Massachusetts Institute of Technology

September 13, 1989 Volume 34 Number 5



# Harris assumes major arts post

By CHINA ALTMAN Arts Communication Director

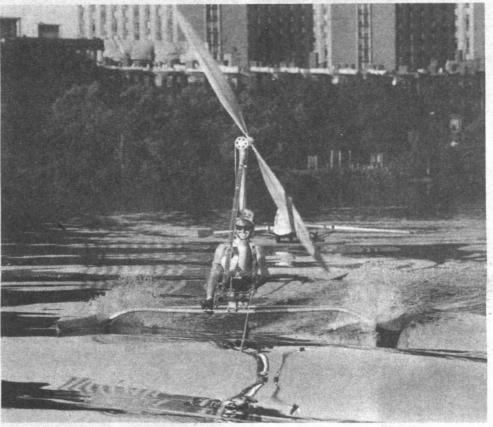
Ellen T. Harris, a distinguished scholar of music who also is known widely as a soprano soloist, arrived officially at MIT this month to take up her position as MIT's first Associate Provost for the Arts, it was announced this week by Provost John M. Deutch.

She comes here from the University of

Chicago where she was professor of music and head of the Department of Music. As a scholar she has been recognized for her work on the music of George Frederick Handel. As a singer she is best known for her dramatic stage performances.

At MIT she also has been appointed professor of music.

Her arrival on campus is the final fulfillment of a set of recommendations made



Assistant Professor Mark Drela pilots the hydrofoil Decavitator in a water test on the Charles River. -Photo by Donna Coveney

# Now a human-powered hydrofoil

#### By DONNA COVENEY Staff Photojournalist

Jet skis, move over. MIT's humanpowered hydrofoil, The Decavitator, is 40 pounds of sheer energy on water-that is, with a person at the pedals.

Built of carbon fiber Kevlar and thinwall aluminum tubing to compete in a contest administered by the International Human-Powered Vehicle Association on September 17, on Lake Adrian, Michigan, the Decavitator will be humming along at a cool 20 knots, it is hoped. Its propulsion system—a pedal-driven air propeller—is similar to that of MIT's record-breaking human-powered aircraft, Daedalus, which flew 72.44 miles in 1988 between the islands of Crete and Santorini in Greece.

foils are definitely faster, though," he said.

He described the Decavitator, a hydrofoil, as "a human-powered water vehicle: a cross between a recumbent bicycle, a crew shell, and an air boat." The latter skims the surface of the water using an air propeller. A hydrofoil has water wings under the water surface which support the craft.

Webster's dictionary defines cavitation as: "The formation of partial vacuums in a liquid by a swiftly moving solid body (as a propeller)."

in November 1987 by the Arts Review Committee headed by Paul L. Joskow, professor of economics. "Of most importance," Professor Joskow said at that time, "is the need to appoint a senior administration official who is also a faculty member in either the performing or the visual arts, to take broad responsibility as an advocate, leader and coordinator of the creative arts program at MIT."

Professor Deutch said, "The position of associate provost for the arts is central to enhancing our current program in the creative arts and to success in pursuing new initiatives. MIT is enormously fortunate to have attracted a person of Ellen Harris's distinction to our faculty and I greatly look forward to working with Professor Harris to strengthen the arts at MIT."

#### What is their place?

In an early interview, Professor Harris gave the following answer when asked to (continued on page 8)

# Aero & Astro to mark 50th anniversary

Course 16's roots extend back to the era just following the Wright brothers' first flight and its branches reach to the Moon and beyond. During its growth, three other MIT departments have sheltered and nourished it.

This week the Department of Aeronautics and Astronautics and many of its alumni will celebrate the 50th anniversary of the department's establishment as an independent academic department within the School of Engineering.

Festivities will begin Friday afternoon, Sept.15, with a tour of the department's facilities. This will be followed by an introductory lecture by former faculty member and US presidential science advisor, Dr. H. Guyford Stever. Saturday's program will feature a host of lectures that will both look back on the history of the department and provide a glimpse of the future of aeronautics and astronautics.

Course 16 has a venerable history that traces back to aviation's earliest years. It was the first college program in aeronautical engineering in the United States. In 1914, MIT began awarding a masters degree in aeronautics as part of the Department of Naval Architecture and Marine Engineering's curriculum. The program was inaugurated in 1913 by Jerome C. Hunsaker '12, who in 1939 would begin serving as the first aeronautics department head. One of the program's first students was aviation pioneer and later airplane builder Donald Douglas '14. His name survives to this day in the McDonnell Douglas Corporation. The masters degree in aeronautics program remained within Naval Architecture (continued on page 8)

# Safety fair

The MIT Campus Police, in conjunction with the Child Care Office, the Medical Department and the Housing Office, will conduct the first annual Family Safety Fair next week.

The Fair will be held Tuesday, Sept. 19, at Eastgate, and Wednesday, Sept. 20, at Westgate. Both sessions will run 6-7pm and are aimed at the children in those complexes.

Children can sit behind the wheel of the police cruiser and see what's inside the ambulance. McGruff, the Crime Fighter Dog, will be on hand to give honorary police badges to all visiting kids.

Parents will have an opportunity to meet personnel from the sponsoring agencies and will learn about services available to them and who to call in an emergency. Refreshments will be served.

## Grad parking

Graduate students who live outside Boston, Cambridge and Somerville are eligible to apply for a commuter parking permit. Such permits are limited and distributed on a first-come, firstserved basis. All permits are for outdoor lots on the west end of the campus.

Applications will be accepted in the Campus Activities Office, Rm W20-549, daily 9am-5pm. Applicants need MIT ID, the vehicle registration, proof of the fall term address and \$10 (cash or check).

## Book club begins

Toni Morrison's Pulitzer prize winning novel, Beloved, is the first literary selection for the newly formed book discussion club at MIT for people over 40. Join co-leaders Eleanor Bonsaint and Peter Valente for the first meeting Thursday, September 21, from 6-8pm in the Emma Rogers Room (10-340). Refreshments will be served.

To be placed on a mailing list for future book discussions, or for more information, call Ellie at x3-5763 or Peter at x8-2726.

## Directory issued

The Alumni Association has published the 1989 Alumni/ae Directory. It includes an alphabetical list of living alumni/ae and addresses; and name listings of deceased alumni/ae, undergraduates by class, departmental affiliation and geographical location. The price for the book is \$38. The Directory is available only to MIT alumni/ae and staff members.

Also available is MIT: A Portrait, a 9 x 11 1/2-inch hardcover volume of full-color photographs by Robert Llewellyn. The book shows MIT's people, activities and places as well as the Boston and Cambridge environment. The price is \$35; discounts are available for orders of 25 or more books.

To order either book, call Francesca DiMaio, x3-8261, Rm 12-090

DuPont is awarding a prize of \$25,000 for the first human-powered vehicle to reach a speed of 20 knots (about 23 mph) over 100 meters.

Mark Drela, MIT assistant professor of aeronautics and astronautics, who oversaw the project and who will be the initial pilot for the hydrofoil, expects about five other entrants, including some other hydrofoils and some hovercrafts. "Hydro-

When asked where they came up with the name Decavitator, Drela grinned and said, "Well, it's (cavitation) a common problem on boats with water propellers, and so we try to eliminate the problem. . . It's a pun."

Bryan Sullivan, MIT SM '86, initiated the project. Members include Matt Wall, graduate student in the Leaders for Manufacturing Program; Marc Schafer, aeronautics and astronautics 1990; Jim Thorne, mechanical engineering 1990; Erik Saarmaa, aeronautics and astronautics 1990, and Harold Youngren, graduate student in aeronautics and astronautics.

## **Renovated Faculty** Club offers expanded service

Finishing touches are being applied to the new decor at the Faculty Club, restoring it to the original style of the building, as it reopens this week.

For example, visitors will notice that the architectural devices and floor of the Club's foyer and lounge now mirror those

of the Sloan Building's lobby. It is a modified art deco design popular at the time the building was constructed (1938) as the world headquarters of Lever Brothers. MIT acquired the building in 1951.

The physical changes at the Club, which reopened for lunch and dinner Monday,

will be accompanied by major programming changes in the Club's operation, according to Lawrence E. Maguire, director of Housing and Food Services.

"This year the Faculty Club will extend free membership to all members of the (continued on page 5)

# INSTITUTE NOTICES

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

#### Announcements

Library Orientation Tours\*\*-Barker Library -Engineering (10-500): Tues, Sept 19, 26, 4pm; Thurs, Sept 14, 21, 28, 10am. Dewey Library -Socical Sciences and Management (E53-100): Wed, Sept 13, 20, 27, 3pm; Thurs; Sept 14, 21, 28, 10am. Humanities Library (14S-200): Tues, Sept 19, 26, 3pm; Wed, Sept 13, 20, 27, 10am. Science Library (14S-139): Tues, Sept 19, 26, 4pm; Thurs, Sept 14, 21, 28, 10am. Music Branch Library (14E-109): Mon, Sept 18, 4pm or by appointment. Institute Archives and Special Collections (14N-118): Call x3-5136 to set up a tour. Tours available on request at: Aeronautics and Astronautics Branch Library (33-316); Lindgren Branch Library-Earth and Planetary Sciences (54-200); Schering-Plough-Neurosciences (E25-131).

September Degree Candidates Reminder-Post cards must be returned promptly to Rm E19-335 to indicate whether diplomas are to be mailed or called for in person, or whether attendance at Commencement is planned, Mon, June 4, 1990.

Hosts to International Students Program-MIT Women's League program to host foreign students coming to MIT for the first time. Provide a welcome, occasional hospitality and friendship. All financial and academic problems handled by specific MIT offices. Info/volunteer forms: Kate Baty, 861-6725 or Pam Daveta, x3-3656.

MIT Language Conversation Exchange\*\*-Medical Dept program to assist members of the MIT community to practice a language with a native speaker. Applications accepted throughout the year. To exchange English or another language and be matched with someone with your interests, call the secretary of the Language Conversation Exchange, x3-1614.

MIT Student Furniture Exchange\*\*-MIT Women's League store, Tues/Th, 10am-2pm, 25 Windsor St (N52), x3-4293.

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

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

Nightline\*\*-a student-run campus 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. x3-8800

#### Club Notes

MIT Radio Society and UHF Repeater Association Monthly Ham Exams\*\*-All classes, Novice to Extra, Sept 20, Oct 18, Nov 22, Dec 20, Rm 1-150. Reservations requested 2 days in advance. Contact Nick Altenbernd, 437-0320. Exam fee: \$4.50. Bring copy of current licence (if any), 2 forms of picture ID and completed form 610 available from FCC, Quincy, MA, 770-0423.

MIT/DL Bridge Club\*-Duplicate bridge, Tues, 6:30pm, Student Ctr Rm 407. ACBL masterpoints awarded; come with or without partner, newcomers always welcome. Handicap game, 3rd Tues every month. Info call Gary Schwartz, x8-2459 Draper, or Mark Dulcey, 247-2300. Admission for regular games: \$1/students, \$2/non-students.

MIT Student Bridge Club\*-Duplicate games Mon, Thurs, Sat and Sun and teams following 7:30pm, usually at Student Ctr (see posters), Lessons, 7pm, if required. Refreshments. Info: Bo-Yin, x5-9865 dorm or David, x5-7522 dorm.

field is 45 minutes south of Cambridge, off Rt 95. Student membership: \$175; typical flight: \$16. Contact: Cathy Keller. x0814 Linc or 327-3193 eves.

MIT Sport Parachute Club\*-Learn to skydive: experienced jumpers go out every weekend; beginners, call for information on our first jump courses. AFF and Static-line. Carl, 225-0408.

MIT Nautical Association\*\*-Sailing Pavilion on Charles River open every day, 9am-sunset. Sailing, windsurfing and coastal cruising. Free basic sailing classes, Wed, 5:15pm and Sat, 9am. Membership cards on sale at Cashier's Office: \$15 students, \$35 staff/faculty, \$45 alumni.

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

MIT Graduate Club Soccer\*\*-Competitive soccer with teams from the metro-Boston area. Practices Thurs, 7:30-9:30pm; Games Sat, 10am or 2pm, Field A (artificial turf). Open to MIT community. Info: Dave, x3-4546 or Eric, 776-7910.

MIT Aikido Club\*\*-Non-competitive martial discipline, meets M-F, 5:30pm, DuPont Exercise Rm. Beginners always welcome. Info: Mitch Hansberry, x8-1272.

MIT Wu Tang Martial Arts Club\*\*-Learn Northern Chinese kung fu. Long fist and praying mantis styles, short sabre and sword. Meets T/Th, 8-10pm; Sat, 9am-12noon, Burton Dining Hall. Info: Matt Cordery and Paul Filmer, x3-1911.

MIT Karatedo Doshinkan Club\*-Classical noncompetitive Okinawan Karatedo, MWF, 5:30-7pm, meet outside Dupont (W31) by BBQ pits. Rain schedule: MWF, 4:30-6pm, W31-225 Dance Studio. Info: Jim, x3-0472.

MIT Tae Kwon Do Club\*-Traditional Korean martial arts with emphasis on development of mind and body, Mon/Wed, 6:30-8pm, Burton Dining Hall; Fri, 6:30-8pm, T Club Lounge; Sun, 4-6pm, T Club Lounge.

## **Religious Activities**

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

MIT Hillel\*-Wed, Sept 13: BBQ Study Break. 9pm, behind Hillel. Fri, Sept 15: Torah & Chocolate Class, 12noon, Hillel; Conservative Services, 5:30pm, Student Ctr Rm 491; Orthodox Services, 6pm, Rm 50-010; Community Shabbat: "Life at MIT in the 1930's & 1950's," 6:45pm dinner, 8:30pm program, Walker Hall Blue Rm. Mon, Sept 18: Graduate Seminar on Jewish Affairs, 4-5pm, Walker 50-220. Fri, Sept 22: Torah & Chocolate Class, 12noon; Conservative Services, 5:30pm, Student Ctr Rm 491: Orthodox Services, 6pm, Rm 50-010; Shabbat dinner, 6:45pm, Kosher Kitchen (50-007). Sat, Sept 23: Selichot Services, 11pm, Hillel. Sun, Sept 24: Apple Picking, With Wellesley Hillel, meet 1pm, Hillel. Prepare for Yom Kippur: tickets required for Kol Nidre services, obtainable at MIT Hillel through Oct 6 and in Lobby 10 on Sept 18, 25 & Oct 3. Info: x3-2982.

Tech Catholic Community\*\*-Masses: Sat, 5pm; Sun, 10am & 5pm. Tues & Thurs, 5:05pm, Fri, 12:05pm, MIT Chapel. Info/ Holy Day schedule: x3-2981.

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

United Christian Fellowship\*\*-Large group meetings. Join us for worshipful singing, prayer, sharing and Bible teaching, and small group Bible studies during the week in various dorms, Fri, 7pm, Student Ctr Mezzanine Lounge. Info: Tracy, x5-9688

Graduate Christian Fellowship\*\*-Come join other grad students, faculty and staff in learning about and growing in the Christian faith. Activities open to both Christians and those interested in learning more about Christianity. Info: Curt Bronkhorst, x3-4414 or Roz Picard, x3-7314.

MIT Islamic Society\*-5 daily prayers in the prayer room (Ashdown House WD West basement). Friday prayer, 1:10-1:45pm, Student Ctr Rm 407. Islamic Studies Classes: English 7pm, Rm 1-132/134; Arabic, 8pm, Prayer Rm. Introduction to Islam Classes: 1st Thurs of each month, 8:30pm, Rm 1-134. Info: x8-9755.

Christian Science Organization at MIT\*-Weekly Testimony meetings, Thurs, 7pm, MIT Chapel.

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 1-150, bring lunch. Ralph Burgess, x3-8121. (Since 1965.)

MIT Bible Study Group\*-The Economy of God, a look at God's eternal purpose to dispense Himself into man based on the revelation of the Bible, Fri, 8pm, Student Ctr Rm 407. Singing, prayer, Bible reading, fellowship.

# MIT Libraries Term-time hours

## September 11-December 22, February 5-May 24

Administrative Offices		14S-216	Microrep	roduction Lab	14-0551
Mon-Fri	9-5	253-5651	Mon-Fri	9-5	253-5650
Sat-Sun	closed		Sat-Sun	closed	
Aeronautics and		33-316	Music Li	brary	14E-109
Astronautics Library		253-5666	Mon-Thu	8:30-11	253-5689
Mon-Fri	8:30-6		Fri	8:30-7	
Sat	11-6		Sat	11-6	
Sun	1-5		Sun	1-11	
Barker Engineering		10-500	Reserve	Book Room	14N-132
Library	ALTANI DE LA CALLAND	253-5661	Mon-Thu	8:30-11	253-5675
Mon-Thu	8:30-11	1000000000000	Fri	8:30-7	233-3073
Fri	8:30-7		Sat	11-6	
Sat	11-6		Sun	1-11	
Sun	1-11				
			RetroSpe	ctive Collection	N57
Computerized Literature		14S-M48	Mon-Fri	9-5	253-7040
Search Se	ervice	253-7746	Sat-Sun	closed	
Mon-Fri	9-5				
Sat-Sun	closed		+Rotch Library		7-238
			Mon-Thu	8:30-10	258-5590
Dewey Library		E53-100	Fri	8:30-7	
Mon-Thu	8:30-11	253-5677	Sat	11-6	
Fri	8:30-7		Sun	2-10	
Sat	11-8				
Sun 1-11			Rotch Visual Collections		7-304
			Mon-Fri	8:30-6	253-7098
Humanities Library		14S-200	Sat-Sun	closed	
Mon-Thu	8-12	253-5681			
Fri-Sat	8-8		Schering	-Plough Library	E25-131
Sun	noon-12		Mon-Fri	9-6	253-6575
			Sat-Sun	closed	a Standard
	Archives and	14N-118			
Special Collections		253-5688	*Science 1	Library	14S-100
Mon-Fri	9-5		Mon-Thu	8-12	253-5685
Sat-Sun	closed		Fri-Sat	8-8	Constraints
Visio (Links)			Sun	noon-12	
Lindgren Library		54-200			
Mon-Fri	8:30-11	253-5679			
Fri	8:30-7				
Sat	11-6			Sector Strategics	
Sun	1-11				

Open 24 hours a day for members of the MIT community only. (MIT ID required) Construction may cause unexpected closing. Call ahead for hours of the day.

SPECIAL SCHEDULES ARE POSTED FOR HOLIDAYS

call Patricia Gercik, x3-3142, Ctr for International Studies, MIT-Japan Program, Rm E38-754.

## UROP

Welcome to all students, old and new. MIT and Wellesley undergraduates are invited to join with faculty members in pursuit of research projects of mutual fascination. Faculty supervisors wishing to have projects listed should send project descriptions to the UEO. Questions? Contact us, x3-7909, Rm 20B-141.

The 1989-90 UROP directory is available in the Undergraduate Education Office (UEO), 20B-141. Project listings and guidelines will be posted on the bulletin boards located in the infinite corridor and in the UEO.

Software Development. Assist in the development of software on the Macintosh for a course in network optimization. The software will help "animate" graph algorithms so that students can see what is happening as the algorithm is being executed. Student must be familiar with the Macintosh, and should have a knowledge of both PASCAL and SCHEME. Contact faculty supervisor: Prof James Orlin, E53-357, x3-6606.

Optical Communications Group. Students will participate in generating non-classical states of light in a four-wave mixing experiment. They will learn and contribute in: optics and highefficiency photo-detection, dye laser system, thermal control for a high-temperature vacuum cell and quantum noise study and applications. While experience is highly desirable, we are looking for two highly motivated students who are interested in optics and the basic interaction of light with matter. Contact faculty supervisor Dr. Franco Wong, 36-477, x3-8131.

Chemotaxis in Escherichia Coli. 1. Bacterial cells can sense their own energy level and move to most favorable environence helpful. Faculty supervisor: Tim Gutkowski; contact: Kate Gasser, 35-001, x3-7274 or 665-7727.

**Processing and Fracture Behavior of Metal Matrix Compos** ites. Student needed to participate in processing the Almatrix. Work also involves a significant part in analyzing the test performed (energetic analysis of the load displacement curves and optical study of the failure mechanism). Prior experience is not necessary. Faculty supervisor: Prof A. Mortensen, 8-401. Contact P. Metenier, 8-436, x3-3248.

System Programmer. Two students needed for projects in the Theory of Computation Group. Projects include: video image manipulation/image database for on-line look up; data compression algorithms for digitized images, Bulletin Board program for Emacs, etc. Most of the work will be done in UNIXenvironment. Knowledge of UNIX, GNU Emacs, C, and Lisp are helpful but not required. Successful candidates might be required to take 6.170 this semester. Faculty supervisor: Charles Leiserson, NE43-321. Confact: William Ang, x3-7583 or email ang@theory.lcs.mit.edu.

Biochemical Engineering. This position will combine aspects of aerobic fermentation with a novel protein purification method. The student will assist in the growth, characterization, and harvest of a bacterial culture which secretes a proteolytic enzyme. Specific duties will include the operation of a 14 liter Chemap fermenter, optimization of the fermentation conditions, and analysis of the hollow-fiber system. Faculty supervisor D.I.C. Wang. Contact: Brian Kelley, x3-1285 or x3-3465.



MIT Go Club\*-Meets every Wed, 5-7pm, Rm 24-612 (ESG Lounge). Info: John Cox, x3-7887 eves.

MIT Science Fiction Society\*-The world's largest open collection of science fiction books and magazines is located in Student Ctr Rm 473. Meetings, Fri, 5:30pm. Info: x8-5126.

Hunger Action Group\*\*-Meets Tues, 7pm, Baker Master Suite Lounge. Volunteers at soup kitchens, Boston Food Bank; sponsors forums, films addressing hunger- and developmentrelated issues. Contact Susmitha, x5-8528 dorm or Irene, x5-8492 dorm.

COCA (Committee on Central America)\*-Meets at least once a month to plan activities relating to events in Central America, Info: Charlie Welch, 783-1668 eves/messages.

Club Latino at MIT\*\*-Student organization to promote exchange of cultural backgrounds between members of the MIT Hispanic community and other MIT affiliates. Organizational Meeting-Tues, Sept 19, 6pm, Student Ctr West Lounge. Info: Miguel Velez, x3-5958 or e-mail latinos @athena.mit.edu.

Brazililan Student Association of MIT Elections\*\*\*-Fri, Sept 15, 9am-4pm, Lobby 10.

MIT Outing Club\*-Camping, cycling, climbing, canoeing, cabins. Meets 1st Mon of month, 6pm, W20-461. Rental hours, M/Th, 5-6pm, W20-461. Also, see our bulletin board in "Infinite Corridor" next to Athena. Info: x3-2988 or Jerylen, x5-9623 dorm.

MIT Soaring Association\*-Weekend Soaring-Learn the exciting sport of soaring. We fly from the Mansfield airport every weekend and some holidays (weather permitting). MansMIT Campus Crusade for Christ\*-Fridays, 7:17pm, Marlar Lounge, Rm E37-252, TGIF weekly meeting of MIT Campus Crusade for Christ. We "thank God it's Friday" every week with singing, biblical input, discussion and fun. Info: x5-9153 dorm.

## **Graduate Notices**

Fannie & John Hertrz Foundation Graduate Fellowship. 1990-91. Financial support for outstanding students pursuing graduate studies in applied physical sciences. NOT for students in biological sciences or for those seeking professional degrees or PhD and professional degrees (i.e. joint PhD/MD programs). Provides cost-of-education allowance of \$8,000 and a stipend of \$15,000 (9 months) US citizenship or documented evidence of application for citizenship required. Applications available in the Dean of the Graduate School Office, Rm 3-138. Deadline: Nov 1, 1989.

### International Notices

MIT-Japan Program. A unique opportunity for MIT science, technology and management students to spend a year in Japan working at a major Japanese company or laboratory. Students are trained in Japanese language and culture at the Program's expense before being placed in Japan. Placement is tailored to the student's background and experience. Travel to/from Japan and living expenses will be covered. For further information,

ments. This project will use recombinant DNA methods to identify the receptor responsible for this. 2. cGMP is the most powerful attractant for E. coli. We will purify the protein receptor for cGMP taxis and try to understand the biological role of this mysterious behavior. Previous laboratory experience helpful. Prof Kim Lewis, 16-229, x3-0542.

Chemical Weathering on Venus. A position is available for a student interested in laboratory work with high temperature furnaces. The construction of ceramic holders for sample suspension, the modification of existing furnaces, and the building of a gas handling system with automatic controls is a major part of the research. Contact faculty supervisor: Dr. Bruce Fegley, 54-1822, x3-7808.

Electronic Control and Data Acquisition System for High Temperature Furnaces. Student needed with skill in electronic circuit design. The project is to interface a PC computer to a set of two high temperature furnaces for several applications. Contact faculty supervisor: Dr. Bruce Fegley, 54-1822, x3-7808.

Theoretical Models of Volcanic Gas Chemistry. UROP student wanted with extensive experience in the running and revision of computer codes for gas phase multicomponent chemical equilibrium calculations. The work involves models of gas chemistry as a function of pressure, temperature, and eruption rate for a large number which are potential constituents of volcanic gases on the Earth and other solid bodies. Contact faculty supervisor: Dr. Bruce Fegley, 54-1822, x3-7808.

Mechanical Engineering. UROP student wanted to assist in building a machine for manufacturing research, running experiment, and doing material testing. Some machine shop experi-

UL 

September 13, 1989 Volume 34 Number 5

Publisher: Editor: Assistant Editor: Photojournalist: Editorial Assistant: Production:

Kenneth D. Campbell Joanne Miller Elizabeth A. Thomson Donna Coveney Lynn Heinemann Genevieve Parent and Karen Sklut of MIT Graphic Arts

#### **News** Office

Director: Kenneth D. Campbell; Associate Director: Robert C. Di Iorio; Senior Assistant Director: Charles H. Ball; Chief Science Writer: Eugene F. Mallove; Assistant Directors: Naomi F. Chase; Donna Coveney, Joanne Miller; Assistant Editor: Elizabeth A. Thomson; Administrative Assistant: Myles Crowley; Senior Secretary: Lynn Heinemann; Receptionist: Mary T. Galindo.

Tech Talk is published weekly except for most Monday holiday weeks by the News Office, Massachusetts Institute of Technology, 77 Massachusetts Avenue, Cambridge, Massachusetts 02139.

Postmaster: Send address changes to Tech Talk, Room 5-111, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139.

Tech Talk is distributed free to faculty and staff offices and residence halls. It is also available free in the News Office and the Information Center.

Mail subscriptions are \$18 per year. Checks should be de payable to MIT and mailed to Business Manager, Room 5-111, MIT, Cambridge, MA 02139 Second class postage paid at Boston, MA. Permission is granted to excerpt or reprint any material

originated in Tech Talk.

# Schrock named Keyes Professor

One of the world's leading researchers in the area of inorganic and organometal-



lic chemistry, Professor Richard R. Schrock, has been appointed to the Frederick G. Keyes Professorship in the Department of Chemistry, Dean of Science Gene M. Brown has announced.

Dr. Schrock, 44, has been a member of the Chemistry -Department faculty since 1975.

**Dr. Schrock** 

The Frederick G. Keyes Professorship is named in honor of Professor Frederick G. Keyes, who was head of the Department of Chemistry from 1922 to 1942. Current department head Mark S. Wrighton said, "Dr. Schrock is one of chemistry's leading scholars. He has made enormous contributions that will have lasting fundamental consequences and will very likely have practical importance in the chemical industry. The Department of Chemistry at MIT is proud to have Richard Schrock as a member of its faculty.'

Dr. Schrock received the BS degree in chemistry from the University of California at Riverside in 1967 and his PhD in chemistry from Harvard University in 1971. After postdoctoral work at Cambridge University in the United Kingdom, he joined E.I. DuPont in 1972 and came to MIT as an assistant professor three years later. In 1978 he was promoted to associate professor and to professor in 1980. During 1986 he was a Sherman T. Fairchild Distinguished Scholar at the California Institute of Technology.

Professor Schrock has made major contributions that have opened new areas of research and development, especially in the understanding and development of homogeneous catalysts for reactions of hydrocarbons. "Schrock chemistry" is known worldwide and is followed avidly by many research groups.

Among Dr. Schrock's early contributions was the discovery of metal complexes Arts and Sciences.

of carbene, CH, which led to the synthesis of new catalysts and a detailed understanding of their function. Professor Schrock has developed homogeneous catalysts that bring about the rapid metathesis of alkynes at room temperature. Alkyne metathesis involves the apparent cleavage and reassembly of carbon-carbon triple bonds, which are among the strongest chemical bonds known.

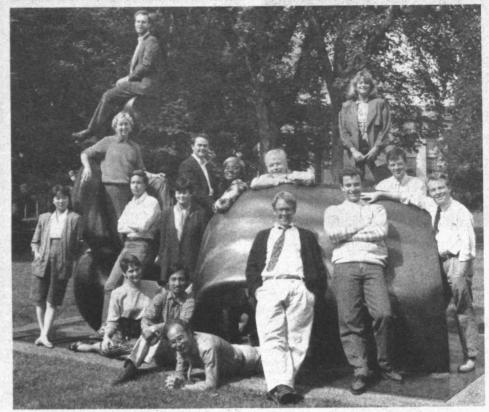
Colleagues say that elegant syntheses and mechanistic sophistication typify Professor Schrock's research contributions. Fundamental insight into the nature of metal-carbon bonds comes from his workan example is the preparation and structural characterization of a tungsten complex having simultaneously a metal-carbon single, double, and triple bond to three different ligands.

Recently, he has pioneered the use of organometallic catalysts to effect the polymerization of strained, cyclic olefins. The socalled ring opening metathesis polymerization (ROMP) yields "living polymers" which allows formation of block co-polymers. ROMP is a new way to make molecular materials having novel properties and one of the few ways available to make welldefined block co-polymers.

His research is also directed towards catalytic reactions of nitrogen, No, with emphasis on conversion to ammonia, NH<sub>3</sub>, via homogeneous processes under ambient conditions

Professor Schrock has served as the associate editor for the American Chemical Society's journal Organometallics. He has been involved with numerous other professional activities connected with the American Chemical Society. He has also served on the NSF Chemistry Advisory Committee, 1979-1981, and on an NIH Metallobiochemistry Study Section, 1983-1987.

Professor Schrock's honors include the American Chemical Society Award in Organometallic Chemistry, conferred in 1985. He was a Fellow of the Alfred P. Sloan Foundation, 1976-1978, and a Camille and Henry Dreyfus Foundation Teacher-Scholar, 1978-1983. In 1989 he was elected to the American Academy of



New Knight Fellows are from left (top): Dan Charles, freelance, Washington, D.C.; Victoria Churchville, The Washington Post; (middle row) Shigeko Segawa, Newton magazine, Tokyo; Judy Foreman, The Boston Globe; James Erickson, The Arizona Daily Star, Tucson; Atsuko Tsuji, Asahi Shimbun, Tokyo; David Bjerklie, Time magazine, New York; Nena Uche, The Guardian, Lagos, Nigeria; Victor McElheny, Director; Joseph van den Broek, Chemisch Magazine, Leiden, The Netherlands; David Baron, WBUR-FM, Boston; (foreground) Linda Lowe, Program Administrator; Yoshio Takano, Yomiuri Shimbun, Tokyo; Monte Basgall, News and Observer, Raleigh, North Carolina; John Nielsen, freelance, Orange County, California; and Alvaro Pereira, Jr., Folha de Sao Paulo, Brazil.

-Photo by Paula M. Lerner

# Knight Fellows begin year here

Six science journalists from overseas joined eight American colleagues here last week as the 1989-90 Knight Science Journalism Fellows began their academic year at the Institute. Selection of the Americans was announced in the May 24 issue of **Tech Talk** 

The Knight Fellows, the seventh group of journalists to study at MIT in a program that began in 1983, are scheduled to meet President Paul E. Gray at a welcoming reception from 4-6pm tomorrow (Thursday, Sept. 14) in the Vannevar Bush Room. The reception is sponsored by Technology Review and the MIT News Office.

The overseas Fellows are from four continents: Asia, Africa, Europe, and South America. The first Knight Fellow from Africa is Ms. Nena Uche, 29, science correspondent for The Guardian in Lagos, Nigeria

The European Fellow is Dr. Joseph M. van den Broek, 38, senior editor of Chemisch Magazine of Leiden in the Netherlands. He is the third Knight Fellow from Europe to be supported by the German Marshall Fund of the United States.

### From South America, with the help of Fulbright funds, comes Alvaro Pereira, Jr., 26, science reporter of the newspaper, Folha de Sao Paulo. He is the second Knight Fellow from Brazil.

All three Asian Fellows are from Tokyo, Japan: Ms. Shigeko Segawa, 27, of Newton magazine; Ms. Atsuko Tsuji, 36, of the Asahi Shimbun, a leading newspaper; and Mr. Yoshio Takano, 35, of the Yomiuri Shimbun, another leading newspaper. Mr. Takano is the second science journalist from Yomiuri to join the MIT program, and the fourth to receive support through the US Japan Educational Commission (Fulbright Program).

The Knight Fellowships are supported by a seven-year operating commitment made in 1987 by the program's principal sponsor, the Knight Foundation of Akron, Ohio. Earlier this year, as announced in Tech Talk on June 14, the Foundation issued a \$5-million challenge toward endowment, with an additional \$2.5 million to be raised by the Institute over the next five years. --Victor Mc Elheny

# Two are appointed in Public Relations

Frances Helmstadter and Ruth T. Davis have joined Public Relations Services as head of the International Visitors Office and editor and production manager in the Communications Office, respectively.

The appointments were announced by Kathryn W. Lombardi, executive assistant to the president and director of Public **Relations Services.** 

As head of the International Visitors Office Ms. Helmstadter will advise the MIT community regarding the concerns of international visitors, such as immigrant and non-immigrant visas and their advantages and disadvantages.

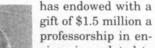
Before coming to MIT, Ms. Helmstadter was advisor to foreign academic staff members at Cornell University for nine years.



Prior to that she was student activities assistant, also at Cornell, and a teacher of high school English at George Junior Republic in Freeville, N.Y.

# Kawasaki Chair established

Kawasaki Heavy Industries, Ltd., one of Japan's major industrial companies,



Materials Science and Engineering, is an expert on the design and fabrication of marine and aerospace structures such as ships, submarines, offshore structures and space vehicles. He is recognized internationally for developing techniques to make welding possible in the deep ocean and in outer space. In 1986 Professor Masubuchi was given a special award from the Minister of Foreign Affairs of Japan. The award recognized his academic contributions and his work to strengthen ties between the United States and Japan mainly through his work with Japan-related societies in this area. Professor Masubuchi, 65, was born in Hokkaido, Japan, and received his BS (1946), MS (1948) and PhD (1959) in naval architecture from the University of Tokyo. He became a citizen of the United States in 1973. He and his wife, Fumiko, live in Arlington.

# Schoettler funds Course I fellowship

Frank W. Schoettler '36, a graduate of what is now the Department of Civil Engineering, has funded the department's first named graduate student fellowship-the Frank W. Schoettler Fellowship.

Mr. Schoettler, of Louisville, Ky., retired recently as president of Struck Construction Co., a 125-year-old company. Mr. Schoettler's grandfather worked for the firm as a cabinet maker for many years and his father was one of a group that bought the company years later. Mr. Schoettler started as a timekeeper and engineer after graduating from MIT and rose to head the firm which has built many office buildings and public facilities in the Middle Atlantic states and Ohio.

Mr. Schoettler, who is childless, created the fellowship to help young people continue their MIT education.

Ms. Helmstadter holds the BA from Washington Square College of New York University and the MA in English from the University of Pennsylvania.

Ruth Davis will assume the day-to-day responsibilities of the Communications Office's cyclical series of publications, including the Courses and Degree Programs Catalogue, in her new position as editor and production manager in that office.

Ms. Davis was most recently a freelance copy editor/proofreader; her clients included WGBH, Fidelity Investments and MIT. Before that she was senior artist for Hub Mail Advertising, Boston, and composition coordinator for Rivkind Associates, Stoughton.

She holds the BA in English from Southeastern Massachusetts University and the MA in journalism from Northeastern University.

gineering related to advanced, complex systems.

Dr. Koichi Masubuchi, a native of Japan who has been a member of the MIT faculty since 1968, has been named the first holder of the Kawasaki Professor-

Dr. Masubuchi ship.

Kawasaki Heavy Industries is a machinery manufacturer whose principal business lines are ships, aircraft, rolling stock, buses, engines, construction machinery, marine machinery, industrial machinery, atomic energy machinery, oil hydraulic machinery, medical equipment and steel products. Its name is widely known in the United States for its motorcycles.

Professor Masubuchi, who holds a joint faculty appointment in the Department of Ocean Engineering and the Department of

## It's a fact

The world's largest open collection of science fiction books and magazines is located in the Student Center, Rm 473.

# THE INSTITUTE CALENDAR

### September 13 - September 24

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

#### Seminars and Lectures

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.

#### Wednesday, September 13

Why is AIDS Different?\*\*—Prof David Baltimore, MIT Whitehead Institute/Dept of Biology, AIDS: Scientific Challenge and Human Challenge Context Subject Seminar, 3-5pm, Rm 6-120.

Intercomparison and Testing of Tropical Ocean Models\*— Dr. Claude Frankignoul, LODYC, University of Paris, Dept of Oceanography Sack Lunch Seminar, 4pm, Rm 54-425.

The Bicoid Morphogen Gradient Determines Anterior Pattern in the Drosophila Embryo\*\*—Dr. Wolfgang Driever, Max Planck Institute, Whitehead Institute Seminar, 4pm, Whitehead Auditorium.

#### Thursday, September 14

Manned Spacecraft: X-15 to the Space Station\*\*-Myron Kayton, president, Kayton Engineering Co, Dept of Aeronautics and Astronautics Seminar, 4-6pm, Rm 9-150.

Quantum Coherence Effects in Small Disordered Conductors\*\* Prof Boris Altshuler, MIT/Leningrad Institute of Nuclear Physics, Physics Colloquium, 4:15pm, Rm 10-250. Refreshments served, 3:45pm, Rm 26-110.

#### Friday, September 15

The Product of the Drosophila Gene vasa Shares Similarities with ATP-Dependent Helicases\*\*—Dr. Michael Ashburner, Dept of Genetics, University of Cambridge, England, Whitehead Institute Seminar, 12noon, Whitehead Auditorium.

Fischer-Tropsch Synthesis as a Way to Utilize Remote Natural Gas\*\*—Dr. George Huff, Amoco Chemicals Corp, Chemical Engineering Seminar, 3:30pm, Rm 66-110.

A Laterally Extensive Geochemical Boundary in the Mesozoic Basalts of Southern Gondwanaland and Tectonic Implications\*\*--Prof A.J. Erlank, University of Cape Town, Dept of Earth, Atmospheric, and Planetary Sciences Conoco Lecture, 4-5pm, Rm 54-915.

#### Monday, September 18

Mass Transport: New Microfabrication Technology for New Semiconductor Optoelectronics\*\*—Dr. Z.L. Liau, Lincoln Lab, Dept of Electrical Engineering and Computer Science Heterostructure Device Seminar, 10am, Rm 34-401A. Coffee & muffins, 9:45am.

An Investigation of Boundary Layer Control in Flight 45 Years Ago (Instrumentation, Flight Techniques and Results)\*—George Toumanoff '42, Dept of Aeronautics and Astronautics Seminar, 3pm, Rm 33-206.

A Small but Complex Virus\*\*—Prof David Baltimore, MIT Whitehead Institute/Dept of Biology, AIDS: Scientific Challenge and Human Challenge Context Subject Seminar, 3-5pm, Rm 6-120.

Stability of Flow Near a Stagnation Point\*-J. Trevor Stuart, visiting prof, Brown University, Applied Mathematics Colloquium, 4pm, Rm 2-338. Refreshments served, 3:30pm, Rm 2-349. Spectral Element Solutions of the Navier-Stokes Equations on Distributed Memory Parallel Processors\*\*—Paul Fischer, MIT Dept of Mechanical Engineering, Dept of Mathematics Numerical Analysis Seminar, 4pm, Rm 4-163. Refreshments, 3:30pm, Rm 2-349.

Recombination and Transcription Factors of Lymphocytes\*—Dr. David Baltimore, MIT Dept of Biology/director, Whitehead Institute, Harvard-MIT Division of Health Sciences and Technology Lecture on Biomedical Research, 4pm, Rm E25-111. Refreshments.

Applications of U-Pb Geochronology to Tectonic Problems: Examples from the Canadian Cordillera, Cape Smith Fold Belt, and Pakistan Himalaya\*\*—Dr. Randy Parrish, Geological Survey of Canada, Dept of Earth, Atmospheric, and Planetary Sciences Conoco Lecture, 4-5pm, Rm 54-915.

The Ancient Architecture of Lahore and the Future\*—Prof Masood A. Khan, visiting prof at MIT, MIT Museum Slide Lecture, 7pm, MIT Museum.

#### Thursday, September 21

An Alternative Funding Plan for the National Air Transportation System: Its Implications for the US and other Governments\*—Jonathan Howe, president, National Business Aircraft Assn, Washington, DC, Flight Transportation Laboratory Seminar, 2-3:30pm, Rm 33-319.

An Emulsion Pathway to Selective Composite Membranes for Separation Processes\*—E. Ruckenstein, Dept of Chemical Engineering, State University of NY-Buffalo, Program in Polymer Science and Technology Semianr, 2-3:30pm, Rm 4-159. Refreshments.

The Fiber Optics Local Loop Field Trials: Experiences to Date and Future Policy Questions\*—John Palladino, Bellcore; Robert Pepper, Federal Communications Commission, MIT Communications Forum Seminar, 4-6pm, Bartos Theater Rm E15-070.

Why We Study B Quark Physics at Cornell\*\*—Prof Bernard Gittelman, Cornell University, Physics Colloquium, 4:15pm, Rm 10-250. Refreshments, 3:45pm, Rm 26-110.

#### Friday, September 22

Compatibility in Blends of Crystallizable Polybutadiene Isomers\*\*—Moira Marx Nir, Chemical Engineering Seminar, 2pm, Rm 66-110.

The Effect of Mixing on Aerosol Formation\*\*—Prof Ian Kennedy, University of California-Davis, Chemical Engineering Seminar, 3:30pm, Rm 66-110.

The Climate History of the North Atlantic over the Past 2.25 Million Years\*\*—Dr. Maureen Raymo, Monash University, Australia, Dept of Earth, Atmospheric, and Planetary Sciences Conoco Lecture, 4-5pm, Rm 54-915.

Fusion Program Strategy\*—Prof Kim Molvig, MIT Plasma Fusion Ctr, Plasma Fusion Ctr Seminar, 4pm, Rm NW16-213.

## **Community Meetings**

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

Al-Anon\*\*—Meetings every Fri, noon-1pm, Health Education Conference Rm E23-297; every Tues, noon-1pm, Rm 1-246; and every Mon, 12-1pm, Lincoln Lab Bldg 1218, Family Support Ctr. The only requirement for membership is that there be a problem of alcoholism in a relative or friend. Call Sarah, x3-4911.

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

Co-Dependents Anonymous (CoDA)\*—Meetings every Thurs, 6:30-8pm, Rm 66-144. Info: Sarah, x3-4911.

Narcotics Anonymous\*—Meetings at MIT, every Mon, 1-2pm, Rm E23-364 (MIT Medical Dept). Call 569-0021.

**Overeaters Anonymous (OA)\***—Meets Thurs, 1-2pm, Rm E23-364. On requirement for membership is the desire to stop eating compulsively. Info: Sarah, x3-4911.

MIT Faculty Club\*\*—Closed for renovations, through early Sept.

Office Workers Issues Group\*\*—Women's Forum informal support staff meetings, Wed, 12:10-1pm, Rm 8-219. Bring your lunch; network or talk about office worker's issues.

Developing Self-Esteem in Our Children\*\*—Peggy Kaufman, director, Parent Programs, Boston Jewish Family and Children's Service, MIT Child Care Office Program, Tues, Sept 19, 12-1:30pm, Rm 18-290.

Stress and Mothering in the Adolescent Years\*\*-Diane Englund, Women's Forum Women's Health Issues Seminar.

Tai Chi Class\*\*—Women's League/Taoist Tai Chi Society of Massachusetts lessons of ancient meditative exercise which can relieve stress and improve concentration and perception. 10week class through Nov 7, 5:10pm, Rm 10-340. Wear loose clothing. Info: Nancy Collins, x3-8381, John, x3-4434, or Pam, Women's League office, x3-3656.

Informal Embroidery Group\*—MIT Women's League Group meets Sept 20, Oct 4 & 18, Nov 1 & 15, Dec 6, Jan 3 & 17, Feb 7 & 21, March 7 & 21, April 4 & 18, May 2 & 16, June 6, 10:30am-1:30pm, Rm 10-340.

### **Health Education**

Nursing Mothers' Support Group\*\*—Pregnant and breastfeeding women at MIT meet to gain confidence and share info and practical tips. First Tues of each month, 10-11am and third Weds of each month, 4-5pm, Rm E23-297. Babies welcome. Info: Connie Bean, x3-1316.

## MITAC

MITAC, the MIT Activities Committee offers discount movie tickets for General Cinema (\$3.75) and Showcase (\$3.75). Tickets are good 7 days a week, any performance, T i c k e t s may be purchased at MITAC Office, Rm 20A-023 (x3-7990), 10am-3pm. Mon through Fri. Tickets are also sold in Lobbies 10 & E18 on Fridays, 12-1:15pm. Lincoln Lab sales are scheduled in Rm A-263 from 1-2pm, Tues-Fri. Check out our table of discounts for dining, musical and cultural events available to you through MITAC.

The 165th Topsfield Fair. Sept 30-Oct 9. America's oldest fair (founded in 1818). Tickets: \$3.50/pp (reg \$4/pp weekdays; \$5/ pp weekends; children under 12 are free). Available in the MITAC office.

Boston Classical Orchestra. Wed, Oct 4, 8pm, Faneuil Hall. Program includes Mozart's Eine Kleine Nachtmusik, K. 525; C. P. E. Bach's Concerto for Harpsichord and Strings in D Minor (Mark Kroll-soloist); Handel's Sonata No. 5 (Concertmaster Robert Brink, soloist); and Mendelssohn's Sinfonia No. 10. Tickets \$8/ea (reg \$12).

Fall Foliage Weekend on Lake Winnipesaukee. Oct 7-8. Escape includes: round-trip bus fare; 1 night's lodging at the Wolfboro Inn; an Oktoberfest evening (dinner/dancing) aboard the Mt. Washington cruise boat; gourmet continental breakfast; morning boat ride on the Judge Sewell; and Sunday brunch — all for only \$96/pp/dbl. occupancy (\*or, \$71/pp/dbl. occupancy without the Oktoberfest evening). Bus leaves. West Garage 10am, Sat, Oct 7; returns approx.7pm, Sun, Oct 8. Space is limited; reservations must be made before Sept 15 in the MITAC office.

Ringling Brothers & Barnum & Bailey Circus. Fri, Oct 13, 7:30pm, Boston Garden. Tickets. \$10/ea (reg \$12.50).

Hal Holbrook in Mark Twain Tonight. Sat, Oct 14, 8pm, Opera House. Tickets \$25/ea (reg \$28); available in the MITAC office.

Philadelphia Weekend by Train. Oct 27-29. The weekend escape includes round-trip train fare; 2 nights' lodging in Independence Square; welcome dinner at the hotel; walking tour of the historic area and Society Hill, followed by lunch at the famous Dickens Pub; Sunday breakfast; transfers and more. Only \$249/pp/dbl occup. Reservations must be made by Sept 15 in the MITAC office, and space is limited.

Montreal Holiday Shopping Weekend. Nov 24-26. Bus leaves West Garage Fri, Nov 24, 7am; returns approx. 7pm, Sun, Nov 26. Cost: \$120/p/dbl occup (inc round-trip bus fare & 2 nights' lodging at the Hotel Le Baccarat). *Space is limited*. Ticket sales for this event only begin Tues, Sept 12, 10am, in the MITAC office.

**F.Y.I.** I Don't miss the North Shore Music Theatre's production of *My Fair Lady*, Oct 5-28. And, receive \$5 off the box office price (for this or any other Broadway show at the NSMT) with the NSMT's Corporate Discount Card. (It's free) Available in the MITAC office. Call, or stop by, the MITAC office for more details.

F.Y.J. II Exotic Car Expo, Oct 6-8, Bayside Expo Center. Discount coupons available in the MITAC office.

The City Books are Here. Only \$1 ea (reg \$7.50). Discount coupon books, from dining to health clubs to car washes and more. (Coupons valid through Oct 15, 1989.) And, look for the new City Books arriving in mid-Oct (with coupons valid through Feb 1, 1990).

**Riverside Park Discount Coupons.** Riverside Amuseument Park, Agawam, MA. Admission \$10.95 (reg \$14.95), or \$7.95/ child under 48" height (reg \$10.95). Available in MITAC Office, valid through Oct 1.

The Steamship Authority Discount Coupons are Here. Offering reduced fares to Nantucket and Martha's Vineyard. With the discount coupon, round-trip fare to Martha's Vineyard is \$6/ adult (reg \$7.50), \$3/child (reg \$3.80), and round-trip fare to Nantucket is \$13.60/adult (reg \$17) and \$6.80/child (reg \$8.50). Discount coupons are available in the MITAC office.

### Theater

Introducing Theater Arts at MIT\*—Theater Arts Organizational Meeting and Open House, Wed, Sept 13, 7:30pm, Kresge Little Theatre. Open House follows, Kresge Rehearsal Rm B. Theater Arts faculty and staff: the curriculum (new minor offered): Workshop Proposal process; student representatives of participating student activities. Refreshments. Info: x3-2877.

MIT Dramashop Auditions\*\*—Fall '89 Major Production, Sept 18-20, times TBA, Kresge Little Theatre. Call x3-2877 for script availability and audition times.

### Dance

MIT Dance Workshop First Meetings\*\*—Beginning Modern Technique, Wed, Sept 13, 3:30-5pm, Dupont Ctr, T-Club Lounge: Technique/Repertory/Improvisation, Thurs, Sept 14, 11-12:30pm, Walker 201. 21.725 Discussion, Fri, Sept 15, 12-1pm, T-Club Lounge. Come prepared to dance. Info: x3-2877.

MIT Ballroom Dance Club Workshops\*—Sun, Sept 17: Waltz 1, 1-2pm, \$.50/member, \$.75/non-member; Swing 2, 2-3:30pm, \$.75/member, \$1/non-member; Merengue 3, 4:30-5:30pm, \$1/member, \$2/non-member, Walker Memorial Morss Hall. General Dancing 3:30-4:30pm, free. No partner necessary. Info: x8-6554.

MIT Folk Dance Club\*—weekly dancing-Sun, Beginning International Dancing, 7:30pm, Student Ctr Sala de Puerto Rico; Tues, Advanced Balkan and Western European Dancing, 8pm, Student Ctr Rm 490; Wed, Israeli Dancing, 7pm, Lobby 13 (subject to change). *Beginner's Night Israeli Dancing*—Wed, Sept 13, 7pm, Sala de Puerto Rico; 8:25 donation. *Beginner's Night Review*—Wed, Sept 20, Lobby 13. Info: x3-3655.

Rhythmic Gymnastics Classes for Women\*\*—MIT Women's League classes, Thurs, 12-1pm, Rm 10-340. Info: Helena, 596-2396 eves.

Yoga\*—Ongoing classes in traditional Hatha and Iyengar style. Beginners: Mon, 5:10pm, Rm 10-340; Intermediate/Advanced: Mon, 6:30pm, Rm 10-340. For information call Ei Turchinetz, 862-2613.

### **Exhibits**

#### LIST VISUAL ARTS CTR

Student Loan Art Exhibition and Lottery. Prints, drawings, and photographs displayed for distribution by lottery to fulltime, registered MIT students for the 1989-90 academic year. Through Sept 21. Lottery: Sept 22. Reno Campopiano: In Residence. Creating a room-size installation, including among other elements, a coffee-table landscape inhabited by a colony of live ants. Through Nov 19. Still Performance: Rimma and Valery Gerlovin. Collaborative photographs by Soviet emigre artists which mix language and portraiture in the creation of poetic and paradoxical visual formlulas to explore philosophical questions. Catalogue available. Through Oct 8. Hours: Weekdays, 12-6pm, Weekends, 1-5pm. Closed holidays.

#### THE MIT MUSEUM

MIT Museum Bldg (N52)-Lahore: The City Within. The cultural, artistic, and architectural center of Pakistan explored through historical and modern photographs, maps, textiles, and paintings, with performances, films and lectures, Sept 17 through Dec 17. Image and Imagination: 150 Years of Photography. An exploration of photography's technological evolvement. Includes artifacts, hands-on equipment, and photographs. Cosponsored by the Polaroid Corporate Archives. Sept 24 through Dec 31. Math in 3D: Geometric Sculptures by Morton C. Bradley, Jr. Revolving sculptures based on mathematical formulae. Form and color relations lend these works a unique visual appeal, ongoing. Holography: Types and Applications. Changing exhibit demonstrating the uses of this three-dimensional imaging medium. Works include scientific, medical, technical, and artistic imaging drawn from the work of the Spatial Imaging Group at MIT's Media Laboratory, ongoing. Light Sculptures by Bill Parker, MIT '74. Changeable, touchable plasma sculptures by the artist who developed this medium, ongoing. Hours: Tues-Fri 9am-5pm. MIT Museum closed to the public on Mondays; Open 12-4pm Sat-Sun.

Compton Gallery—Stopping Time. Photographs, instruments, memorabilia documenting Harold E. Edgerton's invention and use of the strobe light, Through Sept 15. Gallery hours: Weekdays 9am-5pm, closed Saturdays.

#### Hart Nautical Gallery

Ongoing exhibits: George Owen '94: Yacht Designer—Line drawings and half-models designed by one of the early professors of naval architecture at MIT. Half Models in Naval Architecture and Ship Building—Half-models, ship drawings and photographs illustrate how the half model has aided ship and yacht designers and builders.

Edgerton's Strobe Alley-Exhibits of high speed photogra-

Introduction of Fluid Mechanics Faculty and Staff\*\*—Fluid Dynamics Seminar, 4-5pm, Rm 5-234.

Engineering Ethics: Making the Best of Difficult Situations\*\*-Roger Boisjoly, former engineering, Morton Thiokol, Depts of Civil/Mechanical/Electrical/Chemical/ and Nuclear Engineering and Aeronautics and Astronautics Ethical Issues in the Work Life of Engineers and Scientists Lecture, 4:30pm, Rm 10-250.

#### Tuesday, September 19

Visualizing High-Speed Flows\*\*—Dr. Peter Bryanston-Cross, visiting associate prof, Warwick, England, Gas Turbine Laboratory Seminar, 4pm, Rm 33-206. Refreshments served.

Clues on the Formation of Genetic Regulatory Networks from the Structure of a Transcription Factor\*\*—Steven L. McKnight, Dept of Embryology, Carnegie Institution of Washington, Biology Colloquium, 4:15pm, Rm 10-250. Coffee served, 3:45pm, outside Rm 10-250.

Pulsars Lost and Found\*—Dr. Andrew Fruchter, Dept of Terrestrial Magnetism, Carnegie Institution of Washington, Ctr for Space Research Astrophysics Colloquium, 4:!5pm, Rm 37-252. Refreshments, 3:45pm.

#### Wednesday, September 20

Large-Eddy Simulations of Small-Scale Thermocline Motions\*—Dr. David Siegel, WHOI, Oceanography Sack Lunch Seminar, 12:10pm, Rm 54-915. Mon, Sept 25, 12-1:30pm, Rm 10-340. Bring bag lunch.

Women's Forum Talbot House Weekend\*\*—Active members and friends invited, Sept 22-24, Talbot House, VT. Open program, time to relax, and get to know each other. Dorm-style lodging and meals, \$50/pp. Provide own transportation or car pool. Reservations due by Sept 15, Call Joan Doucette, x3-8246.

English Conversation Classes for International Wives\*\*— MIT Women's League Classes, Registration—Sept 14, 9-11am, Rm 10-340. Classes meet Tues/Th, 9:15-11am. Cost: \$35/ student. Babysitting available (space limited), \$50/child. Info: Jan Kirtley, 277-2628 or Pam Daveta, x3-3656.

MIT Women's Book Discussion Club\*\*—Meets 1st & 3rd Thurs each month, 1-2pm, Rm 10-340. Sept selection, After the Second Set: Conversations with Simone de Beauvoir, by Alice Schwarzer, 1984. Bring lunch. Info: Ellie Bonsaint, x3-5763.

Working Mothers Support Group\*\*—Meets every other Tuesday, 12-1:30pm (drop in any time), Rm 8-219. Next meetings: Sept 19 and Oct 3. An ongoing support group that meets to discuss parenting-related issues in a casual atmosphere. Info: Janette Hyde, x3-4290.

MIT Association for Women Postdocs\*\*—Meeting to discuss plans for the year, Tues, Sept 19, 12noon, Rm 6-321, Lunch provided. Info: Patti, x3-1824.

Child Care Discussion for Expectant Parents\*\*—Child Care Office Discussion led by Rae Goodell, coordinator, Parent Programs, Thurs, Sept 14, 12-1:30pm, Rm 4-144. MIT men and women expecting or planning their first child. 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 the MIT Libraries, x3-5651. At Lincoln Lab, passes are available in the Lincoln Lab Library, Rm A-150.

PLEASE NOTE: Museum of Science tickets no longer available. Due to the recent revamping of the Museum of Science Corporate Discount Ticket Program, the \$1 discount tickets are no longer available.

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**

Fondue/Outing\*\*—Tech Catholic Community Fondue supper followed by an outing into Boston for new graduate students, Fri, Sept 15, 7pm, Student Ctr Rm 307.

Japanese Lunch Table\*\*—Every Tues, 1pm, Walker Rm 220. Bring bag lunch and speak Japanese with native speakers. All levels welcome. phy. 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.

#### OTHER EXHIBITS

Institute Archives and Special Collections—1887: The Founding of the Lawrence Experiment Station. Second in a series of three exhibits in commemoration of the Lawrence Experiment Station's 100th anniversary. Jerome C. Hunsaker, Father of Aeronautics at MIT. Chronicles his founding of aeronautics at the Institute; his design and construction of Navy airships and NC-4, the first airplane to cross the Atlantic, and his role in leading the Dept of Aeronautical Engineering from 1939-51. Happy 50th, Class of '39. Hall exhibit cases in 14N, 1st floor.

## **Wellesley Events**

Jewett Arts Center\*—Style and Science: Examining a Polykleitan Statue, A technical and stylistic analysis of the most important work of classical sculpture in the Wellesley College Museum collection. Through Oct 22. Giorgio Vasari's me the same that a faith and have



Upperclassmen Georgina Maldonado '91 and Angelika Argawala '92 help freshman Susanne Choe of New Jersey move her luggage to her new home. —Photo by Donna Coveney

# Book Night sparks discussions in 39 first year living groups

#### By KENNETH D. CAMPBELL Staff Writer

Rachel and Her Children, the book about homelessness by Jonathan Kozol, sparked lively discussions in the first year undergraduate living groups on Book Night, according to students, faculty and administrators who attended.

Mary Enterline, assistant dean of student affairs in the Undergraduate Academic Support Office, reported that all but four of the 43 first year living groups scheduled discussions and "the reaction was very positive" from faculty/administrator facilitators. A student survey two days before the event indicated that about 60 percent of the first year students had read all or part of the book by that time.

"It was arguably one of the best discussions I've had in 12 years at MIT," said Jeremy M. Wolfe, associate professor of psychology, who was a discussion leader at Student House. "It was not limited to freshmen, there was a good cross-section of

Holy Family: Master and Pupil in a Renaissance Workshop. Examination of a Renaissance masterlpiece reveals clues to the structure of the Renaissance workshop. Through Oct 22.

Style and Science\*—Henry Lie, Gene Farrell and Maureen Ressell Neil, Ctr for Conservaton and Technical Studies, Harvard Art Museums, Wellesley College Museum Gallery

#### students.

"We tackled the big questions. What is the nature of society? Do human beings need to work? Socialism versus capitalism. Can you have a society with equitable distribution of wealth and maintain motivation? What do people owe other people?

"It started at 6pm and I left at 9:30, for a meeting at eight o'clock!" said Professor Wolfe.

Elizabeth A. Sorenson, '90, was coordinator of the event at Next House (500 Memorial Drive), where three of the afternoon speakers at the Book Night Kickoff had dinner and then participated in the discussions.

"From what I can tell, this is the best participation we've had," Ms. Sorenson said. "A lot of people were asking questions. Most were sympathetic, but some had different feelings about it... We talked about experiences, the legal system, trying to get to the causes" of homelessness.

The speakers at the kickoff event were Philip Mangano of the Cambridge Multi-Service Center; attorney Vincent McCarthy of Hale & Dorr, who does volunteer legal work in the shelter community; Anna Roberts, a former homeless person who heads Cambridge Furniture Exchange, and Langley C. Keyes Jr., professor of city and regional planning.

Hale Van Dorn Bradt, professor of phys-

# Faculty Club offers expanded service

### (continued from page 1)

community—the Corporation and faculty; academic and administrative staff; support staff; graduate students and alumni," he said. A mailing later this month will describe the expanded services available and invite nonmembers to join.

New membership cards—similar to Mastercard or Visa—will be issued to improve billing procedures. In addition Mastercard and Visa themselves will be accepted, as will cash and Institute requisitions.

Another major initiative, Mr. Maguire said, was expansion and improvement of the catering staff. Catering and conference services are now available to all MIT affiliated people and organizations along with support in planning and carrying out events. A brochure on catering services will be available soon.

# It's a fact

The MIT campus occupies 142 acres and stretches for more than a mile along the Charles River.

# League announces English classes

The Women's League is once again offering English conversation classes for international women. Registration for the fall term is tomorrow, (Thursday, Sept. 14) 9-11am in Rm 10-340.

Classes range from beginner to advanced and are held Tuesday and Thursday mornings, 9:15-11am, at various locations on campus. They start September 19 and will run through the beginning of December. The Thursday morning class will be followed by an informal coffee get-together where all class participants are invited to socialize and practice newly learned language skills.

Space is limited, so the League is accepting applications on a first come, first served basis. There is a small class fee of \$35 per student and babysitting is available for \$50 per child.

For more information call Coordinator Jan Kirtley at 277-2628, or Pam Daveta in the Women's League at x3-3656. "We will be able to provide services comparable to and competitive with nearby commercial facilities," he said.

Regular operations at the Club have been extended, too, Mr. Maguire said.

The day begins with complementary coffee and newspapers in the lounge. Lunch is served 11:30am-2pm and includes both buffet and a la carte service. On Fridays the buffet will feature regional cuisine.

Afternoon services are aimed at fostering congeniality and collegiality. Dessert and teatime menu selections are offered, as well as cocktails. A la carte dinner is served from 6-8pm.

Ione Gatch joined the Faculty Club as manager last year. She was formerly affiliated with Ark Restaurants, operators of several food establishments at Quincy Market. The new chef is Joseph Parrish, whose experience includes work at the Sheraton and Boston Harbor Hotels.

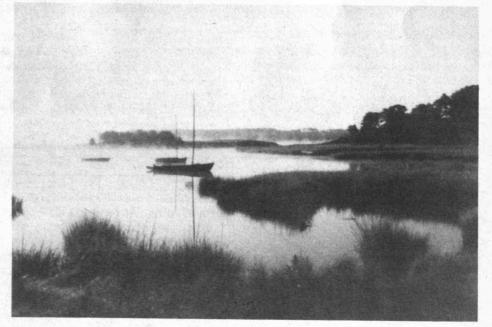
Bruner and Cott, who did the Student Center, were architects for the Club renovations, which were carried out under the supervision of Francis A. Lawton, engineering projects manager in Physical Plant. --Joanne Miller

## Sitters needed

The Women's League is currently looking for babysitters to watch the children of women attending the League's English conversation classes. (See related story.)

Sitters are needed beginning September 19 for three hours each Tuesday and Thursday morning (six hours a week). Employment will last through the beginning of December; sitters will be paid. Individuals who work well with small children and speak another language are in particular demand.

If you are interested, call Pam Daveta at x3-3656 or Keiko Kanda at 492-6324. They would appreciate hearing from you as soon as possible, because the number of children they can accommodate will depend on the number of sitters available.



Talk, Sept 14, 4:30pm, Jewett Main Gallery.

The Bread and Puppets Theater\*—Outdoor performance, Fri, Sept 15, 4:30pm. Rain location: Sports Ctr Field House.

Infrared Reflectography and Its Uses in Examining Paintings\*—Teri Hensick, painting conservator, Ctr for Conservation and Technical Studies, Harvard University Art Museums, Wellesley College Museum Gallery Talk, Sept 19, 12:30pm, Jewett Main Gallery.

MIT Cable Listings—Submit announcement in writing to Rm 9-050. We prefer a day's warning, but faster action may be possible. Useful also for correcting errors, notifying about cancellations, and dealing with emergencies. If you have met the Tech Talk deadline, your announcement is automatically put on cable (except for exhibits and some multi-meetings programs).

We are now accepting requests via e-mail. Announcements are shown on MIT Cable channel 12, which is displayed on the receivers in Lobbies 7 and 10. Announcements should be of interest to the general MIT community. Classified ad type messages will not be accepted. Messages should include: date, title of event, speaker or sponsor, time and location. MIT Cable reserves the right to edit your message to fit the screen Include your MIT phone number. E-mail your announcements to: tv-messages@telecom.mit.edu. Messages will usually be posted within 24 hours of their receipt.

Send notices for Wednesday, September 20 through Sunday, October 1 to Calendar Editor Rm 5-111, before 12noon Friday, September 15. ics and a discussion leader at Next House, said after the kickoff he talked to the speakers and invited them to Next House. All but Professor Keyes were able to attend.

The discussion at Next House "was quite successful," said Bradt. The book "was incredibly eye-opening for me," he said, although he has done volunteer work at Pine Street Inn, a homeless shelter in Boston.

He said the presence of Anna Roberts, who told students she comes from a middleclass background and has three years of college, made the presentation more immediate.

Professor Bradt quoted the remark a young woman made to him last week. She told him, "You know, most of us are just a couple of paychecks away from being homeless."

Professor Bradt said Book Night worked well as an educational event. "I'm sort of proud that MIT does this," he said. "Early Morning Mist at Round Cove" won honorable mention for Virginia Such in last year's Coastweeks photo contest.

# Coastweeks returns with 150 events

All of us here at MIT live near or use the beach.

Beginning this Saturday, September 16, Massachusetts citizens will have a special opportunity to enjoy, learn about and help protect the coastline as Coastweeks '89, a program sponsored in part by MIT Sea Grant, kicks off three weeks of activities.

Designed to raise awareness of our nation's fragile coasts, Coastweeks '89 will feature more than 150 events from whale watches to lectures on the marine environment to fairs and festivals. The program will also sponsor several beach cleanups last year participants collected and catalogued more than 25 tons of trash from over 100 miles of Massachusetts' coasts. In addition, photographers are invited to enter the annual Coastweeks photo contest sponsored by Sea Grant. Last year one of our own, Virginia A. Such, senior library assistant, won the Grand Prize with "Sunset on the Brewster Mudflats." She also picked up an honorable mention with "Early Morning Mist at Round Cove."

Coastweeks '89 is the eighth annual Coastweeks event in Massachusetts. This year's major sponsors are MIT Sea Grant, WBZ-TV (Channel 4) and the Massachusetts Office of Coastal Zone Management.

For more information on Coastweeks '89 activities in your area, or on how you can host a beach cleanup or other activity, contact Madeleine Hall-Arber at x3-9308.

# CLASSIFIED ADS

Tech Talk ads are intended for personal and private transactions between members of the MIT community and are not available for commercial use. The Tech Talk staff reserves the right to edit ads and to reject those it deems inappropriate.

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

MIT-owned equipment may be disposed of through the Property Office.

Deadline is noon Friday before publication.

### For Sale

8-spd Osterizer liquifier/blendr, \$15; Black & Decker short cut food procssr, not usd, \$25; Easy Glider, \$30. Venetia, 666-0224 aftr 5pm.

4 215/65R15 trs, gd shape, plnty tread, \$130 nw, sell for \$50 ea; 2 215/65R15 Eagle GT MS trs, wh raisd lttrs, usd only 1 wntr, \$145 nw, sell for \$70 ea. Mario, x8-4715 Draper.

Q-sz wtrbed, \$250; couch & chr, gd cond, \$150. Tom, x8-2909 Draper or 648-7045.

1981 Encyc Brit, exc cond, \$229 firm. Roger, x3-7144 or 776-6871.

M's grlthr driving gloves, sz XL, nvr wrn, pd \$40, askg \$20; M's Frey brwn lthr boots, sz 11-1/2D, stll in box, pd \$135, askg \$75 or bst. Susie, x3-5916.

Gas stove; 19" colr tv; '84 Plymouth 4-dr wgn, 35K; 2-dr sideby-side fridge; 2 accordians, Magrarate Scholar b&w keys & Victoria Castelfidardo Armonia, red & wh. Call 395-7265 AMs or aftr 3pm.

Hndmd hi-hat cymbals, nw, 1 pr, \$187 or bst; 100W tube combo guitr amp, \$275 or bst; pr amplif'd mini spkrs, \$25. Call x5-9861 dorm.

Sm desk (no wd), exc cond, 30. Al, x8-5686 or x5-7512 dorm for mssg.

Hewlett-Packard 41C calcultr w/3 xtnded memry modules, exc cond, bst offr. Jonathan, x4734 Linc or 489-5417.

Mt bike, '88 GT Karakorum, 17" frame, Shimano Deore components, 18-spd, Araya RM 20 rims, Richey Force 2.0 trs, Hite Rite, Vetta Gel seat, 2 H2O bttl cages, \$400. Sarir, x4011 Linc or 893-8010.

Sears Kenmore fridge, 16 c.f. frst free, wh, exc cond, 9 yrs old, \$150 or bst. Call x3-8801 or 489-1834 eves.

Centurian 10-spd bike, exc cond, rear rack, \$100. Dan, x3-8192 or 628-3666.

Dlx Q-sz futon & frame, exc cond, \$250; Apple Image writer II, almst nw, \$400 nego. Sarah, x3-3562.

Mving sale: stereo sys, \$220; a/c, \$200; cmplt aquarium w/fish, \$35; sm ktchn appliancs, furn & lots more. Bob, x3-5407 or 508-699-5903.

Aprica strllr, \$150; Q-sz wtrbed, \$85; bike rfrck, \$100 or bst; hi chr, \$30; deco-styl hutch, \$75; rckr, \$75; 4-drwr filing cbnt, \$40; Xacto set, \$20; piano tuning tools, \$75; ktchn tbl & chrs, \$35; couch & chrs, \$50. Roselyn, x3-9405.

Q-sz dbl bed w/mttrss & spr, \$50/all; dual elctrc blankt, \$30; fittd sheets, pillowcases, \$10/2 sets; spread, \$10; dust ruffl, \$5; all v gd-exc cond; also twin mttrss & spr, \$20. Chuck, x3-7902.

Honeypine BR set, fulll or O hd & ft brds, 5-drwr chst, 38x17;

Epson Ectronic typwrtr, prtbl Elite 100, memry, corr tape & mny othr features, 2 yrs old, gd cond, \$100 or bst. Nancy, 508-687-4479.

Rolling Stones tix, 2 for 10/1. Michelle, x7388 Linc.

Litton 700w microwv, \$160: Sears W/D, \$75: 9x12 area rugs: 7000BTU a/c, \$50: sofa bed, \$100: Imps, \$50 pr. dishes, \$10: stainlss: radr detctr, \$45: more. Marilyn, x5666 Linc.

Free, nw K-sz mttrss; also K-sz comfrtr & sheets. Joan, x3-6512. Stereo (nds nw needl) & spkrs, bst offr. Call x3-8020.

W's flr-Ingth rabbit coat, rst/wh, sz 10, exc cond, bst offr. Barbara, x7380 Linc.

Rolling Stones tix, 9/29, \$80 ea; skis, 180s, w/poles, gd cond, \$50; tape holdr, real wd, hlds 160 tapes, \$20. David, 547-1697.

#### Vehicles

'68 Porsche 912, rare 5-spd, looks & rns grt, nw trs, muff, gen, tune-up, \$7,400 or bst. Dan, x8-1698 Draper.

'73 Ford Mustang cnvrtbl, 302 eng, rns well, some rst, nw trs & brks, \$1,800 or bst. Joe, x5400 Linc or 508-369-7047 aftr 6pm.

'76 Mercury Comet, sunrf, tape playr & radio, ps, pb, auto trans, \$600 or bst. Call x3-6761 or 492-8113.

'77 Ford Maverick, 4-dr, only 27K, no rollovr, rns grt, gd cond xcpt some dents, \$600. Wes, x8-5246 Whitehead.

'80 Rover 3500, 4-dr, \$2,500; Pontiac 2-dr, \$300. Ralph, 508-685-2614.

'80 Phoenix 5-dr htchbck, auto, ps, 56K, 1 ownr, int & mech exc, ext gd, bk valu \$1,500, askg \$1,300. Call x3462 Linc or 484-8472 lv mssg.

'80 Honda Civic htchbck, Alpine AM/FM/cass stereo, nw exh & brks, \$400. Peter, x3-2280 or 396-7885 eves.

'81 Mercury Lynx, 3-dr htchbck, 81K, std, gd shape, nw carb, \$950. John, 864-7725.

<sup>82</sup> Nissan Stanza, 5-spd, a/c, sunrf, AM/FM, ps, no rst, v gd cond, 65K, \$2,500. Call 623-2850.

<sup>82</sup> Honda Civic, nice car, gd ext & int, 50K orig, mst sell, \$700 or bst. Paul/Rob, x3-5005 or 492-4442.

'82 Datsun truck, 4WD, Kingcab, only 63K, cap, a/c, ps, pb, well-maint, have rcrds, rcnt tune-up, trs & exh, looks sharp, \$4,600 or bst. Alan, x7399 Linc or 641-3499.

'83 Mercury Capri, 74K, V6, auto, a/c, \$2,200 or bst. Pat, x3-2288 or 491-9062.

'83 Honda Nighthawk 550 mtrcycl, only 5.6K, perf cond, maroon, askg \$1,100. Chris, x8-5236 Whitehead or 491-4904.

'84 Cutlass Supreme, 4-dr, a/c, ps, pb, rear defog, AM/FM/cass, v gd cond, 84K hiway, \$2,600. Mark, x3-7049 aftr 4pm.

'84 Nissan Stanza, 4-dr sdn, 5-spd, a/c, std, \$3,500 or bst. Call 969-4260 eves/wkends.

'84 Nissan Stanza, 4-dr htchbck, 80K, stereo tape deck, a/c, sgl ownr elderly prof. Call x3-7281.

'84 Chevy Celebrity, 4-dr, 60K, V6, warr, auto, a/c, ps, pw, cruise, AM/FM/cass, pwr lcks, seat, nw trs, brks, batt, \$4,300 or bst. Kunio, x3-6330.

'86 Olds Cutlass Cierra, mint cond, 4-dr, auto, ps, pb, a/c, rear dfrstr, pwr lcks & wndws, AM/FM/cass stereo, book valu \$6,800, sell for \$6,100 or bst. Dave Miller, x5-8245 dorm or x3-3261 mssg.

'86 Ford Escort L, 5-dr, 5-spd, nw muff & brks, undr 17K, blck/ red int, some xtras, exc cond, \$4,000. Jerry, x3-4573 or 782-0241 eves.

'86 Honda Rebel, 250cc, red, less than 2K, \$600. John, x7345 Linc or 861-7971 eves.

<sup>\*87</sup> Plymouth Sundance, bl w/ velour int, auto w/console AM/ FM stereo, rear defrst, intermittnt wiprs, rear seat splits & folds down for lots of space, exc cond, 34K. Demetri, x3-3908.

'88 Hyundai GLS, 4-dr, 5-spd, clth seats, full carpet, AM/FM/ cass stereo, dk gray, askg \$6,600 or bst. Dottie, x3-2889.

### Housing

New Brunswick, Kent County Canada, nwly renovatd 4BR farmhse on 100 acres, lake on prop, elec ht w/nw wd stv, fields, wds, berries & wildlife, 3 mi to ocean, askg \$125,000. Lynne, x3-6597.

Nashua, 2BR apt, cln, quiet bldg, 28 mi to Linc Lab, avlbl immed, \$500/mo inc fridge, stv, prkg, no utils. John, x4851 Linc or 665-8672.

MIT's first supercomputer, the CRAY-2, (above) arrived on campus earlier this summer and is now on the network and open for business. All members of the MIT community can use the machine. Otherwise known as "ed," the CRAY-2 can compute at speeds in excess of 1,000 times the rate achieved by small workstations. Students and faculty in particular might find the machine invaluable for analyzing research data or running coursework-related computing projects. Time on the CRAY is available at a fully burdened rate of \$140 per hour. To obtain an account or get more information, contact Eddie Andrews of the MIT Supercomputer Facility (MITSF) at x3-8033 in Rm 11-124A. Furthermore, anyone interested in basic courses in vectorization, parallelization, supercomputing, and the general use of the CRAY can contact the MITSF consultant at x3-5126.

# Working group names new co-convenor

Sarah B. Brady, budget officer in the Office of Financial Management and Planning, has been appointed co-convener of the Working Group on Support Staff Issues for the 1989-91 term, announced Vice President Constantine B. Simonides.

Ms. Brady, who has been a member of the Working Group for more than two years, will coordinate Group programs with Angela Katsos, administrative assistant in Development Services and the other coconvener.

Working Group activities are conducted in the form of volunteer task groups that work throughout the year to study specific support-staff issues. The full membership of the Working Group discusses and approves task group reports and submits them to the senior MIT administration.

Current task groups include Career Development, Working Parents' Issues, Mentoring, Special Events, the "Tell Someone" Brochure (a reference guide on complaints), Leaves of Absence, the Support Staff Art

Arlington Hts, sm furn rm, sep entrnc, full bathrm, no ktchn, on bus line & stores, non-smkr, \$350/mo+ utils & prkg. Dana, x4611 Linc.

Arlington, 2BR twnhse on quiet st, DR, LR, finshd bsmnt, lrg deck, lots of storage, deeded prkg, nr public trnsprtn, \$160,000. Call x3-2595 or 646-2421 eves.

Arlington, 2BR mod apt, enclosed prch, off-st prkg, conv to trnsprtn, D&D, wshr, \$885/mo elec inc unhtd. Call x3-4736 or 547-4504.

Exhibit, and Retaining Support Staff.

The Working Group was established in 1974 to consider matters of policy and work-related issues affecting support staff. It currently consists of 45 administrative and support staff members, as well as resource staff from the Personnel Office.

To obtain Working Group membership information or express your concerns about the MIT work environment, call Ms. Brady at x3-6277 or Ms. Katsos at x3-3823.

## It's a fact

More women—2,429—than ever before were enrolled in MIT in 1988-89. They made up slightly more than a quarter of the student body. The first woman student was admitted in 1871, six years after MIT opened.

## Obituaries Walter J. Cavanaugh

A funeral Mass was said August 21 for Walter J. Cavanaugh, 67, of Melrose, who died August 17. Mr. Cavanaugh was a houseman at Ashdown House from 1979 until his retirement in 1986.

He leaves a widow, Georgette Nickerson Cavanaugh; three daughters, Georgette Curran, Kathleen Donovan and Cynthia Boyle, all of Melrose; a són, Thomas Cavanaugh of Los Angeles, and eight grandchildren.

order drssr w/bkshlf & mirror, 63x17; 3-drwr nitestnd; exc cond, \$500. Joyce, x3519 Linc.

Pugeot 12-spd, PH10LE, 50cm, blck w/toe clips, Kryptonite lock, \$200 or bst. Craig, x3-2872.

Vetta prtbl magnetic bike trainr (supports rear whl & provides resistance for statnry riding), nw \$120, \$69. Dan, x3-0928 or 876-4358 mssg or email djconnel@caf.

Scand Des sofa, \$55; wh rnd ktchn tbis, \$75 & \$95; 3 ktchn chrs, \$20 ea; office sz desk, \$95; desk chr, \$35; misc lmps & fixtures, \$10-55; console tbl, \$55; attache cases, \$15 & \$25; stereo & spkrs; Orientl Pakistani rug, 4x6, nw, \$395. Call 332-8251.

Casio keybrd w/adaptr for headphns, gd cond, \$35. IPam, x3-3123.

2 W's 10-spd bikes, red, gd cond, \$50 ea. Peter, x8-5667.

IBM-AT compatbl Leading Edge D2, 80286 @ 6/10 MHZ, 640K RAM, 30MB HD, 1.2MB FD, ambr mntr, EGA card, parallel/serial ports, '88 Byte's top 10 mdl, \$1,250. Waiming, x3-0991 or 661-2565.

Radr detctr, Beltronics, stll in seald box, reatil \$140, sell \$100 or bst. John, x3-0831.

TDC spkr, Benjamin rcvr, Benjamin rcrdr, \$135 total. Maria, x3-2115 or 472-1347 eves.

Wd bkcase, 80.5"Lx29.5"Hx9"D, \$35. Judith, x3-5749.

Bl sofa & green lv seat, fair cond, \$35 ea. John, x4608 Linc or 863-2423 aftr 7pm.

Medfield/Dover, 5 yr old 4BR Colonl on 1 acre landscapd culde-sac lot, 2-1/2b, 2 car grg, hdwd flrs, screend prch, fmly nbrhd, 40 min to dwntwn, by ownr, \$309,000. Call x2885 Linc or 508-359-4448 eves.

Arlington, 2BR, brite, well-kpt apt, v nr Mass Ave, Hrvd Sq & Alewife bus, pets ok, ready for end Sept occup, \$650/mo inc utils. Call 648-7271.

Hrvd Sq, btfl 2BR condo, LR, DR, nw ktchn & bath, sunny, nxt to Hrvd Law School, \$155,000. Call 969-5108.

Lexington, 4BR, 2-1/2b, young btfl Colonl on 1/2 acre land, avlbl 10/22, \$2,100/mo+ utils. Nancy, x3-4690 or 862-2933.

1BR + stdy (2BR) condo, 1 off-st prkg spot, quiet st, nicely renovatd space, avlbl Sept-May, \$925/mo+ utils. Kathy, 497-5525.

Smokehouse Bay Club, Marco Island, FL, bayside wtr view, br nw condo, 2BR, 2b, screend Ianai, W/D, fully euppd & furn, wkly/mnthly, 2-4 ppl only, no pets. Call x3-4251 or 646-1876.

Hrvd-Radcliffe area apts: 2BR, w-w carpets, frplc, dshwshr, prkg, a/c, \$1,250; 1BR, w-w carpets, frplc, dshwshr, prkg, a/c, \$1,350. Call 576-3729.

Chelsea, 2BR twnhse condo, btfl cond, 2 yrs old, 1,500 s.f, LR, eat-in ktchn, 1-1/2b, bsmnt, w-w carpet, D/D, sec sys, off-st prkg, access to Blue & Orange lines, conv to Rts 1 & 1A, \$109,900. Call 884-1142.

Weston, MA, charming 3BR unfurn hse, quiet nbrhd, exc schools, 1/2 hr to MIT, avlbl immed thru 7/90, married grad stdnt/fac, \$1,600/mo. Ann, x3-3329 or 899-8793.

## Wanted

Teachr's aide, Tech Children's Ctr, asst in classrm M-F, 9-12, start immed, mst have hi school diploma & intrst in chldrn. TCC, 60 Wadsworth St, Camb, 02142, x3-5907.

Apt whid, rsnbl rent for 2-3BR apt, in xchng for carpentry skills, shoveling & taking care of yrd, mst allw chldrn. Darlene, x3-4701 or 623-5934.

#### Roommates

E Camb, F non-smkr wntd for 2BR, 2b condo, W/D, a/c, 2 cats, 10 min wlk to MIT, \$550/mo. Jenny, x3-1969 or 577-8775.

Somerville, Irg sunny renovatd apt, 3 Irg BR, eat-in ktchn w/D/ D, sep DR & LR, frnt prch, back veranda, Irg attic & bsmnt, W/ D, hdwd flrs, tile bath, \$300 inc all utils. Alfredo, x8-2401 (ring 9 times for V-mail).

#### Carpool

Desperately nd ride to/frm Walpole, Norwood or Dedham area/ MIT, daily 8-4:30 or 9-5, will pay. Patricia, x3-8262 or 508-668-2683.

Rdrs wntd frm Wellesley/W Newton, arrive MIT & CSDL 7:30am, depart 4:30pm. Jake, x8-1578 Draper.

## Frank F. Mangano

Frank F. Mangano, 75, of Stoneham, a retired security guard at Lincoln Laboratory, died August 17. Mr. Mangano worked at Lincoln from 1958 until his retirement in 1979.

Mr. Mangano is survived by his widow, Josephine Morandi Mangano; a son, Frank Mangano of Ayer; two daughters, Barbara Schmidt of Burlington and Mae Louise Fernald of Northboro, eight grandchildren and three great-grandchildren.

## Orowan service

There will be a memorial service for Professor Emeritus Egon Orowan Friday, Sept. 15, at 2pm, not 2:30 as previously announced, in the MIT Chapel. Professor Orowan was Geroge Westinghouse Professor in the Department of Mechanical Engineering from 1951 until he retired in 1968. He died August 3 at 87. The service will be followed by a reception in the Norma Mele Lounge of McCormick Hall.



# A fabled city revealed at the MIT Museum this Saturday evening

An exhibition of photographs and paintings exploring Lahore, the fabled city in which recorded history began in 1,000 BC, will open with a celebration at the MIT Museum this Saturday evening, September 16.

Students and all other members of the MIT community are invited to "An Evening in Lahore," a special performance with singing and dancing, beginning at 6:30 and followed by a reception.

Though less visited and less known than Delhi, Lahore is the cultural, artistic, and architectural center of Pakistan. This exhibition will be one of the largest observances of Pakistani history and culture ever held in this area.

In the Museum's full-color brochure which accompanies the exhibit, Lahore was described in the following terms: "Both by geography and by the choice of rulers, Lahore has, over the centuries, absorbed many forms of civilization and many cultures. Much of the walled city remains though the Hindu rajas, Mughal emperors, Sikh invaders, and British raj have faded away."

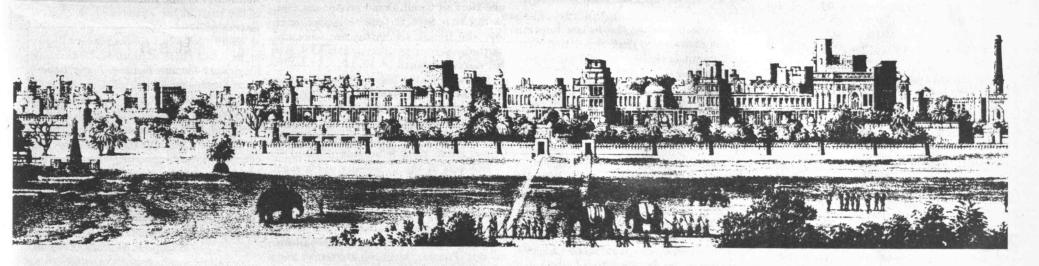
This Saturday's event begins a series of special evenings, including dance, music, poetry, films, and a slide series. In the Museum's exhibition, *Lahore: The City Within*, contemporary artist Samina



Quraeshi creates a portrait of the city through her photographs and paintings. These, along with historical photographs, maps and textiles, are scheduled to continue at the Museum through December 17.

This exhibition and its performance/lecture series is being sponsored in part by the Aga Khan Program for Islamic Architecture, the Council for the Arts at MIT, and the Jafri Foundation. Subsequent activities will appear on the Arts Page and a list of them may be obtained at the Museum. Above, *Discourse of Scholars and Calligraphy*, an opaque watercolor on paper from the mid-17th century, one of several works loaned to the Lahore exhibit by the Boston Museum of Fine Arts. Below, a drawing of ancient Lahore published as the frontispiece of the book, *Thirtyfive years in the East*, published in London in 1852.

The MIT Museum is located at 265 Massachusetts, diagonally across the street from the Necco Factory. It is free to everyone with an MIT ID, \$2 to others. Hours: 9-5 Tuesday-Friday, 12-4 Saturday and Sunday. Information: 253-4444.



### Get to know them

All those interested in dance or theater arts are invited to a get-acquainted occasion tonight at 7:30pm in Kresge Little Theater and Rehearsal Room B, both located The Music and Theater Arts Section of the School of Humanities and Social Science will be hosts for this Theater Arts Organizational Meeting.

After a brief meeting in the Little Theater, an open house with refreshments will be held in the nearby rehearsal room.

### Student gallery's new show

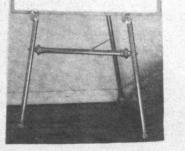
The first exhibition this term in the Wiesner Student Art Gallery, on the second floor of the Student Center, will be a selection of works from the Student Art Association, scheduled until September 30. The Association, located on the Center's fourth floor, offers classes in painting, drawing, photography, and pottery. For more information: 253-7019. strands from an array of thought systems, myths, and matters of the heart.

### In the summertime

Susan Downing '86, recently appointed theater arts office manager at MIT, directed an all-female cast in The Two Gentlemen of Verona for four weekends of August at the Leland Theatre in Boston. Ms. Downing said that Shakespeare's own precedent of casting only men supports her decision to found Inanna Theatre, a single-gender company where the "generic" actor happens to be a "she."

beneath the large auditorium in Kresge.

> Theater & Dance at MIT



The purpose of the evening is to introduce theater arts and dance at MIT. All faculty and staff members of both theater arts and the Dance Workshop will be there. Also to be introduced will be student representatives of each performing arts activity. The curriculum (including the new offering of a minor in theater arts) and the new Workshop program will be explained.

All the professionals, as well as student representatives, will be available to answer specific questions, to hand out literature, and to recruit new members. Groups also are encouraged to bring posters of previous productions.

Students from theater activities wishing to take part are encouraged to drop by Kresge's room W16-015, or to call Sue Downing at 253-2877 or 253-5623 for more information.



## Artist brings ants

In addition to viewing the two exhibitions now in place in two galleries of the List Visual Arts Center, visitors also may meet and/or observe an artist at work in the third gallery. A new artist in residence, Remo Campopiano, is creating a room-size installation based on the four axes of the Native American medicine wheel.

Beginning with a tabletop universe in the form of a live colony of ants, Minneapolisbased Campopiano will weave together

## List is honored

The MIT List Visual Arts Center was one of 111 winners from among 1,600 entries for the 1989 Award of Merit in the Museum Publications Competition of the American Association of Museums. Their winning catalog, for *Three on Technology*, a photo exhibit now on a national tour, will be part of a traveling exhibition being arranged by the Cedar Rapids Museum of Art.

--China Altman, with Elizabeth Thomson and members of the Arts Communication Network.

# Harris assumes major arts post

identify or define the place of the arts at MIT: "They are not here as a service or as an adjunct to the Institute's mission but as an integral component, deserving of the same respect, pursued with the same intensity, and held to the same standards of excellence as any of the scientific disciplines."

She also said, "I've come to MIT not to create an arts program but to oversee an exciting and vital arts program already in existence. I see my major role as an arts advocate both within MIT and from MIT to the larger Boston/Cambridge community. In this role I will be evaluating the current programs, coordinating those that are now in existence, assisting in communication among various programs, and determining where we need to place our energy in terms of programs, personnel, and facilities."

Her decision to come to MIT was made

# Arts in action

Here is a brief summary of some of the changes in the arts which have occurred as Professor of Music Ellen Harris takes up her position as Associate Provost for the Arts at MIT:

The Creative Arts Council has been established, modeled along the lines of other MIT councils, "so that at the highest level people in the arts will be able to work together as a community to determine short and long range goals and priorities," Professor Harris said. It will be made up of the deans of Humanities and Social Science and of Architecture and Urban Planning, department heads, and leaders of programs in the arts.

Reporting to the associate provost will be the List Visual Arts Center and the Council for the Arts (both formerly within the President's Office), the MIT Museum (formerly in the MIT Libraries), and public relations and communication for the arts (formerly in the News Office).

In the List Visual Arts Center, Katy Kline has been promoted to director and Dana Friis-Hansen to curator.

A new Visual Arts Program began this term, with Professor of Visual Arts Edward Levine as director.

Changes in theater arts brought about by its director, Professor Alan Brody, have made it possible for MIT undergraduates to pursue a minor in theater arts.

William A. Fregosi has been promoted to director of Dramashop, technical coordinator of theater arts and designer for Dramashop, the Shakespeare Ensemble and the Dance Workshop. He was formerly technical coordinator and designer for Dramashop.

The six dancers of the professional group, Beth Soll & Company, have been named artists in residence at MIT for this academic year. Ms. Soll has been director of MIT's Dance Workshop since 1978. In the Office of the Arts, the staff already in place is made up of China Altman, director of communication, formerly assistant director in the News Office; Mark Palmgren, director of programs, formerly program officer of the Council for the Arts, Lynn S. Heinemann, senior staff assistant, formerly editorial assistant in the News Office. Professor Harris's administrative assistant in her permanent office, Rm 10-200, is Elizabeth M. Connors, formerly administrative secretary in Brain and Cognitive Science. More complete details of programs and activities in the arts will be published in a "State of the Arts" freestanding insert to the Tech Talk issue of October 18. This insert also will be available in arts centers throughout the campus after that time.



**Dr. Harris** —*Photo by Donna-Coveney* after several intensive visits. "It became clear to me that the one most distinguishing feature of MIT is the abundance of creativity, which allows both students and faculty to move beyond research and analytical thinking to a manifestation of their thought processes. This process is no different whether the manifestation be a solar-powered car, such as the MIT model that drove across the country this summer, an advance in microchip technology, or a symphony," she said.

### Astonishing numbers

"The creative impulse that is so palpable on the MIT campus has attracted creative artists in numbers that are astonishing. But beyond the activities I saw, it was also clear through the Joskow Report and the response to that report that the commitment to the arts at MIT was particularly strong."

Professor Ann F. Friedlaender, dean of the School of Humanities and Social Science, and Professor John de Monchaux, dean of the School of Architecture and Planning, both said they look forward to working with the new Associate Provost.

Professor Friedlaender said, "We are very fortunate that Ellen Harris has joined our faculty as professor of music and associate provost. Since the arts activities are divided between our two schools, Professor Harris's presence should make a major difference in the development of a coordinated undergraduate arts curriculum."

In his turn Professor de Monchaux said, "The arts, like science and engineering, offer an important way to think about the world we live in and want to change. The creation of the position of Associate Provost for the Arts is a major step for MIT which acknowledges the crucial importance of the arts in MIT's environment. Ellen Harris brings outstanding knowledge and skills in the arts to the role as well as an evident commitment to excellence. I know that faculty in the Department of Architecture and in the Media Arts and Sciences Section are looking forward to working with her." needs of the arts community in a more effective way. The program will be administered by the Office of the Arts (OA). **Meet the Arts Provost** 

Professor Harris's first public appearance before the MIT community will occur October 20 when she will moderate an open symposium on the arts at MIT in Edgerton Hall (34-101). Panelists will include Edward Levine, professor of visual arts and head of the new visual arts program in the Department of Architecture; Alan Brody, professor of theater arts and director of theater arts, and Marcus Thompson, professor of music, music director of the MIT Chamber Players, and head of the Chamber Music Society and of the Advanced Music Performance Program.

Although classroom teaching will not be possible during this academic year, Professor Harris has developed classes that she would "love to teach here some time in the future." These include a class on music criticism based in part on the writing of George Bernard Shaw, and classes on Shakespearean opera, Schubert's songs, and elementary harmony.

She sings at MIT

Her singing debut at MIT will occur December 9 when she sings Berlioz's Les *Nuits d'été* in a concert of the MIT Symphony Orchestra, with Professor of Music David Epstein as conductor and music director.

Professor Harris has been working temporarily in the Office of the Arts, now established in the Wiesner Building (Rm E15-205). Along with her newly appointed administrative assistant, Elizabeth Connors, she expects to move to her permanent office, Rm 10-200, within a few days.

The Associate Provost has written two books, Handel and the Pastoral Tradition and Henry Purcell's "Dido and Aeneas," both published by Oxford University Press. She has also edited The Librettos of Handel's Operas in 13 volumes, a complete facsimile edition with critical commentary, and Henry Purcell, Dido and Aeneas. Her essays have been included in anthologies and she frequently writes for scholarly journals.

### Numerous grants

Professor Harris has received a number of grants and fellowships including the National Endowment for the Humanities (fellowship 1988-89; stipend 1978), and the American Council of Learned Societies (travel grant, 1985; fellowship, 1980-81).

She was at the University of Chicago from 1980 until now. She also taught three years at Columbia University.

Her operatic roles include: Pamina and First Lady (Mozart, *Die Zauberflöte*), Susanna (Mozart, *Le Nozze di Figaro*), Ciocio-san (Puccini, *Madama Butterfly*) and Savitri (Holst, *Savitri*).

She sang the lead in a Chicago production of Gilbert and Sullivan's *Iolanthe* in August, and has also sung Patience in Patience, Mabel in *Pirates of Penzance*, and Princess Ida in *Princess Ida*.

Professor Harris and her husband, John, have just moved into a house in Cambridge. They have two daughters, Marian, who is a freshman at Yale University, and Ann, who is a freshman at Buckingham, Browne and Nichols in Cambridge.

# Aero & Astro to mark 50th anniversary

#### (continued from page 1)

and Marine Engineering until 1920 when it became the "aeronautics division of instruction" within the Physics Department. There it stayed until 1926. From 1926 through 1933 the discipline became an independent division that reported directly to the president of MIT.

In 1933, Professor Hunsaker became head of the Department of Mechanical Engineering and arranged to have aeronautics administratively transferred under the wings of mechanical engineering. In 1939, aeronautics finally became an independent department within the School of Engineering with Professor Hunsaker as its head. He served in that capacity until 1951.

The Saturday program of the 50th anniversary commemoration will be held in Kresge Auditorium beginning at 9am. Chairing the morning program will be Professor Walter M. Hollister. The look back on the past will include: "Introduction and the Early Years: 1925 and Before," Professor Walter M. Hollister; "The Emerging Era: 1926-1939," Professor Emeritus C. Fayette Taylor; "Independence and Growth: 1940-1956," Professor Emeritus Walter McKay; "The Start of the Space Age: 1957-1969," Dr. Robert C. Seamans, Jr.; and "The Last 20 Years: 1969-1989," Professor Rene H. Miller.

The Saturday afternoon program from 2-4pm, "Technology and the Future: Industry Perspective," will feature speakers from outside of MIT: "Future of Aeronautics," Dr. Donald Fraser of the Draper Laboratory; "Future of Astronautics," Lt. General James Abrahamson (USAF Rtd.), former director of SDI; "International Aspects and Aeronautics," Dr. Peter Hamel of the Institut für Flugmechanik of West Germany.

From 4-5:45pm, Professor Robert Loewy of RPI will chair a panel on "Educating Engineers for the Future: Four Views," Participating will be Professors Fred E. Culick of Caltech, Martin C. Jischke of the University of Missouri, Holt Ashley of Stanford, and Jack L. Kerrebrock of MIT.

The 50th anniversary celebration will conclude Saturday evening with a banquet in the Grand Ballroom of the Sonesta Hotel and a presentation by professor David L. Akin, "EASE (Experimental Assembly of Structures in Extravehicular Activity) Program— Adventures in Space."

- Eugene F. Mallove, XVI, '69.

# Proposals wanted

The MIT Sea Grant College Program is issuing a request for proposals for its core program research.

The core program expects to award between \$250,000 and \$300,000 for projects that will begin July 1, 1990. Awards usually

#### **Council is revitalized**

As this new era begins, the Council for the Arts was described by Professor Harris as being in a stage of revitalization. With the creation of the Office of the Arts, also recommended by the Joskow Report, the Council for the Arts will be relieved of the responsibility of staffing its own office, and its fundraising efforts will henceforth go exclusively into arts activities.

Professor Harris spoke with particular enthusiasm about the grants programs of the Council for the Arts. "These have been the jewels in the crown of its activities during its 17-year history at MIT," she said. With the help of Council members this program will be expanded to meet the

# Parent talks begin

A workshop for MIT parents on "Developing Positive Self-Esteem in Our Children" will be held Tuesday, Sept. 19, at noon in Rm 18-290 (Dreyfus Building). Peggy Kaufman, director of parent programs for the Boston Jewish Family and Children's Service, will lead the discussion.

The program is the first of an annual series of educational workshops for MIT parents sponsored by the Child Care Office. Other topics this fall will include preventing alcohol and drug abuse, identifying and coping with children's special needs, children and anger, children of divorce, sex education in the age of AIDS, and cooperative play.

For further information, call Rae Goodell, coordinator of parent programs, Rm 4-144, x3-1592. average about \$50,000 each.

The call for the program's core research involves a two-step selection process. Investigators must first submit a preproposal of not more than six pages by September 27, 1989. Those investigators whose pre-proposals are selected for further consideration will be invited to submit a formal proposal of about 20 pages by December 1, 1989.

Proposals are selected on the basis of their potential application to marine related problems. In particular, the program will give preference to investigations in six theme areas. These are: automation in the manufacture of marine systems, marine biotechnology, ocean and coastal processes, ocean engineering, technology development and management for ocean uses, and unmanned underwater systems.

Proposal packets include an extensive discussion of the theme areas as well as detailed instructions for applying. To receive a packet, call Karen Hartley, x3-3461.