a six-dimensional sculpture accomplished with mirrors, is especially satisfying because it both poses and solves an impossible problem.

Then there's the fun, goofy stuff that only students make, like a lightproof suit and an inflatable green dome that turns red when you hit it. The dome's furnished inside with a chair and table like a living room. Both are by Luc Corchesne.

And then there's Robert Rosinsky's "Wonder Bread Motion Picture Projector." The work consists of a light that is being projected through two slices of



ROBERT Rosinsky's "Wonder Bread Motion Picture Projector" at the Art Institute of Boston's Gallery East, till Dec. 21.

moldering Wonder Bread. The sculpture is six feet off the floor and mounted in a tiny closet. The artist says this dynamic work is all about decadence. You've got to see it to believe it.

This punkish show was curated by Jonathan Goldman, one of

the student artists. Gallery East, on the ground floor at 700 Beacon Street, has made the most of a very small and awkward space. Gallery hours are 9 a.m. to 4:30 p.m. weekdays, Saturday noon to 4. There are no stairs. Admission is free.

TECHNOLOGY

Tools of science now artists' 'brushes'

From lasers to computers to videodisks, high-tech devices are being put to use to fashion new art forms

By David L. Chandler
Globe Staff

Art is a reflection of the world around us, it is only fitting that some of today's artists have turned to electronics, lasers, computers, videodisks, and even the space shuttle as media for esthetic expression.

The result, if not a marriage of science and art, is at least a new and increasing awareness by scientists and artists of each other's ways of understanding and interpreting the world.

And, at its best, this convergence of two fields often seen as polar opposites can produce new insights and techniques for both.

The high-tech creative media include:

- Holograms, eerily lifelike three-dimensional images created by a laser beam passing through a glass photographic plate. For example, a hologram by Cambridge artist Harriet Casdin-Silver shows a bunch of forks hovering in midair so realistically that people instinctively reach out to touch them. Such works bring to life in literal form a description by Leonardo da Vinci — one of the first to combine art with technology and science — of how the viewer of art is "seeing a place behind a sheet of glass."

- Videodisks, which also make possible creative works that could not exist in any other form. Rus Gant, who is now filming in China for a videodisc project, explained in an interview that this technology "encompasses film, music, still photography and art; it allows you to work with all of them at once. In the same package." Further, because a videodisc player can almost instantly skip to any place on the disk under computer control, it can be an interactive medium, where "the viewers actually control in some ways the work that they see."

For example, a videodisc artwork might show a view of a room that the viewer could "move" around in by pressing keys on the computer, stopping to "pick up" and examine different objects; picking up an object might then trigger a film sequence portraying the history of that object and how it came to be in the room.

- Laser beams of various colors, whose movement is controlled by computer to "draw" pictures on screens, walls or even on water or clouds of smoke; and more powerful industrial lasers, which have been used to heat the surface of light-colored stone to the melting point, producing designs made out of a blackened material resembling volcanic rock.

- Computers, used to paint pictures on a screen with electronic "paints" and "brushes" that have remarkable flexibility — such as allowing paint to vary from perfectly opaque to perfectly transparent. While the most powerful graphics computers have usually been available only to engineers and large corporations, a Boston company called Lightspeed Computers has begun renting out, time to artists on an advanced computer they designed specifically for the creative process. Lightspeed vice president Francis Olschafskie, an artist himself, emphasizes that "it's important to allow it to be used for experimentation."

- Electricity itself is being used as an artistic medium, both in the form of glass sculptures that contain a continuously changing display of colored sparks, and in the form of colored neon lights arranged to form ethereal moving sculptures.

- And, in a move that will literally raise art to new heights, there are even plans to produce works of art in the space shuttle as it orbits overhead. Including a spectacular artificial aurora — like the dazzling northern lights, which are usually seen at their best only in extreme latitudes — that may become the most widely viewed work of art ever produced.

Joe Davis of MIT's Center for Advanced Visual Studies is the creator of the artificial aurora project, which will use an electron gun mounted in the space shuttle's cargo bay to produce artistic communication on an unprecedented scale. It is an attempt to recreate, on a much smaller scale, one of nature's most impressive displays, the filmy swirls and sheets of glowing gas in the upper atmosphere that normally result when a burst of energy from

the sun excites atoms in the air so that they produce a colored glow. While they are normally visible only to those who live close to the North or South pole, the artificial aurora, Davis hopes, will be visible from almost anywhere on Earth.

The work is titled "New Wave Ruby Falls" in a reference to a waterfall in Tennessee, a popular tourist attraction that is advertised on ubiquitous billboards in the South. It is made possible by a NASA program called the Getaway Special, which allows organizations or individuals to buy five cubic feet of space shuttle cargo space for only \$10,000 — a tiny fraction of the multimillion dollar cost of a full mission.

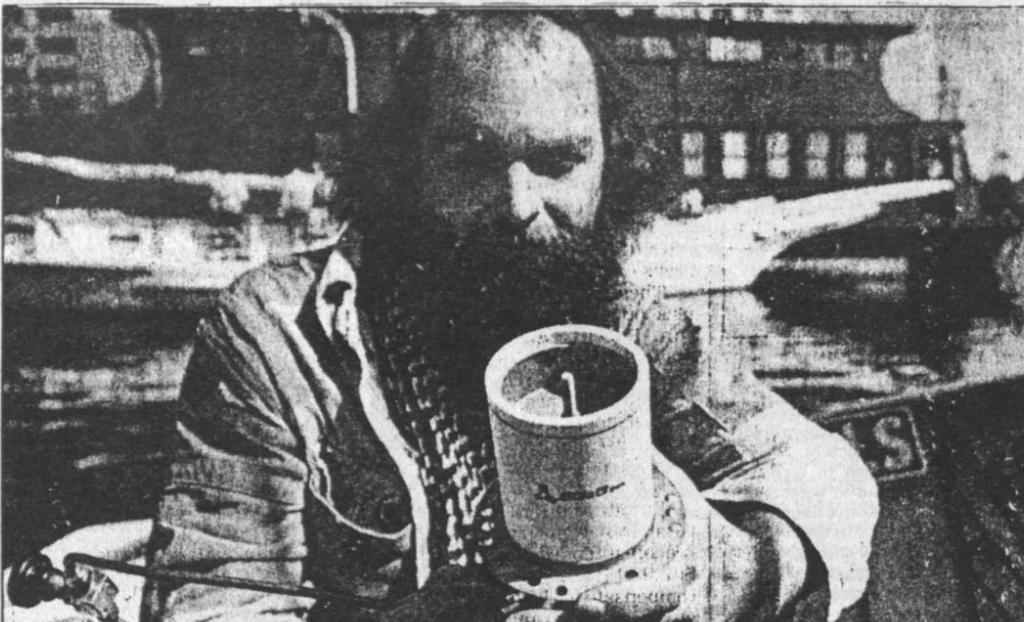
Developed at MIT

The electron gun for this project — a much larger version of the device that illuminates the screen of a TV picture tube — is being developed in the High Voltage Research lab at MIT, and Davis hopes the technical preparations will be completed in time for it to go aloft on a shuttle mission sometime next year. The gun will produce at least 300 bursts of electrons, once every few minutes for as long as the batteries last, and Davis expects each burst to produce a glowing greenish cloud about 100 yards across and 12 miles long, which should be easily visible to anyone within a 750-mile radius of the shuttle's position.

"We're in it for egotistical reasons, of course," Davis concedes. But his concerns go much deeper than that, and he quickly adds that he also strongly feels he has "the right to make a difference." Only in America, he says, would it be possible for one individual artist to produce something so spectacular.

While Davis looks out to space, other artists are turning inside the human body to use technology as a means of probing the subjective perceptions of an individual.

Vin Grabill, another research fellow at the MIT visual studies center, uses videotape as his canvas and is preparing a work in collaboration with Elizabeth Goldring, also of the center, that explores from a very personal perspective what it's like to live in a



Joe Davis holds electron gun which he hopes will be used to create an art work in the heavens.

GLOBE STAFF PHOTO BY DAVID RYAN

world of deteriorating vision.

Goldring is a diabetic, and her eyesight is degenerating as a result of that disease. While doctors are familiar with the external signs of her condition, the two artists are trying to make it possible for others to see it from the inside — to portray, for example, the strange visual impressions produced by a diagnostic procedure in which a laser beam sweeps across the retina.

In order to recreate this inner view, Grabill has had to develop some new video techniques, and has also made use in an artistic way of a variety of imaging methods developed for medical diagnosis. He interweaves these pictures, making extensive use of multiple images, to convey simultaneously the inner and outer viewpoints.

Paul Earls, who started out as a composer of electronic music and turned to projected laser images as an accompaniment for the music, is also interested in exploring how we see. "This isn't a scientific experiment at all," he says, pointing to a computer-controlled laser system that draws colorful pulsing images on the wall behind him, "but you find yourself exploring questions about vision and perception."

Otto Plene, director of the advanced visual studies center, points out that the relationship between artist and scientist sometimes goes further: "Every once in a while one of the artists makes something that imparts or suggests ideas in science or technology."

Artists and technology

Most of the flow of instruments and techniques is, of course, from the researchers and engineers to the artists. But the transfer in the other direction is not insignificant: Composer and laser artist Earls has devised laser-beam control systems for his performances that may have industrial applications; Brookline-based light sculptor Alejandro Sina has invented a new kind of neon light that is free of the usual bulky connectors and power supplies; video artist Grabill's portrayal of a patient's-eye view of an illness may give new understanding to the doctors who deal with that condition; and space-age sculptor Davis' planned artificial aurora may actually provide some new insights for scientists studying the workings of the Earth's magnetic field.

But such spinoffs are not the object of these artists' work, and indeed seem to be of little concern

to them. For example, when Sina is asked whether his neon technology is patentable, it's a question he has not really thought about before.

Davis is more emphatic in his disavowal. After years of trying to persuade NASA officials of the scientific merits of his art project, he now says, only half in jest, that "We've been thinking of letting a few scientists participate in our project — but only if they can justify their participation in terms of art."

The statement is intentionally ironic, but the sentiment is real and seems to be widespread: This art may be technological in its look and in the means of its production, but its purpose has nothing to do with utility.

Summing up the artist's function in a technological era, Plene says: "The artist always has had a very strong role in making the connection between the metaphysical world of the stars... and the physical world, the earthly world, the factual roots with which we live when we walk on the asphalt. This is just continuing the tradition that the artist has always lived for — placing markers in that everyday world in which we live."

THE WALL STREET JOURNAL

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★ EDITION: FINANCIAL

TUESDAY, DECEMBER 10, 1985

CINCINNATI, MISSOURI

Spaced-Out Artwork Adds Allure to Flights Of NASA's Shuttles

A Balloon as Bright as Venus, Messages in Dolphin Talk May Both Make the Trip

By DAVID STIPP

Staff Reporter of THE WALL STREET JOURNAL

As part of a campaign to make its mission more appealing to the public, NASA is opening the space shuttle's doors to artists it might once have dismissed as space cadets.

Last year, the shuttle carried an abstract glass sculpture by Prescott, Ariz., artist Joseph McShane. Another art payload that has been accepted for launch is described by its creator, Lowry Burgess, as "a cube of nothing searching for itself in minus time." Still other artists applying for shuttle space want to send a greeting to other worlds in the form of dolphins' voices and to blow giant bubbles in space.

Few artists, though, are as ambitious as Joe Davis, a fellow at Massachusetts Institute of Technology's Center for Advanced Visual Studies and one of the first artists to request shuttle space. With help from MIT engineers, he is assembling a sort of high-tech cattle prod to be carried on the space shuttle. It would shock atoms in the upper atmosphere; the atoms, in turn, would emit "screams" of light—as they do in a neon light—says Mr. Davis. Down here, according to his calculations, people would see a brief aurora—something like the quickly fading grin of a Cheshire cat.



After the Aurora

All systems are go at NASA. Mr. Davis plans to deliver his compact, push-button aurora-maker by the end of 1986. (NASA says it will fly Mr. Davis's device if it doesn't interfere with shuttle operations—a fairly big if, adds a NASA spokesman, given the device's planned high-voltage emissions.) After the aurora project, he wants to orbit an inflatable version of Stonehenge and to use robots to carve out giant patterns on the lunar surface. "These ideas may sound outlandish now, but they won't" after the aurora project is completed, he says.

Dealing with artists isn't new to NASA. In fact, the agency has commissioned artists since the early 1960s to make realistic paintings of astronauts and rocket launches. But such works "aren't really space art," asserts Mr. McShane, the sculptor. "They're space illustration."

Outer space may be one of the most inspiring new mediums for art since cave painting, in part because artists are enthralled by the possibility of making statements on a cosmic scale. Mr. Davis, for instance, hopes to create dozens of auroras from the orbiting shuttle—enough to be seen by almost everyone on earth.

Campus Calendar
DECEMBER 1985Look! Up in the sky!
It's a bird! It's a plane! It's...

A piece of sculpture by a Boston artist will be the first work of art to be taken into outer space. *The Boundless Aperture*, an art work by Massachusetts College of Art Professor Lowry Burgess will be the first nonscientific payload to fly into outer space aboard a NASA Space Shuttle in May of 1986.

The Boundless Aperture is a set of cubes centered around a vacuum chamber whose inner surfaces are holograms of nothing. This cube of nothing floats in a larger cube of 36 waters, including 18 rivers, from all over the world which was distilled into one fluid at the Dead Sea. Dissolved and suspended in this purified water are minute quantities of each of the chemical elements of the periodic table to form a cube that contains all of the elements of matter.

On the surfaces of the larger cube are holographic texts. In bright light the texts expand from the surface of the cube into outer space proclaiming messages of release and reassurance.

Upon its return to earth *The Boundless Aperture* will be placed inside a petrified sycamore tree brought from the bottom of the Grand Canyon. The tree and the cube will hover in a permanent magnetic field inside a massive stone outcrop beside Sandy Pond, near Walden Pond, in



MCA Professor Lowry Burgess and his "Boundless Aperture."

Massachusetts.

The Boundless Aperture has been in part funded by the DeCordova Museum and the Massachusetts Artists Foundation.

Lowry Burgess is Professor and Director of the Graduate Fine Arts and Design programs at the Massachusetts College of Art in Boston. He is also a Fellow and Senior Consultant at the Center of Visual Studies at M.I.T.

COUNCIL FOR THE ARTS AT MIT

The Council for the Arts works within the Office of the President to support and foster the arts at MIT. Members of the Council are alumni and friends of the Institute who have demonstrated scholarship, creativity, or distinguished service in the arts. The Council operates through a number of standing committees and a professional staff. Funds for Council operations are raised entirely from members and from friends. All gifts to the Council receive full alumni credit. We welcome comments, inquiries, and support.

Council for the Arts at MIT
Room E15-205
Cambridge, MA 02139
617/253-4003



Jerome B. Wiesner, Chairman
Helvi McClelland, Executive Director

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Design and paste-up: Alison Shafer

Music

Japanese Koto Music* - Norio Eiguchi, Yoko Gates & Ralph Samelson, direct from Carnegie Hall, MIT Japan Science and Technology Program/Japan Society of Boston/MIT Center for International Studies concert, Feb 12, 7:30pm, Rm 10-250. Tickets: \$5/students; \$7.50/general.

MIT Gospel Choir* - Black History Month at MIT concert, Feb 13, 12noon, Lobby 7.

Noon Hour Chapel Series* - Virginia Sindelar, flute and Richard Schilling, guitar, Thurs, Feb 13, 12:05pm, MIT Chapel. Free.

MIT Chamber Players Series* - Marcus Thompson, music director, Sat, Feb 15, 8:30pm, Kresge Auditorium. Free.

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

MIT Gospel Choir* - Black History Month at MIT concert, Feb 20, 12noon, Lobby 7.

Noon Hour Chapel Series* - Kevin Brau, baritone and Herbert Burtis, harpsichord, Thurs, Feb 20, 12:05pm, MIT Chapel. Free.

Guest Artist Series* - Vermeer Quartet, performs Mozart, Berg and Ravel, Fri, Feb 21, 8:30pm, Kresge Auditorium. Free.

MIT Concert Band* - John Corley, director, features the Boston premiere of this year's commission, *Black Sun* by composer Thomas McGab, Sat, Feb 22, 8pm, Kresge Auditorium. Free.

MIT Gospel Choir* - Black History Month at MIT concert, Feb 27, 12noon, Lobby 7.

Noon Hour Chapel Series* - Music of South America, Thurs, Feb 27, 12:05pm, MIT Chapel. Free.

Experimental Music Studio - New Musical Resources Series, Fri, Feb 28, 8pm, Kresge Auditorium. For info, call x3-7441.

MIT Affiliated Artist Series* - Richard Given, trumpet, Sat, March 1, 8:30pm, Kresge Auditorium. Free.

Theater

The Cavern - by Jean Anouilh (Lucienne Hill translation) - MIT Dramashop, modern takeoff on 19th century melodramas, with live orchestra to heighten effects, directed by Dr. Robert N. Scanlan, director, Feb 13-15, 8pm, Kresge Little Theatre. Admission: \$5; \$4 students/seniors - Box Office in Lobby 10. Reservations, x3-4720. Information, x3-2877.

Trent Arterberry (Mime) in Concert* - Student Center Committee presentation, Feb 15, 8pm, Kresge Auditorium. Reserved seating on sale, Lobby 10. Tickets: \$2,3,4.

Arsenic and Old Lace* - MIT Community Players production, Feb 21-23, Feb 27-28, March 1, 8pm, Kresge Little Theatre. Tickets: \$4/students, MIT affiliates, senior citizens; \$6/general. Reservations: x3-2530.

1001 Black Inventions* - Pin Points Theater, Washington, DC Production, Black History Month at MIT drama and comedy with audience participation, Feb 25, 7pm, Student Ctr Sala de Puerto Rico. Admission: \$2.



Trent Arterberry, nationally acclaimed mime performer, will present his unique one man show Saturday, Feb. 15, at 8pm in Kresge Auditorium. Tickets, on sale through Friday, Feb. 14, in Lobby 10, are \$2-4. Hailed as America's premier mime artist, Mr. Arterberry's performance of comedy, dance and drama is enhanced with lighting, sound and special effects. The show is sponsored by the MIT Student Center Committee.

Dance

Western Square Dancing* - Tech Squares Club Level dancing and rounds, Tues, 8-11pm, Student Ctr 2nd Floor. Dennis Marsh, club caller & instructor; Veronica McClure, club cuer. Recorded info: x5-9126 dorm.

MIT Dance Workshop Classes** - Beginning Modern Dance Technique, M/W, 3-5pm, DuPont T-Club Lounge; Intermediate Modern Dance, T/Th, 5:30-7pm, Walker 201; Improvisation, Th, 1-3pm, Walker 201.

MIT Contemporary Dance Club* - Cynthia Mallick, instructor, Aerobic, M/W, 3-5pm; Jazz I, M, 7:30-8:30pm; Jazz II, W, 7:30-8:30pm, all at McCormick Gym. Fee: \$3/single class, \$4/non-MIT. Free to McCormick residents. Info: call 723-7081.

Children's Dance Classes** - Pamela Day, instructor. Creative Movement/Modern Dance classes for children ages 3-9. Classes, Fri afternoons. For info, call Pamela, x3-5791, T/Th mornings or 648-4838 eves/wkends.

Rhythmic Gymnastics Classes for Women** - MIT Women's League classes, Fri, 12-1pm, Rm 10-340. Info: Helena, 526-2396.

Exhibits

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

David and Sandra Bakalar Sculpture Gallery - Alexander Calder, Artist and Engineer, through April 13. Reception: Feb 28.

THE MIT MUSEUM

MIT Museum Bldg - A Continental Eye: The Art and Architecture of Arthur Rotch, 166 watercolors in which the

19th-century Boston architect recorded his impressions of Europe and the Near East between 1871 and 1892, through April 5. **Sculpture by Beverly Benson Seamans**, Feb 15 through July 26. **Three Photographers**, photos by Linda Cucurullo and Gordon Thomas (MIT Libraries staff), and Carolina Salguero (formerly of MIT Dept of Architecture), Feb 26 through April 19. **Minor White: Photographs**, 102 prints dating from the 1930s to 1968, through March 1986. **Gjon Mili '27: A Tribute**, Born in Rumania, world famous photographer Gjon Mili studied electrical engineering at MIT and pioneered in the use of electronic flash and multiple exposure photographs. In 1938 he began doing stories for Life magazine, ongoing. **Of Aerostatic Machines: Early Ballooning in France and Britain**, Prints from MIT's Vail Collection illustrate the development of ballooning as a science and sport including fanciful inventions for steering balloons, and aerial views of Paris and other cities, ongoing. **Light Sculptures by Bill Parker '74**, A synthesis of scientific knowledge and artistic composition gives expression to these changeable, touchable plasma sculptures, ongoing. **Physics at the Laboratory for Nuclear Science: 35 Years at LNS**, through Feb 28. Hours: Weekdays 9am-5pm, Saturdays 10am-4pm.

Compton Gallery - Images of Infinity: Photomontages by Yulia Lipchitz, 50-60 photographs and photomontages reflecting the artist's personal vision, through March 8. Hours: Weekdays 9am-5pm, Saturdays 10am-4pm.

Hart Nautical Gallery

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

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

Corridor Exhibits

Corridor Exhibits: Building 1 & 5, 2nd floor: John Ripley Freeman Lobby, Building 4: Norbert Wiener, Karl Taylor Compton. Community Service Fund, Ellen Swallow Richards. Women at MIT. An overview of the admission of women at MIT. Five photographic panels with text documenting the circumstances that increased the number of women in the classroom since Ellen Swallow Richards. Building 6: **Laboratory for Physical Chemistry, Building 8:**

OTHER EXHIBITS

Institute Archives and Special Collections - Planning the New Technology. Part Two: Constant Desire Despradelle. Part two of a three-part series about the relocation of MIT from Copley Square to Cambridge portrays the impressive design of architect and teacher Despradelle. Though he died before the project began, several of his ideas were incorporated into the ultimate plan by his successor, William Welles Bosworth. Hall exhibit case across from 14N-118.

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

Jerome B. Wiesner Student Art Gallery - for 1986 scheduling, any MIT student or student group interested in showing or performing art in the Gallery, call Andy Eisenmann, x3-7019 in Rm W20-429, M-F, 9-5.

Sports

HOME EVENTS: Feb 13: M's Volleyball vs Northeastern, 7pm; W's Basketball vs WPI, 6pm; M's Basketball vs WPI, 8pm. Feb 14-16: Rifle NECRL Championship, NRA Collegiate Sectionals 8am. Feb 14: Indoor Track vs Bentley & UMass-Boston, 6pm; Wrestling vs Western New England, 7pm. Feb 15: M's Swimming vs Bowdoin, 12noon; W's Swimming vs Bowdoin, 2pm; M's Fencing vs CCNY, 1pm; W's Fencing vs CCNY, 1pm; M's Basketball vs Suffolk, 2pm; W's Gymnastics vs Conn College, Smith, 2pm; Squash vs Stony Brook State, 2pm; M's Ice Hockey vs Brandeis, 2pm. Feb 16: M's Ice Hockey vs NJ Tech, 2pm. Feb 17: Wrestling vs University of Lowell, 7pm; M's Basketball vs Tufts, 7pm. Feb 19: M's Fencing vs Harvard, 7pm. Feb 22: W's Gymnastics vs Bridgewater State, 2pm; M's Basketball vs New York University, 7pm. Feb 23: M's Volleyball vs Dartmouth, 2pm. Feb 24: W's Swimming MIT Invitational, 7pm. Feb 27: M's Volleyball vs Springfield, 7:30pm. Feb 28-March 1: Indoor Track New England Championships, 6pm.

Wellesley Events

Jewett Arts Center* - African Art of the Dogon. Selections from the Hans Gugenheim Collection symbolizing the complementary duality of natural and social order in Dogon culture, through March 23. **Nic Nicosia: Recent Photographs.** Includes selections from his most recent series, *The Cast*, through March 23. **Clay, Paper, Fabric and Glass Workshop Experiments.** Examination of selected works produced in contemporary workshops by leading artists, Feb 15 through March 23. **Contemporary Arts: An Expanding View.** Selected works by contemporary artists which transcend the historical concept of craft, Feb 15 through March 23. **Contemporary Prints from the Permanent Collection.** continuing.

Feminism* - Prof Dorothy Smith, University of Ontario, Feb 12, 7:30pm, Library Lecture Rm.

Women Making Music: The New Scholarship, Recordings and Concert Festivals* - Judith Tick, visiting research scholar, Ctr for Research on Women, Ctr for Research on Women Luncheon Seminar, Feb 13, 12:30-1:30pm, Cheever House. Bring bag lunch; coffee provided.

Everyone is a Minority* - Don Polk, executive director, Urban League of Boston and 8 students representing 8 minorities, Chaplaincy/Intercultural Awareness Now (ICAN)/Affirmative Action Committee Panel Discussion, Feb 13, 4:15pm, Jewett Auditorium.

Tupelos Concert* - Feb 14, 8pm, Jewett Auditorium.

How Children Misread Dictionaries* - Prof George Miller, Princeton University, Henry Luce Lecture, Feb 20, 7:30pm, Science Ctr Rm 377.

A Spectrum of 20th Century Music* - Concert of Bartok, Crumb, Poggi Escot and Arlene Zallman presented in collaboration with the Wheaton College music faculty, Feb 23, 8pm, Jewett Auditorium.

From Billie to Lena with Jennifer* - Jennifer Lewis from *Ain't Misbehavin'* and *Dream Girls* recreates the performances of 6 famous black women singers, Feb 24, 8pm, Alumnae Hall Auditorium.

Presidents John F. Kennedy and Lyndon Baines Johnson* - Alan Brinkley, associate professor of history, Harvard University, Lecture, Feb 25, 7:30pm, Library Lecture Rm.

Corporate Policy and Women's Career Development* - Bette Woody, project director; Phyllis Schlessinger, visiting research scholar, Ctr for Research on Women, Ctr for Research on Women Luncheon Seminar, Feb 27, 12:30-1:30pm, Cheever House. Bring bag lunch, coffee provided.

South Africa* - Dennis Brutus, S African poet and activist, Lecture, Feb 28, 7pm, Houghton Memorial Chapel.

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

Send notices for Wednesday, February 26 through Sunday, March 9, to Calendar Editor Rm 5-111, before noon, Friday, February 21.

←Here & There→

Given its title, *The Fatal Equilibrium*, and its publisher, the MIT Press, it might appear to be a work on some aspect of physics. But that just shows how wrong assumptions can be, as any mystery reader knows. The MIT Press, has published, of all things, a murder mystery. And it's doing very well, thank you, already into a second printing of 2,500 after selling out its first order of 5,000.

Actually, the novel doesn't depart all that much from the academic scene. It's written by two economics professors, its locale is Harvard and its protagonist is a professor. The authors, William Breit of Trinity University and Kenneth Elzinga of the University of Virginia, write under the pen name Marshall Jevons (after two 19th century economists who introduced the theory of marginal utility, which plays a part in the book). Breit and Elzinga have written two economics books as well as an earlier mystery.

And how did they come to write this book about campus skulduggery for the MIT Press? Breit explained to a reviewer that he was at an economics conference in Boston when a representative of the Press approached him. "He said they wanted to publish a mystery," Breit said, "but they didn't want to go too far away from what they were publishing and they liked the idea of a mystery about the world of economics."

Carol M. O'Connor, publicity manager for the MIT Press, said sales have been helped by good notices, including one in the New York Times Book Review. The book has been selling particularly well, she added, at gatherings of economists. In addition, Ballantine books has acquired mass-market paperback reprint rights to *The Fatal Equilibrium* through MIT Press rights director Trudihope Schlomowitz for a \$7,500 advance against a 10 per cent royalty—"a very big deal for us," Ms. O'Connor commented. The authors, she said, are working on a third mystery—also on an economics theme. Will the Press publish it? Ms. O'Connor sounded hopeful.

Recent awards and honors:

—Economics professor **Jerry A. Hausman** has won the American Economics Association's John Bates Clark medal, given every other year to an outstanding economist under forty. Professor Hausman was cited for his contributions to economic theory and for his empirical analyses. He is the fifth member of the MIT Department of Economics to get the award since Professor Paul Samuelson received the first in 1947.

—**Robert W. Mann**, Whitaker Professor of Biomedical Engineering, has been named a Fellow of the American Society of Mechanical Engineers. The Fellow grade is conferred upon a member with at least 10 years of active engineering practice who has made significant contributions to the field. The announcement cited Dr. Mann's work on communication and mobility aids for the blind and on cybernetic prostheses for the amputee, as well as his pioneering involvement of students in design undertakings.

—**Dr. Kerry A. Emanuel**, associate professor in the Department of Earth, Atmospheric and Planetary Sciences, received the American Meteorological Society's Clarence Leroy Meisinger Award "for highly original advances in mesoscale meteorological theory and interpretation of observations." Professor Emanuel received the SB at MIT in 1976 and PhD in meteorology in 1978.

—The Research Program on Communications Policy has announced co-winners of the 1986 Ithiel de Sola Pool Research Award: **Jolene J. Kiolbassa**, a graduate student in political science, and **Lori Wallach**, a Wellesley College senior. They will be conducting research on the impact of televised political advertising at MIT's Audience Research Facility. The facility, dedicated to the study of media effects and audience response to communications technologies, is located in the Liberty Tree Mall in Danvers.

—**Bethann Friedman** and **Patricia G. McCaffrey**, graduate students in the Department of Applied Biological Science, have been awarded a Fulbright Collaborative Research Grant for research in Japan. Both graduate students are PhD candidates working in the laboratory of Professor **Marsha R. Rosner**. Ms. Friedman will spend six months at the National Cancer Center Research Institute in Tokyo; Ms. McCaffrey will do research at the Kobe University School of Medicine.

Among MIT faculty members on the road in January were mathematics professor **Victor W. Guillemin**, who spoke on "zoll surfaces" at a meeting in New Orleans, La., sponsored jointly by the American Mathematical Society and the Mathematical Association of America, and **Robert M. Fano**, professor emeritus of

electrical engineering, who discussed lifelong education for engineers at a conference at Texas A&M University.

Going on the road in March will be **Dr. Martin Yarmish**, principal research associate, and **Lucille P. Markey**, Scholar in the Department of Chemical Engineering, who will speak at a national colloquium on "Protein Engineering and Bioprocessing" sponsored by the Michigan Biotechnology Institute. His topic: "New developments in protein recovery: biospecific absorption with monoclonal antibodies."

Sportsnotes:

—After the Boston Patriots beat the Miami Dolphins in the Orange Bowl to gain the dubious distinction (as it turned out) of meeting the Chicago Bears in the Super Bowl, whose picture should appear in color the next day on the front page of USA Today but that of **Anthony J. Ippolito** of Woburn, a Physical Plant employee who went to Miami for the game. He was shown celebrating the Pats' victory while wearing a "Squish the Fish" T-shirt.

—MIT junior **Jeri Ikeda** of Hawaii has been named to the Adidas Intercollegiate Soccer Association Women's Academic All-America Team. Ikeda was the only New England player selected to the first team.

—MIT's 36th and newest intercollegiate varsity sport—men's volleyball—is coached by a woman, **Karyn Altman-Velazquez**, a 1978 graduate in civil engineering who also serves as head coach of the women's volleyball team. Men's volleyball has been a club sport for the past decade. The first home game will be against Harvard next Tuesday (Feb. 11) at 8pm.

PRESS CLIPPINGS:

—Two MIT faculty members in the Department of Humanities have had reviews recently in the New York Times book review. History professor **William B. Watson** reviewed *Orwell: The Lost Writings*, edited by W. J. West, consisting largely of a group of hitherto unknown radio scripts the author George Orwell did for the BBC in World War II. The Times notes that Professor Watson, whose specialty is modern European history, is writing a book about "Hemingway, Dos Passos and Joris Ivens in the Spanish Civil War." Literature professor **William J. Paul** contributed a review of *Double Exposure: Fiction Into Film*, by Joy Gould Boyum. Professor Paul, the author of *Ernst Lubitsch's American Comedy*, teaches literature and film at MIT.

—A study by management professor **Phyllis Wallace**, tracking more than 322 Sloan School graduates, 35 per cent of them women, was reported by Boston Globe economics writer David Warsh. The good news from the study, he wrote, is that young women managers appear to be keeping pace with their male colleagues, in terms of salary, in the first five years of their working lives. The bad news, according to Warsh, is that the women work more hours per week and experience more stress than their male counterparts. Assisting Dr. Wallace in the study were Sloan graduates **Ming-Je Tang** and **Cathleen R. Tilney**.

—The Boston Herald reports that university radio stations in the Boston area, including MIT's WMBR, are playing music that more commercially-oriented stations ignore. The story quotes WMBR's music director as saying, "College radio is really life's blood for the underground music scene. For the most part, these bands are too loud, too abrasive or too poorly recorded to get commercial airplay."

—A story in The Washington Post on "Arms and America's Fortunes" began this way: "Next spring, almost one-third of the nation's best young engineers will leave the Massachusetts Institute of Technology to begin designing weapons." MIT's **Robert K. Weatherall**, director of Career Services and Preprofessional Advising, pointed out later in the piece that the majority of MIT graduates end up in commercial enterprises, noting that many students today view the entrepreneurs of Silicon Valley as more innovative and less bureaucratic than the defense giants of the Los Angeles basin. But in some fields, he acknowledged, departing students find little demand for their talents outside the world of weapons.

—According to the Houston, Texas, Post, MIT was eighth in the nation this year in enrolling freshmen who were Merit Scholars, with 143. Harvard led all universities with 318, followed by the University of Texas at Austin, 271; Rice University, 179; Texas A&M University, 168; Yale, 167; Princeton, 163; and Stanford, 153.

CLASSIFIED ADS

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Deadline is noon Friday before publication.

For Sale

Bus! ...ell Banner Astro 400 Celestial telescope, 400 pwr scope w/3 lenses, 20mm, 12mm, 4mm, 2X cnvrtr, sun & moon fltrs, std & sighting scope, \$140. Peter, x3-5416.

Ranch mink full-length coat, sz 12, exc cond, w/rt \$1,000, ask \$800 or bst. Jane 275-7802 aft 6pm.

Wh wickr bthrm shlf, br nw, nvr usd, \$15; 3-hook wden coat brd for wall, \$4. Call x3-6256.

Lrg elgt Scandinvn DR tbl & 6 chrs, nw \$2,100, ask \$650; Sealy Posturpedic full mtrrs, bx & frm, \$180. Call 969-9106.

Head skis, 180 w/bndngs, \$15; Alpine boots, sz 7 1/2, \$15; Raiche boots, sz 5 1/2, \$25; x-entry boots, sizes 42 & 43, \$20 & \$25; orange easy chr, nw, \$20; dsk chr, \$15; sm rnd tbl, \$10; rctnglr tbl or stereo bch, \$18; GE tstr ovr, \$18; grtz htr, \$18; brwn cord 3-pc suit, M's sz 38-40, usd 2X, \$35; SCM mnl typwrt w/carryng case, \$15; ceiling fixtra, \$5-20. Call x3-3175 or 332-8251.

Wedding gwn, desgnr orig, drop waist bodice, adrnd w/Venice & Schiffl lace & beads, veil w/blushr & cathdr train, perf cond, fits sz 11/12 or smllr w/altertn, inc full petticoat, \$700 or bst. Sandra, x3-4444.

EMS dwn parka, M's sz M, rst, almt nw, \$35; fig skts, M's sz 12, \$10; prtbl lmp, \$25; swingng brss wall lmp, \$25; typwrt tbl, \$10; 8 wine glasses, \$10; asstrd bhvdr itms & M's clthng & boots; tckt to Bavarian Symphony Orch concert, 4/25 (Mozart & Berlioz), \$12; tckt to Boston Chamber Music Society concerts, 3/2, 3/23, 4/20, \$6 ea. Jim, x3-3751 or 625-9431.

Healthworks (Porter Sq) membrshp, 8 1/2 mo left, \$250, inc transf fee, compare to \$395 currnt annual rate. Call x3-6261.

13 rolls, 15"x39" of 6", R-19 insulatn, \$120. Ree, x3-6321 or 666-8242.

Hvy-dty Singer industrl straight sttchtr, foot w/king sewing mach, sttchs thru leather/vinyl, formica top, nw mtr, exc cond, \$450. Call 641-1454 or 641-3164.

BSO tckts, sgl or for remander of Fri Series B season, 2pm perf, 2/28, 3/21, 4/4, 4/18, 1st balc lft, \$102 or \$25.50 ea. Margaret Petersen, 729-3250.

Spinet piano, mnt cond, ivory keybrd, \$850. Call x3-4574 or 729-4590 aft 3:30pm.

Wurlitzer console piano, 2 yrs old, \$1,500. Joanne, x3-6603.

Regency K-100 progrmmbl police/fire scanner radio, \$140. Bob, 489-3240 aft 5pm.

Ski boots: Nordica sz 7 1/2, Caber sz 8; ice skts, sz 7 1/2. Zvi, x3-5095 or 577-9747.

Digital Electronics breadbrng kit, inc blt-in pwr supply, pulse genrtr, logic swtches, pshtbttns, solderless breadbrd, like nw cond, \$175. Call 648-6389.

Smith-Corona elec typwrt, crtrdge rbbn & corr tape, pica, like nw, \$60 or bst. Elaine, x3-3449.

DR set, hi-qilty fruitwd, ovl tbl w/glss top & 3 leaves, 5 chrs, lrg breakfast, exc cond. A.H. Shapiro, x3-2009 or 522-4418 eves.

Provncl velvet LR set w/wden arms, gld sofa & chr, 1 green chr, gd cond, ask \$600. Call x3-4961, M-Th, 9am-2pm.

Q-sz mtrrs, gd cond, \$75. Larry, x4195 Linc or 1-372-0090.

JVC DD-99 3 head cass dck, exc cond, \$300. Call x3905 Linc or 655-4871.

2 Ford rims, 15", 5 hole. Mac, x2041 Linc.

Commodore 64 cmprtr sys, C64, 1701 colr mnt, 1541 dsk drv, parallel prntr intrfc, cbls, prgrms, books, mags, etc, ovr \$1,400 orig cst, sell for \$600. Paul, x8-3370 Draper.

Pwr supply 135W for IBM PC or PC/XT, \$70; Every Edge colr 16 shade monochrome video brd w/prntr port, \$230. Michael, 494-0467.

Gateleg tbl, 36x48 opn, dk wk, \$90. Charlene, x3-8902 or 492-4364 aft 6pm.

Scand Design bge sofa w/cushns, \$300; ktchn tbl, \$45; china cabnt, \$175; qlty twn bed, \$95; dbl bed, \$65; fold-up sofa beds, \$55/set; lmps, misc itms, evrythng mst go. Call 491-1044 aft 6pm.

X-entry skis, md in Norway, poles, boots, sz 8-8 1/2, usd 3X, like nw, \$60. Janet, x3-2566.

Kenmore frstless 12 c.f. fridge/frzr, \$250; Kenmore prtblperm install wshr, 1.4 c.f. \$200, Sears servc cntacts on bth, perf cond; Q-sz pltrm bed w/World O'Pedic mtrrs, med frm, 1 yr old, \$150; Steelcase 5-dwr dsk, blk w/wd veneer top, grt cond, \$50; colonl dinette set tbl, 47x36", 4 solid wd chrs, like nw, \$90; 5-dwr drsr, gd cond, \$20, mst sell, all prices nego. Keith, x3-1810 or 924-0791.

W's fig skts, sz 7, exc cond, skt grds inc, \$10. Suzanne, x3-3624 or Tom, x5-9244 dorm.

Place your odr now for frsh mapl syrnp, pts, qts, 1/2 gal. Call x3-7235.

72 VW bus parts, 2 snw trs on rims, trans, aux htr, htr bxes, bst offr. David, 494-9260 eves.

Panasonic tape dck, about 10 yrs old but in exc cond, mny featrs, \$30. John, 536-1303 eves.

9 RK-06 dsk pcks, ask \$50 ea. James, x3-3791 or 787-5564.

4 beehives, inc top/btm brds, 7 deeps, 12 shallows, othr eqpmnt, \$250. Darryl, x7505 Linc or 692-6650 (Westford).

Lrg comfy chr, old but in gd cond, \$20. Lynn, x3-6521.

Delta rad Sure Trac snw trs, 75R15 ww, almt nw (4.5K), \$60 pr. Harvey, x4267 Linc.

10-yr-old sofa, lt bl, 7' long, wrn but usabl, mst go soon. Call x3-5528.

19" b&w tv, \$15; sm bkcase, \$10; broilr ovr, \$10; prtbl sewing mach, \$35; Gerrard trntrl, \$30; Scand Dagn stereo bch, \$100. Call x3-1996.

Paine furn: lrg chst of drws w/mirror & bureau, can be seen MIT. Anne, x3-7494.

Vehicles

'89 Chevy Pick Up truck, 6 cyl, std trans, 8' stepside bed (nw flr in bed), bl, rms gd, 86K, \$695 or bst. Dana, x4580 Linc.

71 VW Beetle, ok for prts, rms ok but too rty, \$50 or bst. Les, x8-2283 Draper.

73 Ford Pinto sta wgn, 89K, rms well, gd ext, v gd int, gd mech cond, \$550 or bst. Paolo, x3-4046.

'73 Buick Regal, 8 cyl, auto, gd cond, relbl, \$500. Joe, x3-5260.

'74 VW Bug, nw alt, btt yr old, \$300. Tony, x3-3981 Draper or 668-0961.

'74 Olds Omega, mny nw prts, rms well, \$250 or bst. Gian-Paolo, x3-7921 or 354-5534.

'74 Ford Mustang, 4 cyl, 100K, trs/batt gd cond, gd radio, rms well, looks ok considng Boston drvsr, ask \$700. Carol, x3-0551.

'75 Olds Cutlass, 4-dr hrdtop 41K, exc cond, ps, pb, pwr wndws & dr lcks, a/c, nw brks & exh sys undr warr, 6 nw trs, rcnt tune-up, avlbl early March, \$995. Call x3-5915 or 734-9150 eves.

'78 Ford LTD sta wgn, 60K, ps, pb, a/c, no dats or rst, gd cond, \$1,200. Call x3-2223 or 494-1401.

'79 Ford Econoline E100 van, 6 cyl, 300 cid, aluto, ps, custmzd for campng, v gd cond, \$4,000. Call x2811 Linc or 456-8886.

'79 Mercury Cougar, auto, a/c, ps, pb, AM/FM/cass stereo, 55K, exc cond, \$3,700 or bst. Rose, x3-4263 or 547-4647 eves.

'80 Dodge Colt htchbck, blue, AM/FM, 55K, gd mpt, gd spaae, \$1,250 or bst. Ralf, 734-9625.

'81 Ford Escort, wh, 4-spd, 2-dr, 59K, dlx AM/FM/cass stereo, nds spkrs, \$2,100. Julie, x3-6597.

'82 Buick Le Sabre, 4-dr, auto, diesel, exc cond, no rst or dnts, mst sell ASAP, ask \$2,900 or bst. Vanni, x3-8932 anytime.

'82 Toyota Corolla, 2-dr sdn, auto, AM/FM/cass stereo, only 31.5K, ask \$4,800. Matt, x3-2360 or 641-4478 aft 6pm.

'82 Chevette, 4-dr htchbck, auto, a/c, gd cond, mst sell nd \$ immed, bdy in gd cond, \$1,150 firm. Call 734-4440.

'83 Honda Accord, 4-dr, absolutly perf, burgndy, stereo tape, othr goodies, \$6,500. Prof Dewey, x3-2235.

Housing

Malden, 3BR apt, mastr BR w/wlk-in closet, tile bth, sunprch, w/w, wd hkup, on T, 10 min to MIT, \$700+ utls. Call x3-5124 or 321-6420.

Animals

Gucci, orange, frndly & neutrd 10-mo-old cat who loves people nds hm. Call x5-7624 dorm.

Wanted

Viastng prof sks housng, 9/86-6/87, nd 2-3BR & gd schools, exc refs. Call x3-6809 or 313-663-3102.

Someone to look aft 2 daughtrs, 1 & 6 yrs old, M-F, in our hm in Arlington, live-in or live-out, lt hshld reqstd. Call x3-2895.

Vistng Finnish MD resrchr MGH & fmlly of 4 sks to rnt furn hse/apt, safe, quiet nrhhd, frm 7/1. Matti, x3-4152 or 472-0769.

Comic books in gd cond or btr, will buy ind issues, series, colctns, competitve prices. Dan, x3-2014.

New Zealand MD & wife sk 1-2+BR apt/hse to rnt/look aft frm late March. Matthew, x3-6733.

Roommates

Nonsmkg F wntd to shr mod 2BR apt in Newton Corner, \$389.50 inc ht, carptd, conv trnsprt to Boston. Jan Kim, 438-6565 aft 6pm.

Westwood, shr lux 7 rm hse, 2b, 2 car garg, frpc, w/d, hdwd, on bus line to Bos, 1 1/2 hr frm MIT, \$400+ utls. Jawaid, 329-7700 x3192.

Carpool

Sk early am ride, Brighton-MIT, arr 6:30am, will shr expnses. Jeff Brown, 491-8800 x3142.

Rdrs wntd to/frm Brookline, 8:30-5:30. Helen, x3-1467.

Lost and Found

Lost: orange & brwn ski hat & green lthr ski glvs, approx 2nd wk in Jan. Elaine Wagner, x3-3449 or 547-4820.

Found: silvr mtl Quintel digtl wtch, 1/27, claim Lost & Found, x3-2996.

Lost: gld earrings w/hanging leaves, last wk in Jan. Call x3-3708.

Found: 2/6 nr Burton House, M's college ring w/bl stone, identify initials & college. Call x5-7456 dorm, eves only.

Found: silvr chain, in Bldg 4 bsmnt, 2/3, describe & it's yours. Jim, x3-2831 or 491-1931 eves.

Miscellaneous

Typng, IBM Corr Sel II &/or Wang wrd prcssng, theses, proposls, corrspndnce, resumes, etc, 18 yrs exp. Debbie, x3-3386.

Wrd prcssng, rprts, manuscripts, theses, IBM mach w/free dsk storage, lo rates, quantity disnts, guarnteed, busnss accts welcome. Susan, 494-1649.

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 outside the offices of the Special Assistant (10-215) 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.

Ken Hewitt 3-4267
Dick Higham 3-4278
Virginia Bishop 3-1591
Appointments:
Theresa McConnell 3-4274

Oveta Perry 3-1594
Kenneth W. Chin 3-4289
Sally Hansen 3-4275
Appointments: 3-4268
Maureen Howard 3-4268

Kim Bonfiglioli 3-4076
Appointments:
Nancy Collins 3-4077

Administrative and Academic Staff

Senior Technical Writer, Information Services, to coordinate news activities and various marketing activities for Information Systems. Will oversee collection of news from all areas within IS; participate in preparing news for the IS on-line news system; edit the IS computing newsletter; and prepare related hardcopy announcements and advertisements as necessary. Will be responsible for planning and evaluation of news activities, and for some marketing research and marketing efforts in connection with news and related Publications functions. Position involves extensive contact with Information Systems staff at all levels, as well as with others involved in computing throughout MIT. Should have knowledge of text processing. Bachelor's degree required, or higher degree or certificate in relevant field desirable, and 3-5 years combined experience in at least two of the following fields required: technical writing, journalism, and marketing or public relations. Two writing samples required. A86-674

Editor and Production Manager, Campus Information Services, to assist Communications Manager in editorial and production assignments related to the publishing of course catalogues, directories, fiscal year reports, and additional publications for the Institute. Will be responsible for duties at all stages of production: editing copy for consistency and style, detailed production scheduling of publications, manuscript preparation and typesetting specification, accurate proofreading of galleys and page proofs, preparing dummy layouts and in some cases executing final camera-ready mechanicals, selecting and sizing of photographs, maintaining and updating photo file, contacting typesetting and printing firms for prices, handling distribution of publications. Will also be responsible for administrative and budgetary duties associated with publication production. Excellent editing, organizational, and interpersonal skills necessary. Attention to detail is essential. Word processing and university-related experience helpful. Some physical work involved in moving cartons and distributing publications on campus. Bachelor's degree in English, Communications, or closely related field required, with a minimum of 3 to 4 years experience in related publishing or graphic arts field desired. NON-SMOKING OFFICE A86-673

Supervisor, Mechanical Services, Physical Plant, to assume the responsibility for the supervision of up to 15 skilled mechanics. Will provide technical expertise for the Automatic Temperature Controls group. Will be responsible for evaluating and trouble shooting HVAC Control problems and for the day-to-day implementation of Institute policies. Minimum of 5 years experience in troubleshooting and repair of pneumatic and electronic building temperature controls essential. Requires ability to diagnose electronic control problems to the component level required. 2-3 years in direct supervision of trades personnel desirable. Advanced technical school training in HVAC controls desirable as is an Associate's degree in engineering science or business administration. A86-672

Analyst Programmer II, Administrative Systems, to assist in development of external system specifications and translate into internal system specifications and computer programs. Will prepare program logic diagrams and overall data flow; test and document programs for operational use and future maintenance; assist applications programmers in programming, testing, and debugging techniques. Will prepare program modification or enhancement specifications for approval by senior systems analyst. Will establish file requirements and processing techniques; perform all the functions of applications programmer as required; assist users with program problems; attend classes, seminars and the like to develop and maintain knowledge of currently accepted programming standards and techniques. Requires 1-2 years experience in Revelation or other microcomputer database languages and familiarity with microcomputer local area networks concepts and facilities. Familiarity with Novell operating system and TCP/IP protocols desirable. An Associate's degree or equivalent combination of education and experience is necessary. Considerable experience in programming is essential. A86-671

Associate Editor, Alumni Association (Technology Review), to perform general editorial and writing assignments for *Technology Review*, including covering conferences and seminars, analyzing current issues in technology as reported in other magazines and through interviews, researching and writing short contributions, editing articles written by professional scientists and engineers, and assisting with commission material as well as selecting from manuscripts submitted by scientists, engineers, and professional writers. Familiarity with issues in science, engineering, and technology policy; and writing and editing skills appropriate to a general audience will be necessary. A86-670

Coordinator for Reunion Programs, Alumni Association, to plan, develop, and implement the 13 annual quinquennial class reunions. Duties include planning and developing reunion and off-year reunion programs; providing logistical support for all events; recommending time-tables and developing, coordinating and implementing all promotional programs for all classes; coordinating the registration process; and providing logistical support for Technology Day. A Bachelor's degree, preferably in business or administration, public relations, or hospitality industry, or the equivalent combination of education and experience preferred. Word processing experience helpful. A86-669

Administrative Assistant, Mechanical Engineering, to assist the Administrative Officer in the fiscal affairs of a major academic department. Will assist in the development, preparation and monitoring of department budgets. Will maintain and adjust when necessary payroll records for academic and nonacademic staff. Will assist faculty in the preparation and monitoring of research budgets. Will perform other administrative functions as requested, such as preparation of correspondence and reports, arranging for study, and recommendations for purchase of office equipment. Requires a knowledge of Institute accounting procedures. Attention to detail and ability to work independently are important. Experience in using a personal computer or the willingness to learn essential. At least 2 years of related experience desirable. Some college/accounting training helpful. A86-668

Communications Officer, Media Laboratory, to report to the Laboratory Director for coordinating corporate liaisons, publications, news and media relations and development. Will be responsible for reporting of research results to corporate sponsors; arranging for visiting research affiliates; hosting corporate visits; initiating and maintaining corporate connections via electronic mail system and an "electronic newsletter"; designing and maintaining press kits and Lab research archives to answer formal media requests; coordinating media requests with the MIT News Office; preparing and fact-finding for approaches to corporations and foundations for funding of chairs and support of discretionary funds; coordinating and interacting with MIT's Development Office and with the School of Architecture and Planning's Development Office. Some travel may be required. Bachelor's degree in Electrical Engineering or Computer Science and/or 3-5 years public relations, communications, industrial liaison experience; or equivalent combination of education and experience. A86-655

Research Associate, Laboratory for Information and Decision Systems, to participate in research program on distributed decision-making organizations. PhD required with demonstrated credentials in cognitive psychology and mathematical modeling of human decision processes. Previous experience in the design and analysis of computer-aided experiments in information-processing and decision-making by small organizations, such as command and control ones, is highly desirable. R86-908

Technical Assistant, Psychology, to design, run, and analyze experiments on visual processing in adults and language development in children. Position involves constructing stimuli (photographic and linguistic), programming a microcomputer, calling subjects, contacting schools and day care centers, testing children and college students, analyzing data statistically, writing up short descriptions of methods, performing minor maintenance of equipment. Familiarity with microcomputers, programming, statistics, and experimental design in psychology preferred. SB degree or equivalent background required. R86-901

Research Engineer, Laboratory for Electromagnetic and Electronic Systems, requires an electrical engineer to work in two specific areas combining knowledge of circuits with knowledge of computer operations. Will work independently and establish procedures for and manage LEES VAX 11/750 computer system. Duties will include interaction with vendor on maintenance, maintenance of files, supervision of hardware and software, and assistance of faculty, staff and students in the use of the equipment. In addition, will work with an established research group and contribute to the design and execution of experiments in power electronics and maintain a complex analog simulation system. Will be expected to design, construct and test circuits and systems using bipolar and Mosfet power transistors, thyristors (including gate-turn-off devices), high frequency magnetics, digital and analog integrated circuits, and microprocessors. Ability to effectively interact with vendors is required. Because of the nature of the academic laboratory environment, must have ability to supervise students and be able to interact effectively with faculty and staff. A Master's degree in Electrical Engineering is preferred, although consideration will be given to exceptional candidates with a Bachelor's degree and experience in systems operations for VAX equipment. R86-909

Research Staff/Microprocessor Programmer, Haystack Observatory, to work closely with the digital engineers in the debugging of both hardware and software, modifying code where required. Will at first work to become familiar with the hardware and software which has thus far been completed. Development of original code will also be required. Will be called upon to achieve as high a degree of commonality as possible in all of the code modules. Will also work closely with software designers who are coding the mini-computers for use in controlling the radar, reducing and processing its data and managing the large data bases which are required for the space surveillance operation. The "C" programming language is used throughout the project. Proper documentation of software is an integral part of the work. BS or Associate degree in Engineering or Engineering Technology, with emphasis on Computer Science and/or Programming necessary. Two years of programming experience, including assembly programming, preferably using Intel family microprocessors required. Experience in interactive hardware/software debugging using Development systems such as the H.P. 6400 or Intel's later (16-bit) systems is desirable. This position requires a security clearance or the ability to obtain one. R86-905

Research Associate, Laboratory for Information and Decision Systems, to participate in research program on distributed decision-making organizations. PhD required with demonstrated credentials in cognitive psychology and mathematical modeling of human decision processes. Previous experience in the design and analysis of computer-aided experiments in information-processing and decision-making by small organizations, such as command and control ones, is highly desirable. R86-908

Technical Assistant, Psychology, to design, run, and analyze experiments on visual processing in adults and language development in children. Position involves constructing stimuli (photographic and linguistic), programming a microcomputer, calling subjects, contacting schools and day care centers, testing children and college students, analyzing data statistically, writing up short descriptions of methods, performing minor maintenance of equipment. Familiarity with microcomputers, programming, statistics, and experimental design in psychology preferred. SB degree or equivalent background required. R86-901

Technical Assistant, Psychology and Brain Science, to provide a diverse and expanding array of technical support services to a large research group studying brain architecture, development, and function using a wide variety of traditional and innovative neuroanatomical, neurochemical, and neurophysiological techniques. Techniques currently include autoradiography, HRP histochemistry, receptor binding, immunohistochemistry, and numerous special stains. Major duties will include frozen sectioning, mounting, processing, coverslipping, and ordering of serial sections of brain tissue. Will be responsible for general maintenance, orderliness, and stocking of both the laboratory and a small animal surgery facility. Some work with small animals. Will work as part of a flexible and loosely structured team but often independently and with a minimum of supervision. Efficient work habits and strong organizational skills necessary. Must be able to coordinate activities and set priorities; schedule sometimes unpredictable. Facility with general laboratory biochemistry required. SB degree or equivalent background required. Experience with general histological procedures (cutting, staining, coverslipping) very desirable. Specific experience with brain tissue and techniques mentioned above helpful but less important than energy, enthusiasm, and the ability to learn and adapt quickly in a busy and dynamic laboratory. R86-900

Research Associate, Center for Technology, Policy and Industrial Development, to be the central source of information and analysis in the Program on the organization and performance of the world motor industry. Duties of the Industry Analyst will include: (1) maintaining a comprehensive, computerized data base on the international motor industry to be maintained on an IBM PCAT, to include data from governments, companies, unions and other sources and be available to researchers associated with the Program, and (2) providing analyses of competitive trends and emerging organizational patterns and production strategies within the world motor industry. These analyses will be written in a manner accessible to a wide industry audience and will be suitable for presentation at the Program's annual Policy Forums for senior industry executives, government officials, and labor leaders. Broad-based knowledge of the motor industry, particularly with regard to manufacturing procedures and producer competitive strategy necessary. Must have experience in developing and maintaining a data base using personal computers and generating reports from that data base. Minimum of three years work experience, preferably involving the motor industry, required. Must have ability to travel domestically and internationally; to negotiate diplomatically with governments, motor vehicle producers, and other sources of data around the world; and to make sophisticated presentations to groups of senior industry, government, and union officials. R86-885

Library Assistant III, MIT Libraries - Catalogue Department (temporary), to assist in a project for the processing of records for multivolume works, the individual volume holdings of which are to be linked to an existing online record in the MIT database. Duties will include maintaining file of records to be linked; photocopying and organizing copies of master shelflist records; printing records linked in the MARC Records Management System of the Libraries' new online circulation and editing system and maintaining a file of the printouts; preparing barcodes, shelflist photocopies and multivolume sheets for mailing to Divisional/Branch Libraries; and participating in linking routine holdings to existing records in the MIT database. High school graduate or equivalent and a minimum of one year direct/related experience required. Accurate typing of 40 wpm and attention to detail essential. Experience using CRT terminal desirable. This is a temporary position ending June 30, 1986. L86-230

Library Assistant IV, MIT Libraries - Catalogue Department (temporary), to participate in a project providing for the original cataloguing and online conversion of 11,250 scientific and technological publications issued by MIT from 1861 to 1974. Will convert the bibliographic records of MIT publications (technical reports) to machine-readable form directly online, according to AACRI catalogue code, OCLC bibliographic input standards, and MIT cataloguing policies. Will assign OCLA field and subfield codes and indicators, barcode publications, verify personal names and series in MIT and online authority files, and create new authority records for personal names. Will also resolve personal name heading conflicts and initiate correction to bibliographic records and authority files to reflect AACRI rules of entry; input catalogue records on the OCLC terminal from work forms prepared by cataloguers; edit online contributed and Library of Congress catalogue records based on cataloguers' written instructions; assist in retrieval of items for cataloguing from Divisional/Branch Libraries and the Retrospective Collection facility; and maintain statistics of items converted and input. High school graduate or equivalent is necessary; some college study preferred. Minimum 2.5 years direct/related experience required. Working knowledge of the MARC format, preferably in the OCLC Cataloguing Subsystem, and experience with CRT operations required. Experience using AACRI catalogue code desirable. Accurate typing of 40 wpm and attention to detail essential. This is a temporary position ending December 31, 1986, with possible renewal for second year. Will work Monday-Friday 8-4, 9-5, 10-6, or 11-7 (negotiable). L86-229, L86-228

Library Assistant IV, MIT Libraries - Catalogue Department (temporary), to participate in ongoing retrospective conversion of circulation titles to machine-readable form by converting MIT bibliographic records of Library of Congress classes monographs for which Library of Congress or contributed records exist online. According to requirements of the OCLC Cataloguing Subsystem, will assign appropriate content designators to MIT bibliographic data according to the MARC format, edit and update catalogue data online to conform to MIT policies and OCLC bibliographic input standards, and add MIT holdings information. Assign barcodes to converted holdings. Maintain statistics of titles converted. Perform auxiliary assignments as required. High School graduate or equivalent necessary. Some college preferred. Required 2.5 years direct/related experience. Experience using OCLC Cataloguing Subsystem highly desirable. Retrospective conversion experience highly desirable. Minimum typing speed, 40 wpm, accuracy and attention to detail essential. L86-219

Secretary/Staff Assistant

Administrative Secretary, Materials Processing Center, to provide secretarial and administrative support to faculty members and research group. Will advise supervisor of financial situations for laboratory personnel, monitor research records and accounts with large annual volume. Will also type materials for classes, manuscripts, proposals, etc.; compose letters, organize and maintain files and professional library; handle telephone inquiries; arrange meetings, and coordinate travel plans. Will perform other clerical and administrative duties as required. Must be able to effectively set priorities and work with frequent interruptions in a busy environment. Accuracy and attention to detail important. Familiarity with MIT procedures desirable. Knowledge of word processing (DEC/IBM) helpful. Business Administration degree or equivalent work experience necessary. Minimum 4.5 years direct/related experience required. NON-SMOKING OFFICE B86-224

Administrative Secretary, Office of the Dean for Student Affairs, will provide a variety of secretarial and administrative support services. Will have considerable interaction with students, parents, faculty and staff. Excellent secretarial, communication and organizational skills necessary; knowledge of word processors highly desirable. Ability to work both independently and as part of a team important. Position requires good judgment, patience, tact and understanding. The ability to deal with confidential information necessary. Thorough knowledge of MIT desirable. Some overtime work may be necessary. Minimum 4.5 years direct/related experience required. NON-SMOKING OFFICE B86-193

Administrative Staff Assistant, Research Laboratory of Electronics (part-time), to perform all administrative, secretarial and clerical duties for two faculty and graduate student staff in RLE's Image Processing Group. Responsibilities include typing, filing, receptionist duties, copying, travel arrangements, scheduling seminars, maintaining filing systems, handling purchasing activities, maintaining group roster, and executing library searches. Will also handle academic work for one of two faculty. Excellent command of the English language and excellent typing skills of 65 wpm required. Ability to learn word processing system for producing papers, memos, correspondence, and proposals is essential. Math/Science background highly desirable, but not essential. Minimum 4.5 years direct/related experience required (post-high school education may count toward experience). Will work 28 hours/week, 9-5. B86-217

Senior Secretary, Sloan School of Management, to work for three faculty members in the Operations Management subgroup of the Management Science Area. Duties will include typing and proofreading correspondence, course materials, manuscripts, etc.; maintain complex calendar; schedule appointments; make travel arrangements; answer telephones; interact with students and outside visitors; process mail; monitor accounts; order supplies; and perform other general office functions. Must be willing to assume responsibility and work under minimal supervision. Will handle confidential material, work under pressure and be responsible for accuracy of materials. Knowledge of technical typing, word processor, and IBM PC preferred. Willingness to learn desirable. Excellent typing and organizational skills required and knowledge of MIT preferred. Minimum 2.5 years of secretarial experience required. NON-SMOKING OFFICE B86-239

Senior Secretary, Center for Information Systems Research, to provide secretarial support to two CISR research associates and handle CISR Working Paper Series. Will involve frequent contact with managers from private and public sector organizations, as well as with faculty and students from MIT and other universities. Duties will include typing correspondence and reports from rough draft or dictaphone using a Wang word processor; answering phones and screening calls; making travel arrangements; and preparing high-quality presentation materials using a Xerox Star workstation. Will also process working paper orders and payments; track subscriptions, and maintain inventory of papers. Will be part of team supporting CISR's seminars and annual conference. Must have excellent organizational, interpersonal, and secretarial skills. Word processing experience preferred. Ability to handle detail with accuracy important. Must have flexibility to function well in a busy environment and effectively set priorities. Minimum 2.5 years direct/related experience required. NON-SMOKING OFFICE B86-238

Senior Secretary, Medical Department, to work in the Social Work Service area. Will schedule appointments, arrange conferences, and provide general reception and secretarial support for three social workers. Duties will also include large volume of telephone and visitor contact; general typing from handwritten and machine dictations; statistical data preparation; maintenance of files; and some social work resource development. Will assist Coordinator of Institute Personal Assistant Program in matters related to program development, implementation and day-to-day operations. Will also work with support staff in Psychiatry Service sharing in providing relief coverage for both services. Good organizational, interpersonal, and communication skills desirable. Accurate typing, meticulous attention to detail, and ability to work well under pressure necessary. Minimum 2.5 years direct/related experience required. Previous secretarial experience necessary. NON-SMOKING OFFICE B86-236

Sr. Secretary, Laboratory for Manufacturing and Productivity (part-time), to perform secretarial duties which require some independent judgment in the application of office policies. Will do extensive word processing on the DecMate II including straight typing of manuscripts, proposals and papers; type class notes, schedules and letters from general outlines; transcribe from a dictaphone letters and some class notes. Will also proof-

read and answer phones for 3 professors and 1 laboratory line. Will field questions and direct calls from industrial and government sponsors and representatives and the MIT community. High school graduate or equivalent necessary. Prefer 2.5 years direct/related experience. Minimum typing speed of 60 wpm on DecMate II. Will work 20 hours/week (flexible). B86-232

Sr. Staff Assistant, Sloan School of Management, to support Deputy Dean and Administrative Assistant. Will interact with faculty and staff within and outside the Institute in support of Deputy Dean's varied administrative activities and committee roles and academic research in the field of marketing. Will coordinate and schedule appointments, meetings, seminars, luncheons/dinners, etc.; will disseminate materials and organize agendas as needed; type, proofread and reproduce reports, manuscripts, correspondence and similar material from rough draft. Involves considerable and complicated telephone contact requiring general knowledge of all of the Sloan School and the various departments, faculty, and their areas of research. Will maintain extensive and confidential personnel files of Sloan School faculty; sort, distribute, and review mail, prepare and issue calendar of Sloan School seminars to be published bi-weekly; make travel arrangements, prepare expense vouchers, and order supplies. Will also provide some administrative support for the office of the Associate Dean for Administration. Should be familiar with word processing and office automation systems. College degree preferred with 2-3 years of secretarial experience required. Excellent typing and interpersonal skills desirable. Should have word processing experience and general knowledge of personal computers. B86-231

Sr. Secretary, Center for Space Research, to support three research groups within the Center. Position is 75% secretarial function and 25% data clerk function. Duties will include word processing (using Macintosh and/or Pacific), xeroxing, mass mailings, general correspondence, proposals, publications, etc. Will also maintain various computer files (on software, etc.) as needed, under the supervision of a staff programmer. Strong secretarial skills required. Ability to work with a wide variety of people and projects necessary. Must be able to work independently while contributing to team effectiveness. Must have willingness and ability to work with different word processing and/or computer systems. Minimum 2.5 years direct/related experience required. B86-221

Sr. Secretary, Chemical Engineering, to answer phones, sort mail, maintain inventory of office supplies, monitor accounts, plan travel itineraries, prepare class notes, direct inquiries to proper area, and greet visitors. Will work directly with the department head in absence of administrative assistant and interface with occupants of suite to ensure smooth operation of Headquarters. Will also type and photocopy general correspondence, technical papers and manuscripts. Will act as messenger and perform other duties as assigned. Good typing and communication skills required. Knowledge of, or willingness to learn, word processing helpful. Minimum 2.5 years direct/related experience required. B86-218

Sr. Secretary, Industrial Liaison Program, to handle various secretarial duties for two Liaison Officers. Responsibility will include extensive contact with corporate members of the ILP and Institute faculty and staff. Duties will include the composition and typing of correspondence, reports, visit and travel agendas. Will assist in the scheduling of appointments between company representatives and MIT faculty and staff; arrange for company research briefings including room scheduling, catering and audiovisual equipment; make travel arrangements, obtain travel advances, prepare travel expense vouchers, and maintain files. Assist with coverage of telephones in working group suites and answer inquiries related to servicing the member companies of the Program. Will independently reply to correspondence when appropriate, reproduce reports and manuscripts and perform other duties as assigned. Will assist when needed at occasional office-sponsored symposia and seminars. Computer input and retrieval on various member company statistics and requested publication information. Must have excellent secretarial and organizational skills as well as strong interpersonal skills. Flexibility important and initiative desirable. Must have ability to work as a strong member of a team. Familiarity with MIT helpful. Will be trained on DEC computer system. Minimum 2.5 years direct/related experience required. B86-215

Sr. Secretary, Mechanical Engineering, to provide secretarial and administrative support to two faculty members. Will prepare technical manuscripts and reports and have considerable interaction with agencies funding research; prepare and distribute teaching materials; answer telephone inquiries and correspondence; arrange travel; and do filing and other general office functions. Will interact with a variety of MIT staff and students. Position involves a good deal of student contact. Excellent typing and organizational skills are essential. Accuracy in handling detail and knowledge of MIT accounting system important. Must have minimum of 2.5 years direct/related experience or an equivalent combination of education and experience. B86-214

Sr. Staff Assistant, Civil Engineering (part-time, 20 hours/week) to do a variety of secretarial and administrative functions for a senior faculty member. Duties will include arrangement of seminars and Advisory Committee Meetings and preparation of Administrative Progress Reports for the Center for Scientific Excellence in Offshore Engineering; accounts and occasional technical reports for research projects; and assistance in operation of Society Awards Committee, typing of correspondence, materials for classes, organization of files, and other tasks as required. Ability to interact with students necessary and familiarity with MIT preferred. Must have somewhat flexible schedule due to variations in work load. Good typing skills required. Minimum 2.5 years direct/related experience required. B86-210

Secretary, Spectroscopy Laboratory and Laser Research Center, to provide secretarial support to the department. Will type, perform word processing, prepare routine correspondence, manuscripts, proposals and reports; maintain files; answer phones and assist with general office coverage. Requires excellent typing and proofreading skills. Some overtime may be required. Minimum 2.5 years direct/related experience required. NON-SMOKING OFFICE B86-225

Staff Assistant, Personnel-Benefits Office, to assist in the development and conversion of office records to an automated database. Will assist in redesigning current procedures as appropriate in order to efficiently process and record a heavy volume of applications and forms for a variety of benefit programs. Will maintain records thereafter via direct entry on a computer terminal. Interest in learning utility languages necessary in order to produce weekly and monthly reports necessary. Will utilize DEC II word processor to generate form letters pertaining to MIT's retirement plans. Will maintain office files, setting up or reorganizing as necessary. Some experience in the use of automated office equipment and familiarity with the use of word processing is important. The ability to organize work, set priorities and work independently toward deadlines is essential. Accuracy and attention to detail necessary. Good typing skills essential. Minimum 1 year direct/related experience required. NON-SMOKING OFFICE B85-113

Technical Support Staff

Medical Assistant (Obstetrics/Gynecology), Medical Department, to assist the physicians and nurses with routine examinations and with special procedures. Will report to the Nurse Coordinator for OB/GYN and the Director of Nursing Services. Duties will include chaperoning during examinations, assisting with cautery, IUD insertions, biopsies and prenatal exams. Will weigh patients, take blood pressures, and test urine samples. Responsible for requisitioning lab reports, following up reports for Alpha Feto Protein levels and amniocentesis. Will also be responsible for setting up exam rooms, stocking patient consultation rooms, washing, wrapping, autoclaving equipment, and ordering supplies. Will answer telephone; schedule appointments; prepare charts, records, and varied hospital forms; and help maintain rotation flow for clinics. High school graduate with medical assisting training required. Must be mature and able to deal effectively with patients and staff. Warmth and sensitivity to the needs of patients essential. NON-SMOKING OFFICE T86-235

Computer Operator, Research Laboratory of Electronics, in the Digital Signal Processing Group (part-time). Duties will include performing weekly computer backups during non-prime-time hours. Other responsibilities include inventory of computer supplies, clean/order the computer facility, make and run computer cables, and assist in miscellaneous tasks associated with running a computer facility. High school graduate with direct/related experience is required. College student in a technical area is preferred. Should have some familiarity with the UNIX operating system and a general knowledge of digital electronics is required. Working hours will vary from 12 to 16 hours per week and are confined to non-prime-time hours (possibly weekends and a few hours during the work week). T86-220

Office Assistant

International Marketing Assistant, MIT Press, to be responsible for implementation of international mail promotion program for MIT Press books: pre and post-processing of foreign book orders; handling of routine telephone and written queries and requests from foreign customers by direct response or by routing to the appropriate department of action; maintenance and improvement of international marketing files; preparation of monthly book information sheets for booksellers, and supplying of other information to booksellers; and work on other special projects or tasks as directed by the International Sales Manager. Requires a college degree with 2-3 years post-college work experience, preferably in publishing. Ability to write English clearly, accurately, and correctly necessary. Good knowledge of a major European or Asian language necessary. Should have familiarity with use of word-processing systems, a minimum typing speed of 50 wpm, and a strong interest in publishing. A writing sample will be required. S86-240

Administrative Assistant, Sloan School of Management, to provide secretarial support for the Director of Master's Admissions and Counseling. Will report to the Associate Dean for Master's and Bachelor's Programs. (The Program Office performs services related to the recruitment, admissions, registration, and advising of approximately 400 full-time students.) Will assist with the record-keeping of grades, subject registrations, and section assignments. Will also assist with coordination of thesis process, including collecting forms from students and faculty, maintaining files and records, answering students' questions regarding thesis format and procedures, and checking theses when submitted. Also involved with the admissions process, including processing of applications, computer data entry and retrieval, word processing, and tracking applications from receipt to mailing decisions. Will type correspondence and reports, process requisitions and vouchers, coordinate meetings, answer telephones, handle mail, and answer questions from students, faculty, and applicants. Requires excellent organizational, interpersonal, word processing, and typing skills. Ability to work well under pressure and as part of a support-staff team necessary. Minimum 4.5 years direct/related experience required. NON-SMOKING OFFICE B86-237

Administrative Assistant, Physical Plant, to provide general office support to several staff members. Duties will include the preparation of various operating reports and budgets, maintenance of files and records, and general administrative, secretarial and clerical functions as re-

MIT announces Housing Assistance Loan Program for faculty members

(continued from page 1)

pay for a house. Thus, with a 10 percent down payment, they could spend \$164,000 for a home instead of \$100,000.

As the salary of faculty members increases, the increase in purchasing power diminishes.

In outline, the program:

—Provides HALP aid of up to 40 per cent of the purchase price of the house to a maximum of \$50,000 in the form of a second mortgage to selected staff and faculty with higher ninth-month salaries.

—Provides total HALP aid of up to 40 per cent of the purchase price of the house to a maximum of \$80,000 for those borrowers with salaries below \$40,000.

—Offers second mortgages on a graduated payment basis to borrowers with a need for reduced early year payments.

—Provides a portion of HALP aid in a contingent interest mortgage form for faculty with greater financial need—with up to 30 per cent of the purchase price of the house available in this form for faculty with lower salaries.

—Provides refinancing of the contingent interest mortgage and outstanding second mortgage at the end of the term of the contingent interest mortgage.

—Eliminates closing fees for HALP mortgages.

—Provides mortgage counseling services.

"The HALP program is designed to provide substantial assistance to faculty otherwise unable to buy a home," said Susan DeFord, assistant director of real estate, who played a leading role in drafting the plan. "We calculate that HALP assistance can result in an increase in purchasing power of up to 64 percent, depending on the salary level of the faculty borrower."

While MIT has had a second mortgage plan for faculty since 1968, she said, the new program greatly enhances the second mortgage package and provides, in addition, the contingent interest mortgage for those faculty who qualify.

"Those faculty with the greatest need," she said, "would qualify for a graduated payment second mortgage—where payments are low in the early years, increasing as salary increases—and may also be entitled to receive a portion of that HALP assistance in a contingent interest mortgage (CIM) for up to \$60,000 or 30 per cent of the purchase price of the house. Most of the interest payments on the contingent interest mortgage will be deferred until the end of the term of the CIM. At that time, the contingent interest due will be determined by the actual appreciation of the house over the term, but will not be above the rate of interest of the second mortgage.

"For example, an \$80,000 second mortgage with an interest rate of 11 1/2 per cent would have annual principal and interest payments of \$9,690 for 30 years. The faculty borrower with lower MIT salary may be eligible to receive up to \$60,000 of the \$80,000 HALP aid in a contingent mortgage form, borrowing the remaining \$20,000 in a second mortgage form. The borrower's annual payments would then be a total of \$2,603-\$2,423 on the second mortgage and \$180 on the CIM.

"Should the house appreciate by only 6 percent over the term of the CIM, the borrower would pay MIT a total of 6 percent compounded interest on the \$60,000 CIM, rather than the 11 1/2 per cent he would have paid had he borrowed that additional amount in a second mortgage form. And in no event, even if the house appreciates by 25 per cent per year,

would the borrower pay total interest of more than 11 1/2 per cent compounded (the second mortgage rate) on the CIM."

Ms. DeFord said the cost to MIT of the second mortgage program would be minimal, because the interest rates are set near market levels. The Provost decided MIT's general budget should be charged for a significant portion of the near term foregone income from investing in contingent interest mortgages rather than in fixed income securities available in the public market, she said, "recognizing that helping faculty with housing is one of the most important steps MIT can take to strengthen academic programs. Further information may be obtained by contacting Lorraine Harding in the Treasurer's Office, x3-2975.

ILP appoints two

Dr. James Utterback, director of the Industrial Liaison Program, has announced the appointments of two new Industrial Liaison officers.

Appointed were Linda Kay Smith, founder and former chairman of the Achievers, Inc., Boston, and John F. McNeil, former director of business development for Infotech Corporation, Sudbury.



Mr. McNeil

Ms. Smith

Ms. Smith worked for Lotus Development Corporation in 1984 as manager of the Value-Added Relicensor Program. From 1979 to 1983, she was at Digital Equipment Corporation in the Office of the President as strategic marketing manager and in the Engineering Department as software product manager. Previously, she was at John Hancock Mutual Life Insurance Company where she was an internal consultant in Organization Development, and research analyst for the Personnel Department from 1973-78.

A Boston resident, Ms. Smith was graduated from Washington State University with a BS degree in psychology in 1971 and an MA degree in sociology in 1973. She also received the SM degree in management in 1979 at Sloan School of Management.

Before his employment with Infotech, Mr. McNeil worked for the McGraw Edison Company, Rolling Meadow, Ill., where he was manager of the Wagner Division, N.J. marketing planning department, 1983-85, and planning specialist for the Power Systems Division, Pittsburgh, Penn., 1981-83.

He also worked for the Joy Manufacturing Company as project engineer in the Service Centers Division in Pittsburgh, 1979-81, and for New South Wales, Australia, 1977-79.

Mr. McNeil received a BSEE degree with honors in 1977 and a BS degree in accounting in 1979 from the University of Newcastle, NSW, Australia. He did graduate work in business and management at the University of Pittsburgh where he was an engineer-in-training in 1980.

quired. Good organizational and interpersonal skills as well as the ability to manage data and text on several different PC systems essential. Minimum 4.5 years direct/related experience required. S86-196

Receptionist, The Laboratory of Architecture and Planning, Aga Khan Program for Islamic Architecture, to greet visitors, answer phones, provide information about the program, type and provide general secretarial support. Will make travel arrangements, assist in organizational details for conferences and seminars, operate telex, and assist visitors with parking arrangements, accommodations and travel arrangements. Requires good interpersonal and communication skills, typing (50 wpm), and organizational skills, as well as the ability to work under pressure. Minimum 1 year direct/related experience required. S85-866

Service Staff

Medical Matron, Medical Department, to provide housekeeping support to assigned area(s) in Medical Department. Duties will include the daily cleaning of all offices, examination rooms, secretarial and patient waiting areas, lavatories and small kitchen units in accordance with required hospital standards of cleanliness and effective infection control. Will involve dusting and straightening; emptying waste receptacles and rubbish removal in accordance with strict detailed procedures; washing sinks, mirrors, etc.; and waxing desk tops when necessary. Will be responsible for stocking any necessary related supplies, and provide relief coverage for other Medical Department areas as required during sickness and vacation periods. Individual must be neat in appearance and be a willing and efficient worker. Previous work experience desirable. Ability to work independently and relate well to Department staff necessary. Will work 40 hrs/week (3:00-11:00 or 4:00-12:00) H86-347

Technician B (Electro-Mechanical), Electrical Engineering and Computer Science - Microsystems Technology Laboratories, to assist in laboratory or research work and operate experimental and technical equipment under the supervision of scientific personnel or technicians of a higher grade. Must be able to work for periods of time without supervision. The individual will be assisting in various aspects of the photo-lithographic and mask-making areas. This includes process development, operation and maintenance of optical pattern generators, photo-resist coaters and developers, wafer and mask step and repeat systems, wet etch stations, wet and dry photo-resist strippers, and other related semiconductor processing equipment. This position requires the ability to work with sophisticated measurement equipment such as microscopes, linewidth measures, development rate monitors, and SEMs, and to gather data from this equipment and enter it into a CAF system. The individual must be able to keep accurate laboratory notes and maintenance logs, and to assist in the preparation of process documentation. The individual will be working in a state-of-the-art semiconductor fabrication area and will be required to follow strict procedures regarding cleanliness and the safe handling of gases and chemicals. The individual must be flexible regarding temporary tasks or when needed to provide technical support outside of the designated area, such as to building support systems. Graduation from a two-year day technical school or its equivalent in applicable experience is the minimum experience requirement. Experience with microprocessor-controlled equipment desirable. H86-340

Assistant Animal Technician, Division of Comparative Medicine, to perform duties involved in the care of laboratory animals, working with different species of animals as assignments dictate. Will maintain proper levels of food and water for animals in accordance with established procedures; clean animal cages and trays; change bedding materials and/or

litter; wash cages, trays, water bottles and related items; perform miscellaneous housekeeping functions (such as cleaning laboratory walls, floors, etc.) in animal areas, using cleaning equipment assigned; monitor animals and notify Animal Technologist or supervisor if condition of animals dictates; and perform other related duties. Should have High school diploma. Knowledge of and ability to work with animals a necessity. 1-2 years of animal care experience preferred. Willingness to partake in AALAS seminars and training program required. (40 hrs/wk, Wed.-Sun., 7:00 am-3:30 pm) H86-343

Instrument Systems Worker, Automatic Temperature Controls, Physical Plant, to maintain, diagnose and repair microprocessors and associated instrumentation. Must have ability to perform tests and adjustments of input and output devices, also to set up and maintain history and documentation files. Associate degree and/or two years formal training in electronics plus a minimum of 3 to 5 years experience in temperature or process control required. Must be capable of trouble-shooting electronic circuitry. Will work any and all shifts as required by operations. H86-336

Machinist A, Haystack Observatory, who demonstrates familiarity and a high degree of skill with all the commonly used machine tools. With a minimum of supervision sets up work and operates such machine tools, working to close tolerances from blueprints, specifications, verbal instructions or sketches. Makes such tools, dies, jigs and fixtures as may be required. May direct and train machinist of lower grade. Minimum of 5 years of applicable experience as a machinist is required. H86-328

First Burchard Scholars named

Thirteen juniors and sophomores have been selected as the first Burchard Scholars in the School of Humanities and Social Science, Dean Ann F. Friedlaender has announced.

The awards, named after the school's first dean, are given to students who demonstrate unusual abilities and academic excellence in the areas embraced by the school. Dean Friedlaender said that the Burchard Scholars selected in the first year of competition for the awards "come from exciting and diverse backgrounds and are a remarkable group of gifted young scholars."

The Burchard Scholars will be invited to a series of monthly dinners, beginning in February, at which an MIT faculty member, visiting scholar or Burchard Scholar will present work in progress, followed by a discussion. This will allow students and faculty members a greater chance to mix and will give students, especially, an opportunity to engage in the kind of intellectual exchange

that characterizes scholarship in the humanities and social science, Dean Friedlaender said. She added that the emphasis throughout the program will be interdisciplinary.

The Burchard Scholars were nominated by faculty members in the school. The selection committee consisted of Professors Richard Eckaus (Economics), Joshua Cohen (Political Science and Philosophy), Alvin Kibel (Literature), Claire Kramsch (Foreign Languages and Literature), John Harbison (Music), Bruce Mazlish (History) and Philip S. Khoury (History). Professors Mazlish and Khoury are the 1986 program coordinators.

The 1986 scholars are: Seth Brown, Lisa Greber, Sossina Haile, Dara Norman, Kathy O'Connell, Louis Pepe, Mathew Richter, Sarbani Thakur, David Wallace, William Wedemeyer, Julia White, Matt Wiener and Dennis Yamashita. All are members of the Class of 1987 except O'Connell and Pepe, who are sophomores.



The distinguished lecture series in the brain sciences offered by the Whitaker College of Health Sciences, Technology and Management will resume at 4:30pm Monday, Feb. 24, in Rm 10-250 when the speaker will be Jean-Pierre Changeux, professor at the College of France and chief of the Laboratory of Molecular Neurobiology at the Pasteur Institute's Department of Molecular Biology. His topic will be "A Molecular Approach to Learning by Selection of Synapses." The Institute community is welcome.

W.R. Hewlett to be speaker at graduation

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chairman of the company's executive committee. He then became vice chairman of the board.

Mr. Hewlett has been active in many organizations within the electronics industry. From 1950 to 1957 he was on the board of the Institute of Radio Engineers (now the IEEE) and served as president of the Institute in 1954. He played an important role in the development of the Western Electronic Manufacturers Association, now the American Electronics Association.

The son of a physician who was a professor of medicine at the University of Michigan and Stanford University, Mr. Hewlett has always had a keen interest in medicine and education. He has served as board president of what is now the Stanford Medical Center and is a past director of the Kaiser Foundation Hospital and the Health Plan Board and the Drug Abuse Council in Washington, D.C.

He is currently chairman of the board of trustees of the Carnegie Institution of Washington.

Mr. Hewlett holds honorary doctoral degrees from the University of California, Berkeley, Yale University, Mills College, Polytechnic Institute of New York, Kenyon College, the University of Notre Dame, Dartmouth College, Utah State University and Johns Hopkins University.

He is a member of the National Academy of Engineering, the National Academy of Sciences and a fellow of the American Academy of Arts and Sciences.

Among his many awards is the National Medal of Science, the nation's highest scientific honor, presented by the National Science Committee and President Reagan in February 1985.

Di Iorio is promoted

The appointment of Robert C. Di Iorio as associate director of the News Office, effective immediately, has been announced by Kathryn W. Lombardi, executive assistant to the president and director of Campus Information Services.

Mr. Di Iorio, an assistant director of the News Office since 1973, has had primary news and information responsibility for the School of Engineering and the School of Science. In his new assignment he will have additional responsibilities for Institute-wide news and information activities—both internal and external.

Before joining MIT, Mr. Di Iorio was a reporter and editor for the old Boston Herald-Traveler, the New Bedford Standard-Times, United Press International and the Westerly (R.I.) Sun.

Touring Band witnessed explosion

By CHINA ALTMAN
Staff Writer

On the day before the Challenger Shuttle was due to fly, members of MIT's Concert Band were in St. Petersburg, Florida, for the band's Annual Winter Tour.

They were scheduled to play a concert at Astronaut High School in Titusville on the night of the launch. That morning five members decided to leave early in a rented car to try to watch the launch. Following are quotes from an interview with one of them, graduate student Charles Marge:

"I thought how my friends in Aeronautics and Astronautics always were talking about getting their sleeping bags and driving down to the Cape to see a shuttle launch during spring break.

"We decided to drive straight to Cape Canaveral. We were there. We were going to see this thing. None of us had ever seen a shuttle go off. . . As we were driving on a causeway we knew we were getting close because cars started pulling over."

Marge began snapping pictures second by second as the first semi-circle of light nudged up from the horizon in the flat Florida landscape. His back was turned during the seconds of the actual explosion because he had turned to run up a low hill for a different angle just after the shuttle trail split in two.

"As I turned around, I heard the first sound but I didn't know it was an explosion. I heard this big Ah-h-h from the people. Then I saw the big cloud. My friends had seen the orange stream, but I missed it.

"When I heard the sound, that's how I figured out we were 14 miles away—I had looked at my watch and sound travels at a mile in five seconds. We had the car radio on and it was a little over 70 seconds into flight that we finally heard sound.

"I didn't know what was going on. But it started looking wierd to us. Then we heard the radio say the Challenger had exploded. Everyone kept saying 'The teacher. . . the teacher. . .'

"When they said McNair's name, we couldn't believe it. One of the guys said: 'I just heard him talk at MIT.'

"The strangest thing—it was a crystal clear day with no wind. And that cloud hung in the sky all day. It slowly diffused, it was white with a little grey, and every time we looked up

all day there was this cloud in the sky. And it was that cloud because there was nothing else in the sky at all.

"We went to lunch although we weren't very hungry and when we came out the whole sky was still bright blue but that cloud was there.

"We were supposed to have a band clinic that afternoon at Astronaut High School but nobody at the school felt like it. Everyone was very subdued. On television an announcement kept running all day: All personnel return to the base."

"The town really is a shuttle town. The elementary school is named Apollo. All day long we could tell the morale of the town was really low."

Band members in the car with Marge were: graduate students Tom Beckman and Steve Slivan, Venu Chivukula '89 and Stuart Silver of Boston.

Because of delays in the launch, the band members who had left St. Petersburg at 8:30am also were in the Titusville area when the Challenger exploded. The buses were proceeding on one of the Causeways and all the students were watching out the windows.

A student reported that one of the bus drivers, a Florida native who had seen many launches, said immediately: "That didn't look right to me."

Concert Band conductor John Corley said officials at Astronaut High School asked them to go on with the concert because they felt that people needed to have the option of some kind of normal activity. "The question was raised, whether we'd play a memorial, or say anything at all. They asked us not to and to make no changes in the music scheduled for the program," he said.

Mr. Corley said the band members were profoundly affected but it appeared to be "almost a relief for them to have a concert to do."

The high school auditorium was about half full, he said, and as it turned out, two of the scheduled works had elements that made them both fitting and comforting.

Both these were played in the Band's Lobby 7 concert last October 31: *Night Soliloquy* by Kent Kennan and *Medieval Suite* by Ron Nelson, an unusually lyrical work which calls for all musicians not playing their instruments at any given point to sing Gregorian-like chants.

Dr. McNair's "academic home" at MIT. Dr. Williams and his family attended the 1984 Challenger launch as guests of Dr. McNair.

Dr. McNair was scheduled to be the featured speaker at the April 16 symposium of the National Consortium for Graduate Degrees for Minorities in Engineering. Officials of the consortium announced that the three-day symposium will be dedicated to the memories of Dr. McNair and his fellow Challenger astronauts.

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J.F. McCarthy dies

Dr. John F. McCarthy, 61, of California, former professor of aeronautics and astronautics, and director of Center for Space Research, died suddenly February 7.

Born in Boston, he received the SB (1950) and SM (1951) from MIT and a PhD in 1962 from California Institute of Technology.

Before he died, he was corporate vice president and general manager of the Northrop Corporation in California. He was also a former employee of NASA and recipient of its Distinguished Service Medal.

Dr. McCarthy served in the US Army during World War 11.

He leaves his wife, the former Camille Martinez, one son, Sean; four daughters, Nicole, Megan, Marla and Margaret; his mother, Mrs. Margaret Bartwood McCarthy of West Roxbury; three brothers, George of Sharon, Lawrence of Linwood, N.J., Robert of Houston, Texas, and a sister, Sr. Claire McCarthy, C.S.J. of South Boston.

Donations may be made in his memory to the Dr. John F. McCarthy Jr. MIT Scholarship Fund, c/o Prof. Rene Miller, Rm 33-411.

Seminar to address inequities in medicine

Most technological advances in medicine increase inequity in society? A Technology and Culture Seminar program at 4:30pm on Monday, Feb. 24, in Rm 9-150, will address that question.

The speaker will be Victor Sidel, distinguished university professor of social medicine at Montefiore Medical Center, Albert Einstein College of Medicine, The Bronx, New York.

Dr. Sidel's work at Montefiore has been concerned with service, teaching and research in community health. He is also involved in international health work. He was a founder of the Physicians for Social Responsibility, the US affiliate of the International Physicians for the Prevention of Nuclear War which won the 1985 Nobel Prize for Peace. Dr. Sidel is 1986 president-elect of the Physicians for Social Responsibility.

Scheduled to be the respondent is Professor Jerome Rothenberg of the MIT Department of Economics.

Quasquicentennial coming

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service fund road race on Saturday, May 3, can be rerouted through Back Bay, perhaps to pass the Institute's original location, now occupied by the New England Mutual Life Insurance Company. A plaque on the building commemorates MIT's existence there.

Special events also are being planned for the return of alumni during Technology Days in June, including a regatta on the Charles. This year also marks the fiftieth anniversary of the Sailing Pavilion, now named for the late sailing master, Walter C. Wood. Members of the community who have ideas for augmenting the celebration are invited to submit them to one of the members of the Quasquicentennial Planning Committee. Committee members are:

John Berlinguet, x3-3943; Martha Bertrand, x3-5618; John Buttrick, x3-4892; Robert Byers, x3-0955; Jacqueline Casey, x3-2697; Deborah Cohen, x3-3467; Mary Enterline, x3-3561; David Ferrero, x3-5674; Gayle Fitzgerald, x3-1703; Royce Flippin, x3-4497; Priscilla Gray, x3-2829; William Hecht, x3-8204; Stephen Immerman, x3-3913; Eric Johnson, x3-3272.

Also S. Jay Keyser, x3-1916; E. Barbara Lewis, x3-6580; Susan Lewis, x3-8253; Kathryn Lombardi, x3-1704; Kathleen Marquis, x3-5690; Joseph Martori, x3-8230; Conor Moran, x3-3913; Mary Morrissey, x3-1475; Helen Samuels, x3-5688; Warren Seamans, x3-4444; Alison Shafer, x3-4003; Ronald Sudaiko, x3-1988, and Karen Tenney, x3-4665.

McNair memorial service today

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Mr. Chisolm all were students with Dr. McNair. Dr. Williams and Dr. Turner first met Dr. McNair when he came to MIT as a graduate student.

Contributions to the memorial fund to be established at MIT in honor of Dr. McNair, should be sent to the Ronald E. McNair Memorial Committee, Office of the President, MIT.

Dr. McNair, a native of Lake City, South Carolina, received the BS degree in physics from North Carolina A&T State University. He spent the spring term of his junior year at MIT in 1970 as part of an exchange program that sent MIT faculty to largely black colleges and brought promising students here in their third undergraduate year. Dr. McNair returned to MIT as a graduate student. His field was laser physics and he published many papers on lasers and molecular spectroscopy. He became an astronaut candidate in January 1978 and made his first flight in January 1984 aboard the Challenger, the shuttle that was destroyed on January 28.

Among those at Cape Canaveral on January 28 as guests of Dr. McNair was Dr. Jerome I. Friedman, head of the Department of Physics,

Leida V. Pietron

Leida V. Pietron, 69, of Acton, a technical artist at Graphic Arts from 1953 until her retirement in 1984, died February 7. She is survived by her husband, Jerzy, and son, Hans Valja of Las Vegas.

Bakalar hosts Calder exhibit

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Calder's origins and development. An illustrated essay by Dr. Marter will be available. It discusses the artist's engineering background and the concurrent scientific and artistic events which stimulated his imagination.

This is the third in a series of educational exhibitions designed to illustrate issues in 20th century sculpture by focusing on the modern masters represented in MIT's Permanent Collection. Previous exhibitions have been devoted to Jacques Lipchitz and Henry Moore.

"Students and specialists alike have appreciated the intimate focus of these exhibitions," Katy Kline, curator of the List Visual Arts Center, said. "Looking again at Calder is especially timely and appropriate at MIT where *The Big Sail*, installed in McDermott Court in 1965, has taken on the status of campus emblem.

"In an era dominated by electrical engineering, the energetic inventiveness and astutely calculated relationships among parts in a Calder sculpture constitute a reminder of

the visual poetry and pleasures of mechanics," she said.

The exhibition was organized by the MIT Committee on the Visual Arts with partial support from the National Endowment for the Arts. It is open without charge, Monday through Friday, 10am-4pm, and on weekends, 1-5.

Erratum

Electronic gnomes got Tech Talk last week when we inadvertently published an outdated call for nominations for the Science Council Prize.

Nominations are in order and are due by Friday, March 28. The award recognizes any member of the School of Science faculty who has achieved distinction in his or her teaching.

The Science Council will select the recipient based on the advice of a nominating committee composed of Professors Vernon Ingram (chairman), Robert Alberty, Francis Low and James Munkres.