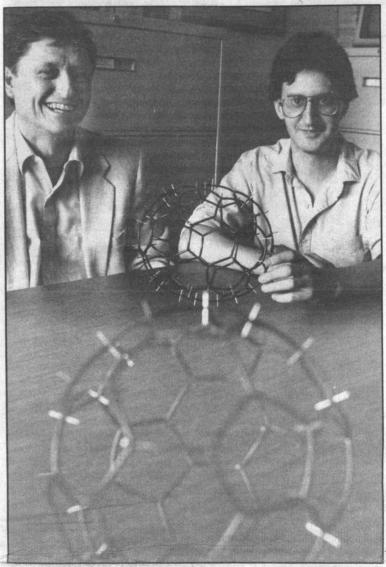


VOLUME 36 NUMBER 3





CARBON SOCCER BALLS—Recently MIT researchers led by Professor Jack Howard of chemical engineering (left) announced a new way to produce fullerenes, ball-shaped forms of carbon with possible applications in superconductivity, cancer therapy, and more. Here Professor Howard and graduate student Christopher Pope (right) sit behind models of fullerene molecules Mr. Pope constructed. The model in the foreground represents buckminsterfullerene, named for the great architect/ engineer/inventor whose geodesic domes it resembles. Photo by Donna Coveney

UP IN FLAMES

Team Finds New Way To Create Fullerenes

By Elizabeth A. Thomson News Office

pplying the results of years of A pplying the research on soot formation in flames, MIT scientists have found a new way to produce fullerenes-ballshaped forms of carbon discovered in 1985 that have rocked the scientific world with possible applications in superconductivity, catalysis, cancer therapy and more.

The MIT technique is based on a combustion process already used in industry, so the scientists predict that it could be scaled up to produce large quantities of fullerenes-better known as buckyballs-fairly easily. At present the roughly spherical molecules can only be produced in gram amounts.

In addition, the MIT group says their technique can be adjusted to produce more of one fullerene over another. That could prove important should a given application require a

specific fullerene.

"This is one of the most exciting projects that's come along to us in some while," said Jack Howard, professor of chemical engineering and principal researcher for the work, which was reported in the July 11 issue of

The story begins in 1985 when Rice University scientists discovered buckminsterfullerene, a new form of carbon whose 60 atoms form a structure like one of the geodesic domes Buckminster Fuller invented. Until

then, only two other forms of carbon were known: diamond and graphite.

"It's very surprising that after well over a century of research on carbon, we would only now be finding a new form," Professor Howard said.

Scientists soon found another fullerene containing 70 carbon atoms. While buckminsterfullerene, or C60, resembles a soccer ball, C70 forms a shape that's more oblong—like a rugby ball. The search was on to learn more about the molecules. What are their properties? Can we find others? How do they form?

Howard and colleagues were interested from the start. For years they had studied the formation in flames of soot, the small carbon-containing particles that give flames their yellow color. And early reports on fullerenes speculated that the molecules might be related to soot, possibly even being soot particles at an early stage of develop-

Such suggestions, however, appeared to be in conflict with the great differences between fullerenes and soot, so the MIT group pursued an alternative concept: that fullerenes and soot might be formed along parallel but significantly different routes.

To that end Tom McKinnon, then a graduate student in chemical engineering, performed several analyses on small samples of material collected with a probe from sooting flames. Christopher Pope, also a graduate stu-(continued on page 8)

UP TO \$27M

Magnet Lab Funded for 4 More Years

IT welcomed the news earlier this month that its Francis Bitter National Magnet Laboratory (FBNML) is expected to receive \$27 million over the next four years.

"With these funds, the Magnet Lab will continue to be a center for high field research and technology for the next four years," said Professor of Physics J. David Litster, director of the FBNML. The laboratory's future after September 30, 1991, had been in ques-

tion since a year ago when the National

Science Foundation decided that a new

National High Magnetic Field Labora-

tory (NHMFL) would be based at Florida State University rather than at

The National Science Foundation (NSF) announced yesterday that its National Science Board on August 9 approved an NSF recommendation to provide up to \$23 million to MIT "to continue the support of the Francis Bitter National Magnet Laboratory through September 1995. At that time, the new high magnetic field laboratory currently being constructed with NSF funds is expected to become fully operational," the NSF announcement said.

In a joint project, the NHMFL at Florida State is to provide \$4 million, in funds authorized to it by the NSF, to push the technology further and help MIT design and build a \$9 million, world-record 45 tesla class magnet for later use in the Florida laboratory. The other \$18 million will fund four years of operations, providing facilities for the nation's scientists to use the 25 magnets at the MIT lab in their experiments. Each year, 300 to 400 scientists from universities and laboratories throughout the nation use the MIT magnets, which range in strength from 8 to more than 30 tesla. (One tesla equals a magnetic field 20,000 times the strength of the Earth's magnetic field.)

Professor Litster commented: "This arrangement represents a cooperative effort of the National Science Foundation, the Francis Bitter National Magnet Laboratory and the National High Magnetic Field Laboratory to provide the best possible support for high magnetic field research in the United States. We are looking forward to providing users with high magnetic fields for the next four years, and we are looking forward to the cooperative project with the NHMFL to produce a 45 tesla class magnet. This will maintain the US world leadership.'

The current world record for a steady magnetic field is held by the MIT laboratory for a 31.8 tesla magnet, which has been in service since 1981. That record will be superseded this fall when the MIT lab puts into service a new 35 tesla magnet. Magnetic fields are used by scientists to examine the nature of materials in the fields of physics, materials science and engineering, chemistry, biological sciences, and computer science.

The proposed 45 tesla magnet, by combining superconducting magnets (continued on page 5)

MODERNIZATION

New Building Planned For Lincoln Laboratory

onstruction is expected to begin in September on a major research facility at Lincoln Laboratory, the federally funded research and development center in Lexington that MIT operates for the government. The research facility will be located on land that MIT has leased from the federal government.

The work is part of a modernization and consolidation program that MIT is undertaking with an eye toward the future of the 40-year-old facility, located at Hanscom Air Force Base. Included will be the key facility, a 490,000-square-foot building called the South Laboratory, and a 1,000-space multi-level garage. Significant savings for the government in lease, transportation and communication costs are

Spaulding and Slye, which is responsible for all aspects of the project's development, said the construction cost will be \$70 million. Spaulding and Slye will build the structure to MIT's specifications and will lease the building to MIT. Spaulding and Slye has retained Jung/Brannen Associates, Inc., as master-plan architect and Perini Corp. as the general construction contractor. The target completion date for the construction is the summer of 1994.

Lincoln Laboratory has been part of MIT since 1951, when it was created at the request of the federal government to undertake the research and development of the North American Air Defense System. When that mission ended in the late 1950s, the laboratory turned to research in electronics, communications, strategic defense and surveillance. The laboratory is unrivaled in the development and applica-(continued on page 8)

WELCOME CLASS OF '95

New Students Arrive on Campus

By Joanne Miller News Office

trickle of new students began arriving on campus last week. Beginning tomorrow they will arrive in torrential numbers for a ten-day Residence/Orientation (R/O) program packed with activities and tours.

R/O has two major components residence selection and academic orientation-of roughly equal length. Activities will be launched Thursday, Aug. 29, at 4pm with welcoming remarks from President Charles M. Vest followed by Project MOYA (Move Off Your Assumptions), an activity designed to help new students get acquainted.

Over 100 faculty and staff members and upperclass students have been trained to be MOYA leaders to direct team puzzles and physical activities that will engage the new students in learning something about their classmates, MIT, R/O and even themselves. Though most of Project MOYA will take place Thursday evening, it will conclude with a surprise finale for everyone at the Freshman Picnic Friday at 1pm. After the picnic the freshmen will begin visiting dormitories and independent living groups to select where they will live.

Academic orientation will begin with a breakfast-new this year-for new students, faculty and student-oriented staff members Wednesday, Sept. 4, on

Kresge Oval. It will be followed by a presentation, "What is a Provost, Anyway?," in which Provost Mark Wrighton and some colleagues will offer an intriguing look at MIT education.

The Advisor/Advisee Picnic at which freshmen have their first con-(continued on page 8)

IN BRIEF

The MIT Women's League is looking for babysitters to tend the children of women attending the League's English Conversation Classes beginning Thursday, Sept. 19. Sitters are needed for 2 1/2 hours each Tuesday and Thursday morning (five hours a week). If you are interested, call Coordinator Keiko Kanda at 492-6324 or Pam Daveta at the League office, x3-3656.

FRIDAY DEADLINE

Friday, Aug. 30, is the deadline for enrollment in the fall term at the Lowell Institute School. Catalogs and applications are available in Rm E32-105 or by calling x3-4895.

Pollution To Be Workshop Focus

Members of the MIT community are invited to attend Preventing Pollution, a series of four workshops in September featuring case studies of prevention programs at The Robbins Company in Attleboro, Polaroid, and Procter and Gamble.

The goal of the series is to help participants learn how to prevent pollution in their own businesses or programs. As a result, the workshops are "interactive working meetings in which participants learn from one

another," according to the program

The workshops also offer a twist from traditional prevention programs, focusing on organizational behavior and management strategies rather than new technologies. "We feel [such strategies] are the keys to successful pollution prevention," said John Ehrenfeld, coordinator of the series, in a letter to MIT faculty, students and staff.

(continued on page 5)



***-Open to members only

ANNOUNCEMENTS

- Technique**—The yearbook of MIT staff meet-
- Roommate Get Together**-Sept 3: To help members of the MIT Community in finding housing and for them to informally meet other people who have openings in their homes, 5-7pm, Ashdown House Dining Room. Sponsored by the Off Campus Housing Service,
- A Safe Ride**-Call 253-2997 for a free ride within MIT boundaries. Service operates Sun-
- Free Museum of Science Admission for MIT Students-With MIT student ID, provided admission to special exhibits.

MIT Student Furniture Exchange**—great bargains, used furniture and more, Tues/Th. 10am-2pm, 25 Windsor St (MIT Museum bldg, 1st fl). Donations welcome. x3-4293.

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

RELIGIOUS ACTIVITIES

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

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

Noon Bible Study*—Every Wed, Rm 1-132, bring lunch. Ralph Burgess, x3-8121. (Since 1965.) (Graduate Christian Fellowship.)

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

Tech Catholic Community**—Mass Sundays, 10am, MIT Chapel. Info x3-2981.

MIT Christian Community**—Come and join monthly lunch and discussion on God and Christians at MIT with your fellow faculty, staff, administrators, and grad students. Info: Park x3-2875.

MIT Christian Impact*—The weekly meeting for the ministry of Campus Crusade for Christ. Wind up the week: relax, snack, sing, laugh through skits and gain practical insight from God's Word. Meets Friday 7:17pm, Student Ctr, 3rd flr.

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: John Keen x3-7706, Dave Otis x3-2198.

Church of Jesus Christ of Latter-day Saints Student Association at MIT*-Sunday services, Cambridge University Ward, meets every Sunday 3-6pm at the Cambridge Chapel, corner of Brattle Street and Longfellow Park. Meetings are for students and young single adults.

MIT Hillel*-More info: x3-2982.

MIT Korean Bible Study Group*-Come & join our Bible study, fellowship & sing-a-long on every Friday, Rm 1-136, 7pm. Also, worship service on Sunday 1-3pm at Central Square. For more info, Chris Pak x3-9342 or 876-8594.

MIT Muslim Students Association*-5 daily prayers in the prayer room, Ashdown House (Bldg W-1) west bsmt. Friday congregation: 1:10-1:45pm in Ashdown House (Bldg W-1) west bsmt. Info: x8-9755.

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

United Christian Fellowship**-Join us for a time of worship, prayer, and Biblical teachings, Wednesdays, 7pm, Rm 18-490. For more information call Adam Szabo x3-2401 or 576-3795 or Cathy Trotter x3-4944 or x5-6414.

■ GRADUATE NOTICES

Graduate Commuter Parking Stickers 91-92**-Sept 9: 8am-4pm, 3rd floor Mezzanine Lounge, Student Center. Stopy by the Residence and Campus Activities Office, W20-549, for information and eligibility requirements or call x3-6777.

INTERNATIONAL

20th Annual International Open House**-Sept 4: An opportunity for members of the MIT community to welcome newcomers and their families from abroad. MIT community members are encouraged to stop by. Representatives of campus organizations and helping services will be on hand, and a panel discussion will feature Professors Samuel Jay Keyser (chair), Alvin W. Drake, Margery Resnick, Frank Solomon, Lester Thurow and J. Kim Vandiver. Sponsored by the Medical Dept and the International Students' Office. Call x3-1614. Open House: 9:30am-5pm, Rm 10-105 (Bush Rm). Panel Discussion, 7:30-9pm.

International September Degree Candidates**-International students who are September degree candidates with MIT loans must contact Eleanor Wolcott at x8-5663 in the Bursar's Office/Alumni Services to arrange an appointment for an exit interview. An exit interview is required prior to graduation

International Students: 1st Time Student Loan Borrowers**—Contact Eleanor Wolcott at x8-5663 in the Bursar's Office to arrange an appointment to sign your loan notes.

MIT Language Conversation Exchange**-This service, sponsored by the MIT Medical Department, assists members of the MIT community to practice a language with a native speaker and get to know someone from another country. Call x3-1614, lv mssg.

MIT-Japan Program. Go to Japan for a year of fun and excitement-all expenses paid-with the MIT-Japan Program. Further info: x3-

STUDENT JOBS

There are more job listings available at the Student Employment Office, Rm 5-119. The Student Employment Office has many "one time only" jobs. Many students find these jobs a good way to earn money fast.

On Campus, Non-Technical, Responsible individual needed for general office work in arts administration, including reception duties, answering phones, xeroxing, mailings, filing, errands, etc. Experience with Macintosh and MSWord helpful. Minority students encourged to apply. 12 hrs/wk on Mon-Wed-Fri, \$7/hr. Contact Mary Haller or Mark Palmgren, Office of the Arts, E15-205, x3-4003.

Off Campus, Technical, Programming. Computer Science major needed to assist in developing a BASIC compiler for Microsoft Windows. Should have an understanding of compilers and experience in C. Additional experience in YACC, MSC 6.0, DLLs, and Windows SDK is helpful. Located 3 blocks from Alewife T in a great working environment with your own private space, a 386/20, and free use of the video machines. Minimum of 8 hrs/wk on site with additional off site hours possible. Contact Jerry Bedrick at Softbridge Microsystems, 125 Cambridgepark Drive, Cambridge, MA, 02140. Phone 576-2257 ext. 270 or fax at 864-7747.

Off Campus, Non-Technical, Childcare. Responsible person needed to take care of 1 infant and 1 toddler on Tuesdays (9am-1pm) and Thursdays (8am-2pm) in East Arlington. \$6/hr. Contact Sabine Levet at 646-5405.

On Campus, Non-Technical. Student manager position available for the MIT Symphony Orchestra, Responsibilities include assisting with Symphony activities during rehearsals recording sessions and concerts. Will handle

ALMOST THERE

Gust Foils Hydrofoil

gust of wind cost MIT's human-A powered hydrofoil, Decavitator, any chance of winning the International Human Powered Speed Championship for watercraft held in Milwaukee, Wisc., on August 18.

"We had trouble with crosswinds and never managed to get a good run in the high-speed configuration," said Professor Mark Drela, Decavitator's pilot and project adviser.

Before the wind gust knocked the hydrofoil down with about 10 percent of the 100-meter (110 yards) run to go, Professor Drela said, the Decavitator was maintaining a speed of about 14 and 1/ 2 knots, or 17 miles per hour. That was just slightly under the record speed for human-powered hydrofoils and close to the winning speed in the competition. The Flying-Fish team of California finished first with a maintained speed of 15 knots (17 and 1/2 miles per hour) over a course in a cove off Lake Michigan.

Professor Drela and the MIT team of students and alumni were encouraged enough, however, to keep going after a \$25,000 prize offered by DuPont Co. for the first human-powered boat to go 20 knots, or 23 miles per hour, over the 100-meter course.

"We're going to try to set an official record on the Charles within the next month or so," Professor Drela said. The goal will be a 100-meter run at 16-17 knots or about 18 and 1/2 miles per hour, to eclipse the current record speed of 15 knots.

That would still be short of the 20knot requirement, but Professor Drela said that whoever holds the record at the end of 1992-when the prize expires-would get it.

"Our boat certainly can do it," Professor Drela said of the planned try at a new record.

Meanwhile, the MIT team will continue working on the twin-hulled, 45-pound hydrofoil made entirely of lightweight materials. The boat, powered by a pedal-driven 10-foot air propeller, lifts onto hydrofoils, or underwater wings, as it accelerates.

Its name is a coined antonym for cavitation, a phenomenon of hydrodynamics that creates drag on underwater propellers. The air propeller sidesteps the problem. Thus: decavitation.

Weekend Tips

As we prepare for the last long weekend of the summer, here are some tips from the Campus Police that will secure your office or lab until you return.

-Attach security devices to computers.

-Back up computer files.

-Where possible lock desks and filing cabinets.

-Close transoms and windows securely.

-Be sure the door is locked as you leave.

rehearsal schedules, set-up needs, music/library maintenance, personnel, and concert preparation. Will also attend all rehearsals, concerts, and recording sessions. Manager will also handle a wide variety of other Symphony related duties. Will start on Sept. 3 at the Activities Midway. \$7.30/hr. Contact Robin Dumas, MIT Symphony Orchestra, 14N-207, at x3-2826.

UROP

The UROP office welcomes new and returning students to participate in UROPs this fall. We invite MIT and Wellesley students to join with faculty members to pursue research projects of nutual appeal. For further information, please read details on procedures in the participation section of the new UROP 1991-92 Directory, available September 3, or stop by the UROP office now to pick up a Fall 1991 Guidelines information sheet. Please watch out for pertinent information which we post on the UROP bulletin boards in the infinite corridor near the Admissions office, and in the UROP office, 20B-140.

mmer UROPs end September 8. Review of Fall UROP proposals starts September 9, Registration Day. Fall UROPs may begin as early as Septem ber 9 and end January 29, 1992. The UROP minimum wage rate has been increased to \$6.90 an hour and will be in effect September 9.

Faculty supervisors wishing to have projects listed may send brief project descriptions to the UROP office, or call x3-7306, or e-mail to stom@athena. Listings are posted below, on the UROP bulletin boards in the infinite corridor and in the UROP

Fall Opportunity in Biomedical Research. Laboratory seeking student to assist in an investigation of the cellular and molecular effects of low density lipoproteins (LDL) for the Fall semester. The project involve working closely with M.D.'s and a medical student. Opportunities for additional independent work may also be available. Previous laboratory experience is a plus, but is not a prerequisite. Faculty supervisor: Prof. Robert S. Lees, 26-131, x3-3012; e-mail: shahn@hstbme.mit.edu.

Project in Child Language Acquisition. Project nvolves assisting with language studies testing the development of 3 and 4-year-old children's grammar. Testing takes place at day care centers in Arlington. Interested students must have 2 completely free mornings a week. Own transportation helpful. Some background in linguistics preferred. Pay or credit. Faculty supervisor: Prof. Ken Wexler, E10-020; contact: Rosalind Thornton, E10-246, x3-7957 or (203) 974-2063.

Brain and Cognitive Sciences. A motivated, independent and reliable undergraduate is sought to carry out neurobiological research on the development of mammalian nervous system. The project is well defined on the development of the retina that would involve learning neuroanatomical techniques (dissecting, slicing tissue, applying dyes) as well as mi-croscope work (analyzing tissue, drawing, photographing). At the beginning the student

would work closely with a senior colleague before working independently with supervision. Seeking a one-year commitment, for pay or credit, at least 10 hours per week. Faculty supervisor: Prof. Mriganka Sur, E25-618; contact. Cheryl White, E25-618, x3-Jilli

Cardiac Imaging Research. Opportunity for one or more students to participate in a large international study on regression of coronary arteriosclerosis. The project involves computer acquisition and analysis of coronary angiograms. For more information please call. Faculty supervisor: Prof. Robert S. Lees, HST, x3-3012.

Arteriosclerosis Research. Opening available to study the cellular metabolism of lipoproteins, including the affects of growth factors on lipoprotein metabolism. Prior research ex-perience is desirable but not essential. For more information, please call. Faculty supervisor: Prof. Robert S. Lees, HST, x3-3012.

MIT TECH TALK (USPS 002157)

August 28, 1991 Volume 36 Number 3

Publisher KENNETH D. CAMPBELL

Editor JOANNE MILLER

Assistant Editor ELIZABETH THOMSON

Photojournalist

DONNA COVENEY

Production

GENEVIEVE PARENT

OF MIT GRAPHIC ARTS

News Office

Director: Kenneth D. Campbell; Associate Director: Robert C. Di Iorio; Senior Assistant Director: Charles H. Ball; Assistant Direc-tors: Naomi F. Chase; Donna Coveney, Joanne Miller; Assistant Editor: Elizabeth A. Thomson; Administrative Assistant: Myles Crowley; Senior Staff Assistant: Lisa Damtoft; Receptionist: Chandra Wilds.

Tech Talk is published weekly except for most Monday holiday weeks by the News Office, Massachusetts Institute of Technology, 77 Massachusetts Avenue, Cambridge, Massachusetts 02139-4307. Postmaster: Send address changes to Tech

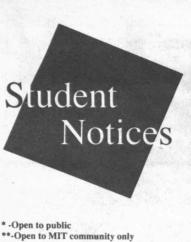
Talk, Room 5-111, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139-4307. Tech Talk is distributed free to faculty

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, nonrefundable. Checks should be made payable to MIT and mailed to Business Manager, Room 5-111, MIT, Cambridge, MA 02139-

Second class postage paid at Boston,

Permission is granted to excerpt or re-print any material originated in Tech Talk.



- ing, Tuesdays, 6:45pm, Student Center Rm W20-451. Looking for photographers and layout help, darkroom available
- x3-1493
- Wed 6pm-3am; Thurs-Sat 6pm-4am.
- by Mass Beta chapter of Tau Beta Pi, the National Engineering Honor Society. Reduced

Crimewatch

Following are incidents reported to the MIT Campus Police Department

August 2: backpack stolen from Bldg. 8, value \$50; portable radio left unattended in W20, value \$40; two bicycles were reported stolen 1) W20, value \$150; 2) E17, value \$500, was left unlocked and unat-

August 3: bicycle stolen from W20, value \$270; computer disc drive from Bldg. 66, value \$724; motor vehicle stolen from Audrey St., value \$4.500.

August 5: the following items were left unlocked and unattended and then stolen: 1) bicycle, from E18, value \$425; 2) backpack from W20, value \$25.

August 7: larceny of a camera, E10, value \$278; bicycle stolen from E2, value \$300; the following items were all stolen from unlocked and unattended areas: 1) portable computer, Bldg. E38, value \$1,761; 2) pocketbook, Bldg. 14, value \$30; 3) jewelry, Bldg. W31, value \$350.

August 8: assist Cambridge Police Department with emergency medical assistance to the victim of a stabbing off campus. A carnival was being held in one of MIT's parking lots on Pacific St. The stabbing occurred off MIT property.

August 9: unlocked & unattended wallet, Bldg. 1, value \$50.

August 10: microwave oven stolen, Bldg. E25, value \$255; an unlocked & unattended wallet, Bldg, 18, value \$20.

August 11: breaking and entering a motor vehicle in West garage, \$1 taken; bicycle, Bldg. 7, value \$100.

August 12: stamps and cash, Bldg. 26, value \$70; bicycle, Bldg. E52, value \$345; three wallets were stolen from unlocked and unattended areas: 1) Bldg. 14, value \$5; 2) Bldg. 14, value \$50; 3) Bldg. 62,

August 13: the following thefts occurred in unlocked and unattended areas: 1) computer, Bldg. E38, value \$5,000; 2) wallet, Bldg. E52, value \$40; 3) wallet, Bldg 6, value \$10.

August 14: juvenile arrested for trespassing and other charges while attempting to steal a bicycle.

August 15: two bicycles were reported stolen 1) Bldg. W1, value \$250; 2) Bldg. W85, value \$136; male arrested after entering NW21 and wielding a large carpenter's file, threatening people. He exited the building and began hitting passing cars, and was arrested for trespassing and disorderly conduct.

August 16: breaking and entering a motor vehicle parked on Fowler St., nothing taken; unattended tools stolen from Bldg. E18, value \$1,000; lunch box and contents from Bldg. E53, value \$50.

August 17: male arrested for trespassing after notice.

August 18: a mutual assault and battery occurred between two nonaffiliated persons, incident occurred in the Albany open parking lot; unlocked & unattended wallet in Bldg. E2, value \$16; an MIT staff person was struck by chalk thrown from a building; two motor vehicles were broken into in the West garage, nothing taken; male arrested for trespassing after notice.

BATES DIRECTOR

Moniz Is Appointed Physics Head

Professor Ernest J. Moniz, director of the Bates Linear Accelerator Center since 1983, has been named head of the Department of Physics, effective September 1.



Professor Moniz, a theoretical nuclear physicist, has gained wide recognition for his frontier work on the interaction of pions with nuclei. Pions are short-lived particles primarily responsible

for the nuclear force. Professor Moniz has been instrumental in developing what is widely considered to be the fundamental description of pion-nuclei interactions.

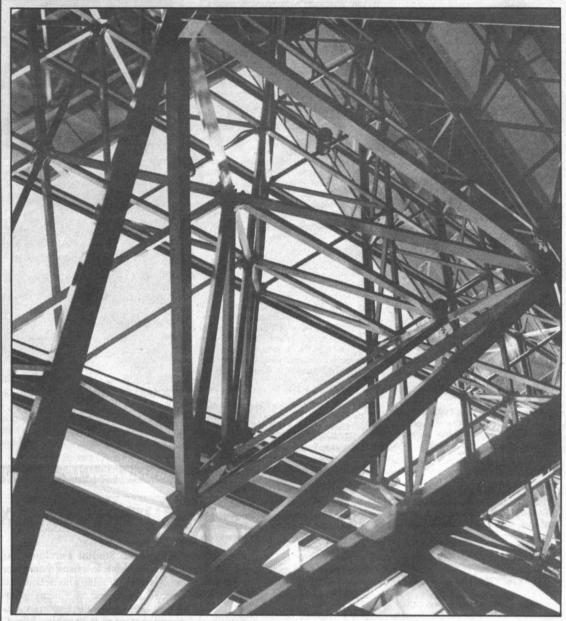
His appointment as department head was announced by Dean of Science Robert J. Birgeneau, who was head of physics when he was named dean earlier this year. Dr. Birgeneau is the Cecil and Ida Green Professor of Physics.

In making the announcement, Professor Birgeneau said that Professor Moniz combines outstanding research accomplishments with an excellent record of administration at Bates and a deep interest in education. Professor Moniz was enthusiastically recommended to the dean by the Physics Head Advisory Committee chaired by Professor Thomas J. Greytak, Professor Birgeneau said.

At Bates, Professor Moniz has helped guide the development of the laboratory's research program toward coincidence experiments and fundamental measurements of the electromagnetic structure of "elementary" strongly interacting systems, both nuclei and their constituent particles. The laboratory, which serves the national community, also embarked on a major upgrade-the construction of a "stretcher/storage ring" 200-meters in circumference. The facility will produce high-intensity continuous electron beams, thereby providing unique research opportunities starting next year.

Professor Moniz, 46, received the BS in physics from Boston College (1966) and the PhD in theoretical physics from Stanford University (1971). He joined the MIT faculty in 1973 after two years as an NSF postdoctoral fellow at the Centre d'Etudes Nucleaires de Saclay and the University of Penn-

The physics department is one of the largest in the world and is at the forefront of physics research and education. Approximately 90 full-time faculty members teach the 250 undergraduate and 300 graduate students. The department provides education in all areas of both theoretical and experimental physics, including astrophysics, nuclear and particle physics, and atomic, plasma and condensedmatter physics.



WORM'S-EYE VIEW-Photojournalist Donna Coveney took this shot up through the atrium of the E,E&G Education Center in Building 34.

AT SLOAN

White Is Promoted

ean Lester C. Thurow of the Sloan School of Management has announced the promotion of Alan F. White from associate dean to senior

associate dean.



'This promotion is in recognition of the many years that Alan has spent leading our executive education programs, the talent he brings to external relations with companies and

countries, and the entrepreneurship he brings to resource development," Dean Thurow said. "To build the best business school team in the country, a good faculty and good students are not enough. It is necessary to have the best talent at every position. Alan brings us that talent at his position."

Dean White received an AB from Miami University in 1965 and the SM from MIT in management in 1971.

He served as regional representative for the US Peace Corps Programs in the Philippines from 1963 to 1967, director of the University of Hawaii Center for Cross Cultural Training and Research from 1967 to 1970, and special assistant to the president of the University of Hawaii from 1971 to

He became associate director for executive programs at the Sloan School in 1973, director of executive education in 1975 and associate dean for executive education in 1985. He also has served as a lecturer since 1975.

He is chairman of the board of directors of the Consortium of University Executive Program Directors, and he serves as a consultant to organizations in the areas of human resource planning, education and training.

EMERITUS HONOR

Scrimshaw to Receive Food Prize

The World Food Prize for 1991— an international honor recognizing individual achievement in improving the quality, quantity or availability of food in the world—has been awarded

to Dr. Nevin S. Scrimshaw, MIT Institute Professor Emeritus.

It is the first time in its fiveyear history that the prize, given for accomplishments in food and agriculture, is being awarded for

contributions in the area of nutrition. The previous laureates have been botanists or biologists cited for increasing the world's food supply.

Dr. Scrimshaw, who currently directs the Food, Nutrition and Human Development Program for the United Nations University of Tokyo and serves as a member of Harvard University's Center for Population Studies, will receive the prize in a ceremony in Des Moines, Iowa, on October 14. The prize includes a cash award of \$200,000 and a sculpture by world-renowned designer Saul Bass.

John Ruan, chairman of The World Prize Foundation, said that while previous prize recipients had been honored for their contributions in the production of food, "we now acknowledge achievements in the area of nutrition.'

'Dr. Scrimshaw's revolutionary accomplishments toward alleviating malnutrition in developing countries have made a substantial difference toward improving the lives of millions of people," Dr. Ruan said.

Dr. Scrimshaw, in a statement distributed by the foundation, said, "This award provides an opportunity to focus on the issue of world hunger. Despite significant scientific and medical advances, it is somewhat disheartening that global hunger continues to plague society.

Dr. Scrimshaw, who has both medical and PhD degrees, came to MIT in 1961 as professor of human nutrition and head of a new Department of Nutrition and Food Science. In 1976 he established the International Food and Nutrition Planning Program at MIT, which provided training in nutrition research for scientists in developing countries. In 1980, as Institute Professor, he began research on the functional consequences of iron deficiency and developed methods for getting iron into the diets of people in underdeveloped countries. Today he remains one of the principal advisors to international and national organizations in the field of food and nutrition. He retired from MIT in 1988

When Dr. Scrimshaw was named to receive the first James R. Killian Jr. Faculty Achievement Award in 1972, the selection committee said that he was "not only a researcher of extraordinary accomplishment, but also a distinguished administrator and teacher, a scientist whose career exemplifies the ideal of science as a search for human answers to the most basic of human needs."

Dr. Scrimshaw, who lives in New Hampshire and maintains an office in Cambridge, has received numerous awards, including one earlier in the summer, the 1990-91 Alan Shawn Feinstein Merit Award for Public Ser-

Lipsky on Leave at Ford Foundation

political science, has taken a leave of absence from MIT to serve as a program officer in The Ford Foundation's Governance and Public Policy Program. He will have responsibility for developing programs on democratic institutions and state and local govern-

At MIT, Professor Lipsky has specialized in public policy, American

Dr. Michael Lipsky, professor of politics, and social movements. He served as a consultant to ACTION, the federal volunteer agency, in the 1970s, and more recently was a member of the Committee on the Status of Black Americans of the National Research Council. He has written extensively on protest and community organizations, public service delivery, and the relationship between government and the voluntary sector.

Hurricane Bob Inflicts Little Damage

A dozen windows were blown out and seven trees crashed to the ground at MIT during Hurricane Bob, causing only light damage, Thomas E. Shepherd Jr., associate director of Physical Plant, reported last week.

Extensive sandbagging at locations vulnerable to flooding from street runoff kept water damage very low. Mr. Shepherd said. Sandbags were placed at

several points, including West Garage, McGregor, Walker Memorial and the steep ramp behind Kresge Auditorium.

Pressure in the tennis bubble was increased to keep the structure from flapping in the wind and it survived without damage.

The Institute closed at 11am, but Physical Plant workers were on hand throughout the day, Mr. Shepherd said.

INTERNATIONAL ACCESS

Thesis Abstracts Added to Database

n a change designed to increase access to MIT theses by scholars and researchers around the world, the MIT Libraries have begun submitting abstracts of MIT theses to an international database.

The database, Dissertation Abstracts International (DAI), is recognized as the most widely used information source about theses written in English. Further, because of its dissemination around the world DAI is important as a tool for researchers and as exposure for authors.

Until now the only comprehensive

index of MIT theses was the Libraries' catalogue, where search possibilities were limited to author or title. This made it difficult, especially for persons outside the Institute, to find out about theses written here if they did not have a specific citation. DAI will group abstracts by subject, and index them by keyword and author.

The Libraries' new CD-ROM based catalogue, to be added later this year, will allow keyword searching and other ways to find theses, but outside access will be more dramatically improved by adding the MIT abstracts to DAI.

Researchers interested in a particular MIT abstract in the database can request copies of the complete thesis from the Libraries' Microreproduction Laboratory. The Libraries hope to offset the cost of putting abstracts in DAI by retaining distribution rights of thesis copies, rather than charging graduate students

All doctoral-level theses have been included in DAI since the beginning of the 1990-91 academic year. DAI is published by University Microfilms Incorporated.



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

August 28 - September 15

SEMINARS & 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

FRIDAY, SEPTEMBER 6

Lower Hybrid Current Drive in TORE SUPRA and JET*-Dr. Didier Moreau, Associa tion Euratom, Cadarache. Plasma Fusion Center Seminar Series, 4pm, Rm NW17-218.

TUESDAY, SEPTEMBER 10

Multiphase Turbulence Combustion With Applications to Advanced Liquid Metal Fuels**-Prof R.P. Huebener, Univ of Tübingen, Germany, Thermal Science Seminar sponsored by the Dept of Mechanical Engineering, 4pm, Rm 5-234. Refreshments 3:45pm.

WEDNESDAY, SEPTEMBER 11

Human Capitalism*-Robert S. Ozaki, California State Univ at Hayward. Cosponsored by the MIT Japan Program and the Japan Society of Boston, 5:30-6:30pm, Rm E38-7th

FRIDAY, SEPTEMBER 13

Success Factors in Technology Transfer**-John Preston, MIT. Mechanical Engineering Colloquium, 3pm, Rm 3-270. Refreshments, 4pm, Rm 1-114 (Miller Rm).

Mode-Locked FEL Oscillator Experiments*-Dr. Eli Jerby, Weizmann Institute of Science, Israel. Plasma Fusion Center Seminar Series, 4pm, Rm NW17-218.

COMMUNITY INTEREST

Alcoholics Anonymous (AA)**-Meetings every Tues, 12-1pm; Thurs, 12-1pm, Rm E23-364. For info call Alice, 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 mem-bership is that there be a problem of alcoholism in a relative or friend. Call Alice, x3-4911.

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

Cancer Support Group**-Meetings every Thursday, 12-2pm, Bldg E51. For those with acute and chronic forms of cancer. Sponsored by the MIT Medical Dept. For information about weekly luncheon meeting, call Dawn Metcalf, Social Work Service, x3-4911.

Co-Dependents Anonymous (CoDA)*-Meetings every Thurs, 6:30-8pm, Rm 66-156. Info: Alice, x3-4911.

Eldercare Support Group**-Meetings every Monday 12-1pm, Rm 8-219. For info call Carole x3-9368 or Maria x3-8820.

Informal Embroidery Group**—MIT Women's League, 10:30am-1:30pm. Upcoming dates are: Sept 4, 18, Oct 2, 16, Nov 6, 20, Dec 4, 18. Meets in Rm 10-340, the Emma Rogers Room. Info: x3-3656.

Infant/Toddler Child Care Briefings**—Sept 5: For parents who need general, preliminary information about the range of options available to them. (Aug. 15 briefing cancelled.) Sponsored by the MIT Child Care Office, 12 1:30pm, Rm 4-144. Interested parents should attend any one meeting.

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. Only requirement for membership is the desire to stop eating compulsively. Info: Alice, x3-4911.

Parent Support Group*—Wednesdays, 12-1pm, sponsored by Parents Anonymous and MIT Child Care Office. Call 1-800-882-1250 for more information.

Weight Watchers**-Interested in starting a group in E19? \$85 for 10 weeks, classes start 9/9. Please call Linda x3-7722 by Sept 5.

■ 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: Margery Wilson 868-

Working Mothers Support Group**—An ongoing support group that meets to discuss parenting-related issues in a casual atmosphere. Meets every other Thursday, 12-1:30pm (drop in anytime), Rm 18-591. Info: Therese Henderson, x3-7492.

■ MITAC

Ticket locations and hours: Tickets may be put chased at the MITAC Office, Rm 20A-023 (x3-7990), 10am-3pm Monday-Friday. Lincoln Lab sales in Rm A-218, 1-2pm Thursday & Friday only through 8/30/91. (There are no sales in Labby 10 during July and August.) Further details on events are included in MITAC's monthly flyer. To avoid disappointment, make reservations and purchase tickets early. Because MITAC is nonprofit, refunds are not available.

MITAC, the MIT Activities Committee, offers discount movie tickets for General Cinema and Loews Cinemas, both are \$4/ea (Loews tickets are not valid the first 2 weeks a movie is released). Tickets are good 7 days a week, any performance. Due to popular demand, Showcase discount tickets have returnedtickets are \$4.25 ea, valid Mon-Thurs only.

Fall Events Previews—NYC Weekend, Oct 12-14; Fall Foliage Weekend/Shopping in N. Conway, Oct 19-20; Autumn Weekend in Hyannis, Oct 25-27. Events will be available for sale in September.

Museum of Fine Arts-The Council for the Arts has 10 passes employees may borrow for free admission. Call the MIT libraries, x3-5651, for availability. At Lincoln Lab, MFA passes are available in A-150.

Discounts (i.e., coupons, use of MIT ID, etc); Arlington Capitol Theatre, Canobie Lake Park, Cambridge Discount Coupon Books (including the new City Books, \$1 ea, valid through 11/15/91), Ferry discounts, Kay Jewelers, Kendall Athletic Club, Magic Kingdom, North Shore Music Theatre, Plymouth County discounts, Rebecca's Café, Riverside, Water Country, whale watches, whitewater rafting. Call MITAC.

■ THEATER

Call the Theatre & Dance Performance Hot-Line at x3-4720 for complete up-to-date information on theatre and dance performances at MIT.

Sweeney Todd*-Aug 30-Sept 1, Sept 5-8, 12-14: Stephen Sondheim musical about the "demon barber of Fleet Street." Sponsored by the MIT Musical Theater Guild, 8pm, Kresge Little Theater. \$8, discounts avail for students

■ DANCE & MOVEMENT

MIT Folk Dance Club*-Three nights of dancing. Sunday: International Dancing, 7-11pm, Lobby 13, with Early Teaching from 7 7:30pm. Tuesday: Advanced Balkan Dancing, 7-11pm, Rm 491, Student Center. Wednesday: Israeli Dancing, 7-11pm, Lobby 13, with Early Teaching from 7-7:30pm. Info: x3-FOLK.

MIT Tech Squares**--Western Square Dance, Tuesday Nights. New class beginning soon. Introductory Fun Night 9/10. Classes begin 9/ 17 (still free if you missed 9/10). Refreshments. 8pm, Sala de Puerto Rico, Student Center. Info line x3-7000.

Aerobics Classes*—Sponsored by the MIT Dance Club, Every Mon, Wed, Fri, 6-7pm, Bldg Studio \$4/class hear come. More info: Julia, 492-1369.

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

MIT Dance Workshop Classes*—An activity of the Theatre Arts program taught by members of the Beth Soll & Co, MIT's resident dance company. Beginning Modern Technique, M,W,3:30-5pm, T-Club Lounge, Dupont Ctr; Intermediate Modern Technique, Tu, Th, 5:30-7pm, Walker-201; Composition/Improvisation, Tu 1-2:30pm, Walker-201; Technique/ Repertory/Improvisation, Wed 11-12:30, Walker-201. Tap, Fri 12-1:30pm, Walker-201. Info: x3-2877.

EXHIBITS

works by Berenice Abbott, Albers, Calder, Johns, Motherwell, Rauschenberg, Warhol.



TEA AND SCHOLARSHIPS—President Charles M. Vest enjoys tea with members of the Women's League during a recent visit to the MIT Student Furniture Exchange, which the Women's League operates in the MIT Museum Building (265 Massachusetts Ave.) to raise scholarship funds. The group presented a \$10,000 check to the president. From the left: Suze Campbell, co-chair of the Furniture Exchange, Betsy Whitman and Maureen Feldman. The sofa and other items are among those for sale at the Exchange. Many items are donated and the Exchange welcomes additional donations.

Photo by Donna Coveney

BRAND NEW TO ANTIQUE

Furniture Exchange Extends Hours

The MIT Student Furniture Exchange, which raises money for scholarships by selling household and office furniture and other items essential to life on a college campus, has announced special "back-to-school" hours through September 11.

The Furniture Exchange, located in N52, the MIT Museum Building, is open regularly from 10am-2pm Tuesdays and Thursdays all year long. It will be open as well from noon-6pm on August 28, September 4 and September 11 and from 10am-1pm on Septem-

Last year, the Women's League donated \$10,000 to the scholarship fund from proceeds of the Furniture Ex-

"Our record amount of gross sales last year," the League said in its annual report, "may be due to the large number and high quality of donated items we have received. We are truly grateful for these donations and encourage people to think of us religiously and automatically when 'spring cleaning' or moving." In some cases, the Furniture Exchange can arrange help in packing and transporting donated items.

The Exchange, operated by the MIT Women's League as a service to the MIT Community, was started more than 30 years ago by Carolyn Brooks, wife of Edward Pennell Brooks, the first dean of the Sloan School. It has been operating continuously since then and research by the Women's League over the last year has not revealed any similar service at any campus in the United States.

The current co-chairs, Dotty Mark and Suze Campbell, took note in the Women's League's 1990-91 annual

Hotline x3-4680.

Sept 3-20. Application deadline for lottery

selection: Sept 19, 6pm. List Center 24-hr

Freddy Homburger: Landscapes, primarily

of Mexico and Maine by Freddy Homburger,

physician, scientist, diplomat, artist. Through

Sept 12. Made of Light: Photographs from

India and Nepal. A visual essay of Jantar

Mantar, the Celestial Observatory at New

Delhi, more, by Barry Perlus, Cornell. Through

Sept 8. Postcards from Ogunquit. Oil

sketches and larger works by Charles H.

Woodbury, 1886 MIT alumnus and turn-of-

the-century American painter. Through Sept

15. Doc Edgerton: Stopping Time. Photo-

graphs, instruments, and memorabilia docu-

menting the late Harold Edgerton's invention

and use of the strobe light. Ongoing. Light

Sculptures by Bill Parker. Vivid interactive

light sculptures, each with its own personality

and set of moods. Ongoing. Holography:

Types and Applications. Scientific, medi-

cal, technical and artistic imaging drawn from

the work of the Spatial Imaging Group at

MIT's Media Lab. Ongoing. Math in 3D:

Geometric Sculptures by Morton G. Bra-

dley, Jr. Colorful revolving sculptures based

on mathematical formulae. Ongoing. Harold

MIT Museum Bldg (N52)-Watercolors by

report of the fact the name of the organization doesn't accurately describe its activities

"The MIT Student Furniture Exchange began as a service exclusively to help students at MIT furnish their rooms or apartments thriftily. It was opened up some time ago, however, to the MIT community, and now many people on campus make a habit of browsing regularly for the odd or amusing or 'just what I needed' trea-

"The MIT Student Furniture Exchange sells more now than just furniture. One can find almost anything there: dishes, pots and pans, china and glassware, gadgets, appliances, books, linens, old records, lamps, some assorted clothing, TVs and radios, and in general, all manner of household items, in addition to office furniture and furnishings. Everything from the practical to the whimsical, from brand new to respectably antique (what we call 'vintage') can appear on our shelves or

"The MIT Student Furniture Exchange is not really an Exchange in the sense that one can bring in one item and exchange it for another. Students are encouraged to keep their receipts so that they may 'sell back' their purchases for two thirds of the original purchase price. The Furniture Exchange is like a Stock Exchange—one can buy goods there and one can sell them there as

1991-92 Bulletin Issued

he Communications Office will begin distribution of the MIT Bulletin 1991-92 Courses and Degree Programs Issue this week. All faculty and staff members, students and alumni are entitled to one free copy.

By presenting the appropriate identification, a student can get a copy of the Bulletin in one of two temporary distribution centers. Upperclass, graduate and Wellesley students can pick up copies in Rm 5-134 beginning today (Wednesday, Aug. 28), daily 10am-4pm through Registration Day, Monday, Sept. 9. Copies will be available for freshmen in the Residence Orientation Center in the Student Center West Lounge through Friday, Sept. 6.

After September 9 members of the

community and alumni/ae with identification may pick up a copy of the Bulletin in the Information Center, Rm

Distribution to faculty and staff also will begin today via Institute mail. This distribution includes orders for cartons of books ordered earlier through the Communications Office. Offices needing cartons of books may call x3-1702 to place an order.

Throughout the year Bulletins can be purchased in the MIT Museum Shop and the MIT Coop in the Student Center and at the MIT Press Bookstore and the Coop in Kendall Square for \$5 per

Applicants may get Bulletin information by calling (617) 253-2635.

Hart Nautical Gallery-Ongoing exhibits: George Owen '94, Yacht Designer, Ship Models. Half Models in Naval Architecture. Ongoing. 77 Mass Ave, Mon-Sun 9am-8pm.

Corridor Exhibits-Bldg 1 & 5, 2nd floor: John Ripley Freeman. Lobby, Bldg 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 Bldg 6: Laboratory for Physical Chemistry. Bldg 4, 4th floor: Edgerton's Strobe Alley: Exhibits of high-speed photography. (Corridor Exhibit). Through Sept. 1.

Compton Gallery-Crazy After Calculus: Humor at MIT. Photographs, cartoons, and a collection of artifacts documenting a rich through "hacks,"-elaborate practical jokes involving humor and/or engineering technique. Through Sept 21. Hours 9-5 weekdays.

Other Exhibits-Institute Archives and Special Collections: Julius A. Stratton: Happy Birthday. In honor of his 90th birthday, May 18, this exhibit chronicles Dr. Stratton's career at MIT from his student days (Class of 1923) to his presidencey (1959-1966). It also reviews his government service and scientific contributions outside MIT. WIT at MIT: Thesis Humor. The lighter side of thesis writing as expressed in titles, dedications and acknowledgments. First floor corridor of Bldg 14.

LOOKING AHEAD

1991 Microelectronics Research Review*-Oct 1-2: MIT's Microsystems Technology Laboratories present a review of its current developments in the fields of IC technology, manufacturing, devices, circuits, and systems. Rm9-150. Call x3-3978 for more information.

Send notices for Wednesday, September 11 through Sunday, September 22 to Calendar Editor Rm 5-111, before 12 noon Friday, September 6.

List Visual Arts Center—Annual Student Loan Art Exhibition and Lottery: Contemporary prints and photographs from MIT's permanent collections, all available for one-year loan to MIT students and student groups. Includes

Tovish: Tenant, 1964-65. Sculptural installation utilizing stroboscopic light by MIT's Center for Advanced Visual Studies Fellow Ongoing. Mathspace. Hands-on exploration of geometry. Ongoing. Tues-Fri 9-5; Sat-Sun 1-5. 24-hr Hotline: x3-4444.

history of MIT wit and wizardry shown

US V. MIT

Penn. Court Denies Motion to Move Suit

■ By Kenneth D. Campbell News Office

A federal judge in Philadelphia has denied MIT's request to move the US v. MIT antitrust suit on financial aid to Boston.

US District Court Judge Louis C. Bechtle, chief judge of the US District Court for the Eastern District of Pennsylvania, filed his order August 7, according to court papers.

A spokesman for MIT said, "The reason MIT sought the transfer to Boston was to make the litigation less costly in terms of people's time and expense. However, the judge has made his decision and we go on from here."

Attorneys for MIT, appearing in court July 31, asked the judge to move the unprecedented antitrust case to the US District Court in Massachusetts, where the annual financial aid "overlap" meeting of 23 private colleges, including MIT and the eight Ivy League colleges, has taken place for more than two decades. The financial aid officers attending the professional meetings discussed the financial need of undergraduate students who had been admitted to more than one of the colleges and had applied for aid.

MIT declined to sign a May 22 consent decree to which the Ivy League colleges reluctantly agreed. The colleges said they did not believe they had violated the Sherman Antitrust Act but that the cost of fighting the US Department of Justice was prohibitive. The consent decree is subject to approval by the judge.

MIT maintains that its "actions in awarding financial aid based upon the demonstrated need of each applicant are consistent with and required by federal law." The Sherman Antitrust Act's strictures against private business competition do not apply to the competition among nonprofit private educational institutions and their decision as to who shall receive their charitable funds in the form of scholarships, MIT attorneys say.

"This is the first time in the 101year history of the Sherman Antitrust Act that the Department of Justice has maintained that the antitrust law applies in full force to the administration of the basic educational mission of nonprofit educational institutions," said MIT's attorney, Thane D. Scott of the Boston firm of Palmer and Dodge.

The civil suit, in the opinion of Washington Post columnist Edwin M. Yoder Jr., "is perhaps the most overbearing move against private higher education in the nation's history." Yoder wrote, "It is wholly appropriate that colleges and universities guard their limited scholarship funds against bidding wars. It obviously means more aid for more students."

The consent decree would allow the Ivy League colleges to agree to administer aid based on financial need in the case of athletes, but bars such an agreement for other students.

The overlap meetings resulted in a

net increase of financial aid offered by MIT, according to MIT's Financial Aid Office.

MIT's brief said "The primary objective of Overlap is to make colleges more accessible for talented but economically disadvantaged students by encouraging the granting of financial aid on the basis of need. . .

"In this case, the government contends that the principles of fiscal prudence underlying the federal financial aid system are not just imprudent but also illegal when implemented by private colleges with respect to their own charitable funds," the MIT brief said.

The Justice Department case, entitled "United States v. Brown University et al," also named as defendants Columbia, Cornell, Dartmouth, Harvard, MIT, Princeton, University of Pennsylvania and Yale.

The Justice Department brief opposing the motion to transfer the case to Massachusetts stated that the members of Overlap include the nine colleges mentioned, plus three other sets of colleges: Amherst, Bowdoin, Wesleyan and Williams; Barnard, Bryn Mawr, Mount Holyoke, Smith, Vassar and Wellesley; and Colby, Middlebury, Trinity and Tufts.

In a July 22 op-ed article in The New York Times, MIT Chairman Paul E. Gray said, "The issue is not price fixing. There is no personal gain or profit motive involved here. In fact, it is quite the reverse: the issue concerns the fair distribution of subsidies—generated largely from private, charitable donations—to help defray the cost of education for talented students whose families cannot afford it. The Attorney General's accusations flout the 1986 law, mandated by Congress, that requires schools to give Federal aid only to those who have demonstrated need."

Dr. Gray asked, "If the antitrust action prevails, what will the consequences be? Given that funds are limited, once colleges and universities are forbidden to agree on aid, some will choose to compete for students by offering them sums beyond their needs, thus reducing the amount available to other students. Admissions practices may change to give preference to students whose families can pay for college rather than those with the highest academic ability."

Dr. Gray, who was president of MIT from 1980 to 1990, noted that since the Justice Department investigation began three years ago, "MIT and some 60 other private colleges have spent more than \$10 million in legal fees to respond to these inquiries. These funds could have been used for scholarships.

"If successful, the government's antitrust action will result in financial competition for individual students that will, over time, drive up college costs. It will erode the principle of intellectual merit as the primary factor in admissions decisions and deny many the full measure of assistance they require to attend college," Dr. Gray wrote.



SMILE, EVERYONE—MIT was host to ten high school students as part of Cambridge TeenWork this summer. The students and coordinators of the program posed for their picture earlier this month. From left they are: Chris Papadopoulos (Personnel); Blanca Garcia (Medical Department); Eric Chesnakas (Personnel); Warren MacEachern, TeenWork Director; Sarah Eusden, MIT Government and Community Relations; Ginny McCabe, TeenWork counselor; Ilda Moura (Materials Processing Center); Lauren Gilman, program assistant; Fatema Khalifa (Personnel); Ron Suduiko, MIT Government and Community Relations, and Liz Mulcahy, assistant to the manager of Personnel Services. Several TeenWorkers were not present for the photo.

MANY RESOURCES

Language Center Is Open to All

M embers of the MIT community are invited to drop by the Language and Learning Resource Center (LLARC) in Rm 20C-130 to use the Center's videotaped language courses, listen to television broadcasts

from around the world, or otherwise enjoy the LLARC's facilities, according to Ruth Trometer, director of the Center.

Completed last spring, the LLARC includes a number of state-

language. For example, the Center features award-winning interactive video-computer programs in French, Spanish, Russian and English as a Second Language. In these programs the user participates with characters on video through a computer, affecting the outcome of the story while devel-

of-the-art technologies to help

students of any age learn a new

oping language skills and gaining cultural experience.

The LLARC also offers videotaped language courses in French and Russian, and many basic language courses on audio cassette.

Students who have taken courses in MIT's Foreign Languages and Literatures section are already familiar with the LLARC's two classrooms equipped with cassette, CD and laser disc players, as well as video and computer monitors. The video facilities include two tri-standard VHS systems capable of playing videotapes from around the world.

Finally, a satellite hook-up accesses television programming from around the globe. In particular, the SCOLA hook-up provides international news programming.

During the semester LLARC is open Monday through Thursday, 8:30am-10:30pm; Fridays from 8:30am-3pm, and Sundays from 1-10:30pm. For more information, call x3-9779.

Sports at MIT

FOOTBALL

MIT football players Jon Duran and Rod Tranum have received preseason honors from College Football Preview magazine. Duran, a sophomore from Las Vegas, Nevada, is a preseason All-America selection at offensive guard. Tranum was picked as a national scholar-athlete by the publication. A wide receiver from Chatsworth, Ga., who earned first-team Eastern Collegiate Football Conference all-star honors in 1990, Tranum will be entering his junior year.

CREW

Two MIT alums captured medals at the Pan American Games held in Havana, Cuba, earlier this month. Rowers Marvin Guiles and Linda Muri, each of the Class of '86, rowed in two-person boats. Muri won a silver medal in the open women's doubles, while Guiles brought home a bronze for his efforts in the lightweight men's pair. Another alumnus, Jim Pierce '88, was a member of the United States lightweight four without coxswain which finished sixth in the World Championships in Vienna, Austria.

NEW COACH

Cheryl Silva of Wellesley has been named varsity field hockey and women's lacrosse coach at MIT. Ms. Silva has served as assistant coach in both sports at Wellesley College since 1989.

Roger Crosley

Pollution Prevention To Be Workshop Focus

(continued from page 1)

The first three workshops will present the case studies and will be led by company representatives. The fourth workshop will explore how participants can apply similar principles to their own work settings. Descriptions of the workshops follow.

"From Pollution Control to Zero Discharge—Overcoming the Obstacles," on Wednesday, Sept. 4, will focus on The Robbins Company, a small plating firm. In 1988 the company implemented a "closed loop" system that eliminated waste-water discharges, according to the program brochure. Deemed a success, the system has "improved environmental performance, drastically reduced environmental operating costs, avoided major legal problems, and improved sales and corporate image."

"Measuring Toxic Use and Waste

as a Tool in Reducing Pollution," on Wednesday, Sept. 11, will explore how the Polaroid Corporation "tracks nearly every material entering or leaving the company, from chlorinated solvents to office paper." This environmental accounting and reporting system "is the most comprehensive system in use by any major firm."

"Preventing Waste Beyond Company Walls: a Proactive Approach," on Thursday, Sept. 19, will discuss how pollution prevention "requires that companies take responsibility for the entire life cycle of their products and packages, from production to disposal." The workshop will focus on Procter and Gamble's efforts to that end. For example, the company has concentrated its detergents to reduce the amount of packaging and is using recycled plastic in many of its bottles.

Finally, "Preventing Pollution in

Your Work Setting," on Wednesday, Sept. 25, "will pull together themes emerging from the three cases and consider their implications for a broad array of work settings."

All workshops will be held from 4 to 6:30pm in E51-144. Registration is free for members of the MIT community. To receive a registration form or for more information, call Jennifer Nash at x3-0902. Attendance is limited to 50, so interested persons are encouraged to contact Ms. Nash as soon as possible.

The workshop series is sponsored by the EPA through the Hazardous Substances Research Center, a consortium of the New Jersey Institute of Technology, Tufts University and MIT. Dr. Ehrenfeld is coordinator of the MIT branch of the center, the Hazardous Substances Management Program.

Elizabeth A. Thomson

Magnet Lab Funded for 4 More Years

(continued from page 1)

and Bitter (water-cooled) magnets, would achieve a magnetic field 900,000 times the strength of the Earth's magnetic field. The 45 tesla magnet, now in design, is expected to be 4 meters in height and 3 meters in diameter (roughly 13 feet tall and 10 feet wide). The magnetic field is achieved at the center of the magnet in a cylinder about 1-1/2 inches in diameter, where the scientific experiments take place.

The NSF announcement said: "The 4-year award to MIT will help ensure that scientists who must use powerful magnets for their research will have access to this highly sophisticated

technology." Dr. Mary Good, chairman of the NSB, said the NSB action "will help the US maintain its position in high magnetic field technology."

The NSF announcement also quoted Dr. Jack E. Crow, director of the NHMFL, a joint project of Florida State University, the University of Florida and the Los Alamos National Laboratory in New Mexico. Dr. Crow said "The NHMFL is very excited about collaborating with MIT on this project. These interactions will exemplify the outstanding tradition and research accomplishments that have characterized the Francis Bitter National Magnet Laboratory."



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. Faxes will not be accepted.

All extensions listed below are campus numbers unless otherwise specified, i.e., Dorm, Linc, Draper, etc.

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

Deadline is noon Friday before publication.

FOR SALE

- Atomic Active Lite skis 160, Rossignol poles, Dolomite boots, W's sz 5 1/2, used only 1x, moving, must sell, best offer. Sharon x3-6100 or 846-0728.
- Piano, 1905 Chickering upright, exc cond, askg \$750. John 623-8586.
- Skin-So-Soft, 24 oz. bottles, avail for immed delivery, \$12.99. Angela, Draper x8-1746.
- 18 h.p. Nissan outbd motor, barely used, \$1200; boat trailer & 12' Avon rubber raft, older cond, \$500; Marshfield, rm in priv home, walk to beach, resp working F, \$100/wk. Kay x3-2774.
- Sm/med sz Bell bike helmet, like new, \$40 firm; wooden baby hi-chair w/pad, gd cond, \$20. Jan Blair, Draper x8-2843.
- 3-pc LR set (sofa, loveseat, chair), mocha color, v gd cond, contemporary, comfortable, nice, \$500 or bst. Valerie x3-8258.
- Sears Kenmore washer/dryer, \$200; ktchn tbl w/4 chrs, \$100; solid wood drafting tbl, \$125; sm wooden bkcases, \$25 ea; bureau, \$75. Debbie Colodner x3-5790 or 864-2891.
- Sanyo stereo sys, two 28" 100W spkrs, trntbl. amp, tuner, dual cass, CD ready, pd \$899, sell \$495 complete w/cabinet. Gary x3-5498.
- Onkyo amplifier, Philips trntbl, 2 Polk spkrs, gd working cond, about 10 yrs old, askg \$200. Lincoln x7121 or 508-486-9305.
- 386 SX/16, 42M HD, 2M RAM, SVGA w/512K card, 200W, 1.2M floppy, \$1600 or bst. Laurie x3-3054 or 617-969-5577.
- Blackboard, 36"x60", gd cond, askg \$20. Joel, Draper x8-2355.
- Q-sz wooden platform bed w/futon, only 10 mos. old, \$150 or bst; ktchn table & 4 chrs, \$50 or bst. Susan x3-4248.
- Brand new coal stove, only used 2x, perf cond, lower your heating bill this winter, save some bucks, \$250 or bst. Gina, Linc x7923 or 396-8455.
- Q-sz waterbed, like new, 75% motionless, mattress frame, 2 sets sheets, \$120. Call 484-9438.
- Whirlpool elect dryer, lrg capacity, automatic cycles, used 1 yr, perf cond, \$250 or bst. Call x3-0467 or 863-8469.
- Must sell IBM compatible, Gateway 2000, 386, VGA color monitor, 20MHz, 80 meg, various sftwr progs incl Microsoft Windows, \$1500 or bst. Call x3-4927 or 731-9145.
- Lane cedar chest, very old, has decorative top railing, v gd cond, but wd look great if refinished or painted, askg \$125. Marilyn x3-6378.
- Lightning Rollerblade, sz 10, \$130; new set of wheels \$20 Ali x3-8005.
- Sofa & recliner chr, \$300. Debbie DeVine x3-6162.
- Whole PC system, exc cond, \$750; incl XT Clone computer(dual drives), 24pins printer (Panasonic 1124), Hercules monitor (Packard Bell), Wordperfect 5.0, more. S Wang 241-5128.
- Dining set (4 chrs), \$100; double futon w/frame, \$200; desk & dresser set, \$99; 2 lrg wooden shlvs, \$20 ea, twin bed w/frame, \$50; 2 sm tbls, \$15 ea. Neg. Gwen x3-1585 or 884-9065.

- Sci-Fi collection, periodicals & paperbacks from 50s & 60s, nd space now, take entire lot, bst offer. Carol Dwyer x3-1477 or (preferred) 661-8652 lv mssg.
- XT 8088 personal computer, 10Mbyte hard disk, NEC multisync monitor, 5.25" floppy drive, 1200 baud modem, clock card, w/sftwr, \$600 or bst. Tom, Draper x8-1225.
- Avanti refrigerator (14 cu. ft.), used 2.5 yrs, \$200; living rm sofa & 2 chrs, \$150; both negot. Eric x3-8207.
- AM/FM radio fits Toyota Corolla sedan, \$50 or bst; Bell bike helmet, sz sm/med, like nw, \$40; G.E. refrig w/frzr, apt-sz, exc cond, \$200 or bst; wood baby hi-chr w/pad, \$20. Jan, Draper x8-2843.
- Travelling? Pounds for sale. Call 489-3161
- Banjo, 5-string, Eagle, askg \$270; spkrs, Altec, lrg, oak cabinets, pd \$600, askg \$240; Singer sew machine & cab, \$30; hoover vac Spirit 3.6 Hp w/ access, \$60 or bst; more. Call 391-2528.
- Henredon and other pieces of nice furniture: desk, coffee tbl, end tbls, bachelors chest, upholstered chrs & desk chrs, call for details. Tina 484-8123.
- Single bed, bureau, mirror, almost new mattress incl, exc cond, \$100; convertible couch, \$35; student colonial desk, \$50. Melrose 665-2319.
- Excellent Beautyrest coil spring mattress, Q-sz, pick up in Cambridgeport, \$50. Call x3-1631.
- W's sz 7 1/2B Nickels black patent leather shoes w/high heel, open toe, elegant detailing, worn once, wrong sz for me, \$30. Mary x3-2348 (8:30-3).
- Brand new, nvr used Minolta x700 w/50mm lens, \$330 or bst. Catherine x3-2424.
- Bianci wedding gown, lace bodice, beading, off-wh silk, sz 8-10, \$250; also 1989 VW Cabriolet convertible, a/c, cc, ps, pb, 5-sp, AM/FM/cass, \$11,000 or bst. Call x3-3096 or 508-650-9642.
- Futon, Q-sz deluxe, 3 yrs old, \$50 or bst; platform, Q, wood, solid w/roll-out drawer, \$100 or bst; chest of 4 drawers, \$30 or bst. Will x3-7360.
- 19" GE color TV, \$35; 19" Hitachi color TV, \$75; kid's bike, \$12; microwave cart, \$45. Mario Passanisi x8-4715 or 508-535-0270.
- Wool carpet, oriental design, like new, 10'x14', \$280; 2 twin beds w/frames, \$90; sofa table, for plants, antiq, \$75; Q-sz bed w/frame, \$70; lrg mirror, gold frame, \$25. Call 472-1347.
- Black computer desk, \$80; white desk lamp, \$20; Panasonic electronic correcting typewriter & wood tbl, \$80; Samsonite pullman & weekender luggage, \$35/pr. Anne x3-5843.
- Sofa bed, Q-sz, Serta mattress, beige/brown/tan color, open-weave fabric, gd cond, \$100 or bst. Call x3-4237 or 492-3055.
- King-sz platform bed w/2 huge drawers underneath bedframe. Jasmit x3-6705 or 625-5902.
- Sears 26" MTS TV, 2 yrs old, \$265; down comforter, Q-sz, \$50; pair lamps; 3-way spkrs, \$75; misc ktchn utensils, plates. Bob 643-3525.

ANIMALS

- Looking for temporary (poss permanent) home for friendly, trained Golden Retriever (M, purebred) due to my injured back, will help pay for dog food. Call 864-0239.
- Mickey & Minnie, two 2 1/2 year old littermates, nvr separated, nd new home together, gray & white fixed, indr cats, healthy, all shots, present ownrs retiring to "no pets" complex. Call 436-4180.

■ VEHICLES

- 1970 Cutlass Supreme, 350 eng, 89K orig miles, nw paint, top & trs, auto, a/c, stereo cass, restored to nr orig cond, super car, must be seen, \$4000 or bst. Call Linc x4503 or 617-332-7152.
- 1975 Dodge Van, gd for parts but still runs, fix shifter, stick, 6-cyl, 80K, rust, \$250. Don x3-0806.
- 1978 Peugeot 504 sedan, diesel, auto, a/c, stereo, gd mech cond, runs very well, \$550 or bst. Call x3-4201 or 749-4055.
- 1978 Olds Cutlass Supreme 2-dr, 3.81 V6, ps, pb, well-maint, mostly hwy mileage, runs well, \$500/bst. Dan x3-3732 or 617-964-2154.
- 1978 Olds Cutlass Cruiser wagon, orig ownr, carefully maint, exc cond throughout, V8, a/ c, all options, nw trs/brks/batt, \$800 or bst. Scott x3-8229.
- 1979 Saab 99, 97K orig miles, well-maint, gd running cond, all svc records avail, \$800 or bst. Call 661-2963 lv mssg.
- 1982 Honda custom motorcyle, 450cc, nw trs, looks, runs grt, \$500 or bst. Andy, Line x4765.
- 1983 Mazda RX-7 GS, meticulously maint, silver, 5-sp, AM/FM/cass stereo, a/c, alarm, custom keyless sec sys, one-of-a-kind, \$3800 or bst. Jonathan, Linc x4734 or 489-5417 eves.
- 1983 Honda V-45 Magna motorcycle, 4-cyl, brand nw, \$1500 or bst. Tom, Draper x8-1225.

- 1983 Renault Alliance, 2-dr, red, gd mechanical & body cond, AM/FM/cass stereo, 70K, auto, askg \$1200. Call x3-0511 or 327-5123.
- 1984 Subaru GL, 5-sp man, 76K, AM/FM stereo, a/c, v gd cond, \$2100. Call x3-7132.
- 1984 Mercury Lynx wagon, a/c, AM/FM/tape, standard, gd trs, runs well, v dependable, 81K miles, \$1050. Ron, Draper x8-2596 or 944-5890.
- 1984 Honda Civic, metallic blue, nice body, 3-dr, 65K, 1300cc 4-sp stick, nw exh/brks, \$2500. Call x3-4548 or 646-2562.
- 1985 Renault Encore, 71K, 2-dr, Sony AM/FM tape deck, silver, nw batt & 2 trs, \$1500. Call 241-5182.
- 1985 Honda Accord 4-dr sedan, auto, ps, pb, a/c, AM/FM, 4-spkr cass stereo, exc int & ext, burglar alarm (saves on insurance), 1 ownr, moving abroad. Rabia 666-9772.
- 1985 Mercury Topaz, exc cond, black w/gray int, low mileage (41.5K), 4-dr, 5-sp, a/c, Michelin radials, radio, \$3200. Call x3-1892 or x5-0140.
- 1985 Audi 4000s, 4-dr, auto, AM/FM/cass, a/c, chr sidepanels, alloy whls, pl, pw, sunrf, mirrors, hwy mileage, 10wnr, records, exc cond int, v gd ext, \$3300 negot. Call Linc x3734 or 275-1789.
- 1986 Ford Escort L, 65K, 4-dr htchbk, 5-sp w/ AM/FM stereo, rear def, grey w/red int, brand nw brks, 1 ownr, grt cond, askg \$2000. Howard 617-397-7986.
- 1986 Ford Escort L: 65K, 4-dr htchbk, 5-sp w/ AM/FM stereo, rdef, grey w/red int, brand nw brks, 1 ownr, great cond, askg \$2000. Call 617-397-7986
- 1988 Yamaha FZR600 motorcycle, race bike, steering damper, stock & d&d pipes, fox shocks, s.s. brakelines, 2 progressive & 1 stock sets of strpings, trailer, \$1800 firm. Call 337-8816.
- 1990 Toyota Tercel, 5K, 5-sp, ps, a/c, AM/FM, dark red, perf cond, askg \$7200, Maryellen x3-8609.

■ HOUSING

- Bedford: studio apt, lrg, sunny, clean, quiet, in private home, \$425 incl utils. Call 617-275-8384
- Belmont: furn BR/study in priv home, shr bath, lt ktchn priv, conv Hvd Sq/MIT, intl guests welcome, non-smkg gentlemen, \$450/mo, inclutils, prkg \$35/mo, short-term poss. Leova 484-6455.
- Belmont: lrg 7-rm 3BR apt in 2-fam, frplc, htd sun porch, garage, closets, quiet st nr T, 15 min to MIT by T, avail 9/1, 1-yr lease, \$1100/mo + util. Ownr 489-0460.
- Bermuda: timesharing for sale, luxurious 2BR cottage at St. George's Club, pools, tennis, oceanside golf, accomodates 6, last wk in March. Ken, Linc x5702 or 603-432-4516.
- Bourne: waterfront cottage avail Sept weeks at off-season rate, Buttermilk Bay, recently renovated, sleeps 6. Maria x3-8012 or Donna 871-3361.
- Brighton: grand Victorian hse w/separate office & in-law apt; Irg rms, quiet street, sauna, short ride to MIT by car, bus, bike. Owner 787-0613.
- Cambridge: v comfortable furn lrg bsmt studio, walk 10 min to MIT, yd, laundry, avail 9/1, \$650+. John, Draper x8-4118 or 864-7725.
- Cambridge: 2BR newly renov condo for sale, Eurostyle ktchn, nw hdwd flrs, garden window, quiet nbrhd, behind One Kendall Sq, 10 min walk to MIT, \$135,000. Call x3-6117.
- Cambridge, N: fully furn foom in family home, prefer thru-yr tenant, avail 9/1, \$340/mo. Eve x3-7182 (lv mssg aftr 8/30).
- Cape Cod: W Hyannisport, secl pvt apt off main hse, BR, b, LR, porch, ktchn, 200 yds to pvt beach & tennis ct, avail Sept \$1800/mo, \$500/wk. Maria x3-0581 days orlnara 508-771-4575 eves.
- Chelsea: studio, heated, laundry facilities, prkg avail, nr transportation. Bob, Linc x7947 or 235-5462 eves/wknds.
- Dedham: non-smkg woman, no pets, spacious 3rm apt on 3rd fl or lrg Vict, spac yd, safe nbrhd, prkg, avail 9/1, ref, \$550/mo incl utils exc phone. Call x3-9861 or 326-4416.
- Dorchester: modern 2BR on quiet st, conv loc to subway & bus lines, hdwd flrs, safe, \$750/mo. Debbie 825-4199.
- Everett: 4-rm, 2BR apt, nr Glendale Sq, walk to T, Stop & Shop, freshly painted, located in a family nbrhd, sm yd, \$550/mo, no utils: Charlotte x3-4738.
- Everett/Revere line: IBR exc location, T nrby, no pets, sec dep, utils by tenants, \$500/mo. Call 617-893-3377.
- Furnished BR in house. Luis 868-3574 aftr 6pm.
- Hopedale: charming refurb 3BR antique Colonial (c. 1874), nr 495, 2-story barn, exc school sys & parks, lrg back yd, nw deck, appr \$131K, sale by ownr \$122K. Call x3-1450 or 508-478-8845.

Institute Holidays

Here is the list of recognized Institute holidays and the dates they will be observed in the 1991-92 year:

Labor Day—Monday, Sept. 2
Columbus Day—Monday, Oct. 14
Veterans' Day—Monday, Nov. 11
Thanksgiving Day—Thursday, Nov. 28
Christmas Day—Wednesday, Dec. 25
New Year's Day—Wednesday, Jan. 1
Martin Luther King Day—Monday, Jan. 20
Presidents' Day—Monday, Feb. 17
Patriots' Day—Monday, April 20
Memorial Day—Monday, May 25
Independence Day—Friday, July 3

LINCC to Offer Three's Program

The Lincoln Laboratory Children's Center (LINCC) will offer a new program beginning in September—the Three's Program. The new program is a step between the Toddler and Preschool Programs and is designed for children 2.9 to 4 years of age.

The Three's Room will be divided into four sections:

—An art area where activities enhance listening skills and fine motor development. —A block area where cooperative play offers an outlet for gross motor skills.

—A science area with a class pet and changing exhibits and activities.

—A reading area with lots of new books where children can find privacy or get one-on-one attention from a

Applications for enrollment are now being accepted. For more information, call the LINCC director at 861-3850.

the Personnel Office. Mrs. Litchfield,

who died June 1, worked at MIT from

Arthur Litchfield, a retired member of

the purchasing staff; two daughters,

She is survived by her husband,

EULA L. FOSTER

Word has been received of the August 1 death of Eula L. Foster, 93, of Natick, a service staff member in the Office of Laboratory Supplies from 1941 until her retirement in 1963. She leaves a sister, Laura Irving, also of Natick.

HAROLD H. HOOVER JR.

Harold H. Hoover Jr., 66, of Westford, a staff member in Group 68 at Lincoln Laboratory, died on August 7. He leaves his wife, Marilyn G. Hoover.

FLORENCE LITCHFIELD

A memorial service was held in Ellenton, Fla., for Florence (McGowan) Litchfield, 75, a retired senior clerk in Joyce Minosh of Westford and Marcia Silveira of Nashua, N.H.; a son, Roger Litchfield of Clarks Summit, Pa.; nine grandchildren and one great-grand-

CHARLES WARD

Word has been received of the April
6 death of Charles J. Ward, 73, of
Arlington. Mr. Ward was an accountant
in the Comptroller's Accounting Office
from 1971 until his retirement in 1983.

- Lexington: furn 4BR ranch, study, bsmt, lrg yd, quiet st, Jan-July '92, \$1800/mo. Call x3-8702 or 862-2184.
- Loon Mt/Lincoln NH: vacation 2BR, 2b, riverfront condo, slps 6, tennis, pool, clubhse on premises, avail Sept, Oct, Nov, reasonable rates wkdys, wknds. Art, x3-8395 or 472-8551.
- Loon Mt: 4-season rental, 2BR + loft, slps 7-8, tennis, 4 pools, aerobics, sauna, etc, skiing across street. Jack x3-2772 or 396-4221 eves.
- Malden: 2BR on 1st flr nr Square & T, nw w/w & fresh paint, \$575/mo + utils. Call x3-4752 or 395-7356.
- Medford: 2BR, 4-rm 2nd flr, ht & hw incl, quiet nbrhd, 15 min to MIT, 5 min to Tufts, \$770 neg. Call Linc x2905.
- Medford: beaut priv apt in elegant Vict home, spacious, huge closets, skylts, vws, cent air, prkg, yd, professional, no smkg/pets, avail 9/15, \$750 incl utils. Kathy x3-8257 or 395-8224.
- Newton Corner: 1 rm avail in house, \$300 + sec, no util incl, prefer prof/grad, conv to buses & Pike. Marie x3-4745 or 964-5297 lv mssg.
- New York, NY: sublet on Roosevelt Island, 1BR w/bath avail in 2BR 2b apt, avail immed until mid-Sept, \$840/mo. Call x3-8942 or 661-
- Paris, France: apt for rent, 1BR + office, just renovated, central location on left bank, free until 9/30, \$750/mo + utils. Call 868-3294 or 491-2556.
- Randolph: 6-rm colonial, 2BR, finished attic, encl sunporch, full htd bsmt, nat woodwork, skylights, shed, garden, conv to T & expwy, grt cond, by ownr, \$119,900. Call 617-961-2115.
- Somerville: Davis Sq, nr T, sunny lrg 1BR apt, hdwd flrs, w/d, pets negot, avail 9/1, \$725+. Call x3-8676 or 628-5317.
- Westboro: assumable 2BR co-op condo, no down pymt, low int rate, fully appl, d/w, a/c, pool, tennis, nr 495/Pike, 40 min to MIT, ownr anxious. \$75K. Line x2935 or 603-465-2973.

WANTED

- Hat box luggage case for carrying hats when traveling. Naomi x3-8468 or 876-7773.
- Off-street parking space suitable for compact car. Jean-Marc Chanty x3-4233 or 494-8065.

Temporary cook till Dec 15, own car, in Lexington 8:30am-1pm M-F, gd pay. Nancy x3-4690 or 862-2933.

He leaves his wife, Ruth Ward.

ROOMMATES

- Arlington: non-smkg F, 27-38, no pets, shr spacious clean 3BR, prkg, laundry in unit, nr bus & stores, garden, quiet street, \$375+. Call x3-2567 or 646-7041.
- Belmont: non-smkg F, 21+, shr lrg 2BR w/1F & cats, prkg, porches, storage, nr Waverly Sq & bus, \$385+, Call Linc x3002 days or 484-5425 eves.
- Brighton: non-smkg F age 24-32 to shr 2BR condo on Comm Ave nr Chestnut Hill Ave, d/w, disp, eat-in-ktchn, porch, storage, pets okay, on Green line, prkg avail, \$450 incl ht/hw. Call 734-7660.
- Cambridge: Central Sq, grad student wanted for lrg apt, LR, porch, laundry, avail now, no pets, \$300/mo incl ht. Call x3-0315.
- Cambridge: 1BR avail in 3BR apt on Magazine St, apt is one yr old, nw ktchn, hdwd flrs, a/c, gas ht, etc, grt location, 10 min walk from T, conv prkg, \$375+. Call Linc x3270 or 868-5490.
- Cambridge: in search of the ultimate roommate experience? Well, we are 2 star-studded grad students w/nice 3BR apt, 5 min walk to MIT, \$240+. Call 7882-9462 or 864-0636.

CHILD CARE

Child Care Providers: If you wish to advertise your availability to care for children in your home, we are required by law to publish your family day care license number in your ad. This applies to all child care ads unless you specify that you will take care of the child in his or her home.

Looking to share after-school care on campus more fun for kids, less expense for us, 3rd-grade girl nds care 2 aftns/wk. Together, we can hire MIT undergrad or grad spouse. Eileen x3-1572.

MISCELLANEOUS

Free ride to Southern California or anyplace on the way. Leaving Boston Aug. 29 or 30, arriving 3-4 days later. See the USA, share driving. Call Jeff x3-x510 or 926-6959.

Russian language svcs: interpreting, translating, word processing, editing, language instruction. Call 662-3153



September at MIT 8/30-9/1 Fri/Sun

Sweeney Todd

MIT Musical Theater Guild presents the story of "The Demon Barber of Fleet Street," by Stephen Sondheim. 8pm, Kresge Little Theater. \$8; \$7 students/seniors/MIT staff; \$5 MIT/Wellesley students. 253-6294

1 Sun

Photo Exhibit Closes

Last day to see exhibit of prizewinning photographs relating to life at MIT, below. Strobe Alley, Bldg 4, 4th Floor. 253-4444



3-20 Tues/Fri

Live with Art

Annual Student Loan Art Exhibition and Lottery. More than 340 contemporary prints and photographs from MIT's permanent collections, below, all available for one-year loan to MIT students and student groups. Application deadline for lottery selection: 6pm, Sept 19. Weekdays 12-6, Weekends 1-5. 253-4680



5 Thurs

Freshmen Explore Theater Arts
Theater Arts Design and Technical
Staff offer a Freshman Exploration
of the set and costume shops and
storage areas. Opportunities in
design, construction, lighting, and
stage management discussed. Meet
at 10am at E20 (Amherst Street near
the corner of Ames St). 253-0862

5-7 Thurs/Sat

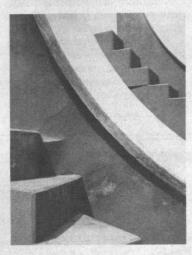
Sweeney still Barbering See 30-1 Fri/Sun above.

6 Fri

Yeomen Sing-Through Sing-through of Yeomen of the Guard, to be produced by the MIT Gilbert and Sullivan Society this fall. (Auditions next week.) 6-11pm, Kresge Rehearsal Rm A. 253-7744 or 625-0229

8 Sun

Photos from India/Nepal Closes Made of Light: Photographs from India and Nepal. A visual essay of Jantar Mantar, the Celestial Observatory at New Delhi as well as photographs of the architecture and sculpture at Mamallapuram and the temples and shrines of the Kathmandu Valley, below, by Barry Perlus, Assistant Professor of Art, Cornell University. MIT Museum. See Museum information below.



Jazz Auditions

Concert Jazz Band and Festival Jazz Ensemble Auditions. Be prepared to sightread from standard jazz band book — solos encouraged. 7pm, Kresge Auditorium. 253-2826

9 Mon

Chamber Audition

MIT Chamber Music Society Audition. Prepare brief solo piece. 7pm, Killian Hall (14W-111). 253-2826

10 Tues

Brass Audition

MIT Brass Ensemble Auditions. Student ensemble conducted by trombonist Lawrence Isaacson. 5pm, Killian Hall. 253-2826

Selection of the "Guard"

Gilbert and Sullivan Society auditions for *Yeomen of the Guard*. Bring a prepared song. 6-11pm, Kresge Rehearsal Rm A. 253-7744 or 625-0229.

Symphony First Meeting

MIT Symphony Orchestra, conducted by Prof. David Epstein. Be prepared to read through some symphonic literature and sign-up for audition time. Auditions will consist of a prepared solo work. 7:30pm, Kresge Auditorium. 253-2826

11 Wed

Chamber Try-Outs

MIT Chamber Orchestra auditions. Open to all members of MIT community; preference given to students. Bring solo or partial solo piece. Be prepared to sightread from standard orchestral repertoire. 5-7pm, Student Ctr Rm 491. 942-2484

Theater and Dance Open House Meet the folks who produce MIT

Meet the folks who produce MIT theater and dance events: Dramashop, the Shakespeare Ensemble, Musical Theatre Guild, Tech Random Music Ensemble, The Gilbert and Sullivan Players, and the Dance Workshop. 7:30pm, Kresge Little Theater and Rehearsal Rooms. 253-2877

Concert Band Audition

MIT Concert Band, conducted by John Corley and made up of students and alumni. Auditions primarily for seating within a section. 8pm, Kresge Auditorium. 253-2826

12 Thurs

Museum Watercolor Show Closes Watercolors by Freddy Homburger. Landscapes, primarily of Mexico and Maine by Freddy Homburger, physician, scientist, diplomat, artist who studied under Raoul Dufy. See Museum information below.

12-14 Thurs/Sat

Sweeney's Last Shave See 30-1 Fri/Sun above.

13 Fri

More Yeomen Auditions See 10 Tues above.

15 Sun

Postcards from Ogunquit Closes Sixty pochades, or quick oil sketches, and several larger works by Charles H. Woodbury, the 1886 MIT alumnus and turn-of-thecentury American painter, which show different aspects of the artist's talents, below. MIT Museum, additional information, see below. "Crisis in American Universities" MIT Writing Program Writers Series lecture by Camille Paglia, below, scholar/critic known for her objections to many of the views of present-day scholarship and teaching. 8pm, Rm 10-250. 253-7894



25 Weds

Arts Grants Deadline

First round of applications due for 1991-92 funding of arts activities and projects by the Council for the Arts at MIT. Forms are available at the Office of the Arts, E15-205. 253-4003

26 Thurs

Quartet in Chapel

Mannheim Quartet performs Pleyel, Rossini, and Viotti. 12noon, MIT Chapel

27 Fri

Musician Behind the Desk Concert TBA. 12noon, Killian Hall.

28 Sat

Duo Piano Recital

Genevieve Chinn and Allen Brings, duo-pianists. Mozart's Sonata in F, K. 497; Kraft's Antiphonies; Brings' Sonata; Stravinsky's *Petrouchka*. 8pm, Killian Hall.

29 Sun

Piano Recital

Arthur Rangell. 3pm, Kresge Auditorium.

30 Mon

Kepes Prize Nominations Due
Deadline for nominations for the
1991 Gyorgy Kepes Fellowship
Prize given by the Council for the
Arts to a member of the MIT
community for excellence in the
creative arts: architecture, visual
and performing arts, and writing.
For information call Mark Palmgren,
x3-4003.

MIT Museum

Ongoing Exhibits

Doc Edgerton: Stopping Time
Photographs, instruments, and
memorabilia documenting the late
Harold Edgerton's invention and
use of the strobe light.

Harold Tovish: Tenant, 1964-65 Sculptural installation utilizing stroboscopic light by MIT's Center for Advanced Visual Studies Fellow Harold Tovish.

Holography: Types and Applications

Scientific, medical, technical and artistic imaging drawn from the work of the Spatial Imaging Group at MIT's Media Lab.

Light Sculptures by Bill Parker Vivid interactive light sculptures, each with its own personality and set of moods.

Math in 3D: Geometric Sculptures by Morton G. Bradley, Jr.
Colorful revolving sculptures based on mathematical formulae.

Mathspace

Hands-on exploration of geometry is the theme of this new room located adjacent to geometric sculptures where visitors can tinker with math playthings.

MIT Museum Hours

Tues-Fri 9-5, Weekends 12-4. Closed holidays. 265 Mass Ave. 253-4444

All events are free unless prices are noted.
All concerts: 253-9800 unless otherwise noted.
MIT Arts Hotline: 253-ARTS.
Month-at-a-Glance is produced by the MIT
Office of the Arts (253-4003) and ARTSNET.
Celia Metcalf, design.

16 Mon 20

Chamber Chorus Audition MIT Chamber Chorus, small all-student group directed by John Oliver. Bring prepared piece; accompanist provided. 6pm, Rm 2-190. 253-2826

Concert Choir Audition

MIT Concert Chorus, a 75 voice all-student chorus directed by John Oliver. Auditions in groups; no solo piece required. 7:30pm, Rm 2-190. 253-2826

16-17 Mon/Tues

Shakespearean Apprentices Shakespeare Ensemble auditions for apprentice program. 4-6pm, Rm W20-423. Call for appointment, 253-2903

Dramashop Auditions

Fall Major Production of Calderon's The Mayor of Zalamea, directed by Michael Ouellette. 7:30-11pm, Kresge Little Theater/Rehearsal Rm A. 253-2877

19 Thurs

Chapel Concert
John Curtis, classical guitar,

John Curtis, classical guitar, below. 12noon, MIT Chapel.



Art Lottery Deadline Last day to sign up for the Annual Student Loan Art Lottery. 6pm, List Visual Arts Center. 253-4680

20 Fri

Musician Behind the Desk Concert TBA. 12noon, Killian Hall

Buckminster Fuller: Harmonizing Nature, Humanity and Technology. Retrospective on the life and work of the late visionary scientist, philosopher, and Renaissance man includes geometric constructions, models, and drawings of experimental furniture, cars, and inventions, and other photographs and artifacts from Fuller's personal collection. MIT Museum. See information

20-22 Fri/Sun

We Have Always Lived in the Castle Original adaptation of Shirley Jackson's gothic tale of family love. Presented by Kristin Johnson, Jennifer Johnson, and John Peitso, List Visual Arts Center gallery attendants. 8pm, Killian Hall, except 7pm Sun. Free for MIT community, \$10 general, \$6 seniors. 242-3855

21 Sat

Hack Show Closes

Crazy After Calculus: Humor at MIT. Photographs, cartoons, collection of artifacts documenting a rich history of MIT wit and wizardry shown through "hacks" — elaborate practical jokes involving a mastery of humor and/or engineering technique. (Reopens Oct 31 at MIT Museum.) Off Lobby 10. 253-4444

23 Mon

Japanese Film

The Political Game, a story of mass bribery, mud-slinging, corruption, greed, and lies in regional Japanese elections. The first of three "bad guy" films shown by the MIT Japan Program and the Japanese Language Program at MIT. \$3 donation (or \$8/3 films, \$5/2 films). 7:30pm, Rm 10-250. 253-8095

Hoffman: Unlock Math's Beauty with Calculators

■ By Kenneth M. Hoffman Department of Mathematics

F orget the upcoming presidential election or Madonna's new movie. The next time you want to pick an argument with someone, tell them that schoolchildren should be using pocket calculators more often to learn mathematics.

I've said so to people I've met on airplanes and at parties, and they often look at me like I'm crazy. "If children use calculators in class," they sputter, "how will they learn the multiplication tables?" Or "Students will know how to push the buttons but won't understand the underlying mathematics."

Then they tell me about the time they went to the store when the cash register wasn't working and the teenage cashier didn't know how to make change.

The very idea of using calculators in classrooms hits a vital nerve in many Americans. They view it as cheating and fear that our already dismal level of performance in mathematics will worsen.

As one who has spent a lifetime teaching mathematics, I disagree profoundly. There is no evidence that the average young cashier today is any worse at arithmetic than teenagers were 50 years ago, although the growth of the service sector does make their inadequacies more obvious. Teenagers of the past depended on a pad and pencil instead of on a cash register. In practical terms, what's the difference?

The real problem with calculators, I think, is that many Americans view math as something painful that youngsters must study because it's good for them. If Mom and Dad spent countless hours doing long division problems then, by God, Jason and Kimberly can

Such attitudes explain why our students perform so miserably. They have been led to view math moralistically rather than as a liberating tool for understanding the world. Mathematics is

seen as a test not only of brains but of character, of whether someone has the grit to calculate problems day after day, year after year.

No wonder people hate it.

Calculators can change this equation. Students still must master the basic skills, but now they can escape the drudgery of endless repetition and do new and exciting things. Elementary school students, for instance, can use calculators and other tools to explore subjects now reserved for higher grades, such as geometry.

Suppose youngsters spent as much time learning about volume and area, by pouring liquids from one container to another, as they now devote to long division. They could discover that a cylinder holds enough liquid to fill three cones with the same base and height as the cylinder. They'd find that three spheres hold just enough liquid to fill two cylinders that have the same radius as the spheres and a height equal to the spheres' diameter.

Centuries ago, Archimedes said

these relationships are among the most profound truths of nature. Why shouldn't our students have the chance to discover them as well?

Similarly, children should be using blocks and tiles to learn that doubling the sides of a square results in an area four times as great. For older children using calculators, it then is a short step to learn about fractals, chaos, and other topics that go far beyond the clerktraining curriculum now in place.

Young children can learn about statistics by measuring the heights of their classmates. A teacher then can guide them to consider ways of determining the center. Is it the average of the heights, the height in the middle or the height that occurs most frequently? Calculators make it possible to assess these possibilities quickly, keeping students focused on the big picture.

Contrary to many people's assumptions, mathematics is not an unchanging body of facts and procedures. It is the language of science, and it evolves continually. When chalkboards were

introduced in schools many years ago, some teachers feared that children would lose the ability to write. Modern worries about calculators are likely to prove similarly groundless.

Technology is not a panacea, as many school systems have learned with computer-based learning materials and other reputed innovations. Dedicated teachers and sound pedagogy remain essential. Yet, used appropriately, calculators can make the job easier, and we should not fear them. They give students what their parents lacked: time and freedom to become better problem solvers and to discover the beauty of math-

(Dr. Hoffman is professor of mathematics and associate executive officer for education at the National Research Council. This op-ed piece was prepared for distribution by the National Academy of Science Op-Ed Service and is reprinted here with permission.)

Team Finds New Way To Create Fullerenes

(continued from page 1)

dent in chemical engineering, performed theoretical calculations to interpret the experimental data from the

Sure enough, the results of these studies "looked very intriguing," Professor Howard said. "There was evidence that C60 might be present." But the scientists couldn't isolate the elusive buckyballs, and the results were inconclusive.

Other researchers around the world were also working to find a new way to produce fullerenes. The Rice group had paved the way by identifying buckyballs and suggesting their structure, but their technique produced only very small quantities of the moleculesbarely enough for scientists to study.

Then last year, in work that Professor Howard says is equal in importance to the initial discovery of fullerenes, researchers at the University of Arizona and the University of Heidelberg found a way to produce the material in grams. The work also led to a breakthrough for the MIT scientists.

Using separation techniques from Arizona/Heidelberg work, McKinnon analyzed soot from the laboratory vacuum cleaner. Used to clean the burner he had worked with for about five years, the vacuum held the only substantial sample of possible fullerenes in the lab.

The results were even more encouraging than the probe studies, so Howard and McKinnon did a set of experiments in which the flame conditions were varied over ranges expected to favor fullerenes. Finally, working with Elaine Johnson, now a junior in chemical engineering, and staff chemists Yakov Makarovsky and Arthur Lafleur, the scientists worked out a way to make buckyballs in a benzene flame.

The MIT procedure has two primary advantages over the Arizona/ Heidelberg technique, which produces fullerenes by vaporizing rods of graphite. First, flame synthesis of fullerenes could be scaled up for industry because similar processes are already widely used there. For example carbon black,

Lincoln Lab

(continued from page 1)

tion of advanced radar technology. Its work has also led to a number of important applications in air traffic control as well as to the establishment of several dozen spin-off companies, including Digital Equipment Corp., Computer Corporation of America and Electronic Space Structures, Inc.

which is essentially soot with special properties that give tires strength and resilience, is produced by a flame sys-

In contrast, while the Arizona/Heidelberg technique is easy to use in the lab, "it might be very cumbersome to scale up for industry," Professor Howard said. With the MIT technique, he envisions a system that "could operate continuously with simply a gas or liquid fuel being pumped in and soot being collected and processed, in much the same way as carbon black is processed today.'

Professor Howard points out, however, that the MIT technique operates at below atmospheric pressure. "That will be an important difference from current flame reactors," he said. 'Carbon black furnaces typically run at atmospheric pressure."

The new procedure is also interesting because the scientists have found that they can control the yields of C60 and C₇₀ by changing the flame conditions. That could lead to "a kind of tailoring" to produce more of one fullerene than another, Professor

Since the discovery of fullerenes in flames, the MIT scientists' research efforts have grown. Saibal Mitra, a postdoctoral associate, joined the group this March. Robert Juba, a senior in chemical engineering, and Joshua Fedderly, a sophomore in physics, joined this summer. Christopher Pope is continuing his theoretical work on fullerenes for his PhD thesis, and Tom McKinnon is starting a new fullerenes research project at the Colorado School of Mines where he is now an assistant

One of the major emphases of the work at this point is to understand how fullerenes form. "How do they get started and how do they grow to become these amazing hollow-caged structures?" Professor Howard said.

Further, what are the other fullerenes, besides C_{60} and C_{70} ? According to Professor Howard, there are some smaller and many larger. Fullerenes C₂₀₀ through C₃₀₀ have been found elsewhere. "It's difficult to imagine closed-shell structures that large, but those are the reports," he said.

The scientists would also like to do more work on enhancing the production of one fullerene over another. In addition, they are exploring the production of fullerenes with metal atoms inside or outside the hollow cages. Such materials, of interest for making superconductors and catalysts, may be possible to produce in flame systems, Professor Howard said.



SUMMER PICNIC—Jim Sweeney (left) of purchasing and Jack Silvey, who worked at the Servo Lab, chat over drinks at the annual Quarter Century Club picnic. Evelyn Sweeney and Juny Silvey are at center left and right, respectively.

Photo by Donna Coveney

STUDENTS FROM ABROAD

Open House to Welcome Newcomers

he 20th annual International Open House to welcome newcomers from abroad and their families will be held Wednesday, Sept. 4, 9:30am-5pm in the Bush Room (10-105).

Representatives of campus organizations and helping groups will be there to distribute information about their programs and activities, including information for wives about English Classes, the Wives Group, Technology Community Women and the MIT Women's League.

Faculty and staff members and students are urged to stop by during the day to greet some 350 newcomers expected to attend. The Open House is informally organized so that those arriving can chat with others, getting to know something about MIT and the Boston area and resources available.

Also on Wednesday evening, Professor Samuel Jay Keyser, associate provost, will chair a discussion on teaching and learning styles at MIT. Also participating will be Professors Alvin W. Drake (electrical engineering and computer science); Margery Resnick (foreign languages and literatures); Frank Solomon (biology); Lester C. Thurow (dean of the Sloan School of Management), and J. Kim Vandiver (ocean engineering).

The events are sponsored jointly by the Medical Department and the International Students' Office. For further information, call x3-1614.

New Students Arrive on Campus (continued from page 1) senior in EECS from Stoughton.

ference with their faculty advisor will take place at 12:30 on Kresge Oval (Johnson Athletics Center, in case of rain). An Academic Expo to show the new students what the departments are doing will fill the Johnson Center during the afternoon.

The final major event is Book Night on Thursday, Sept. 5, at 4pm in Kresge Auditorium. Earlier this summer all new students received a copy of David Halberstam's The Next Century to read in preparation. Dean Lester C. Thurow will discuss the book in a session for everyone to be followed by continued discussions over dinner in the living groups. More faculty members are still welcome to sign up for living-group discussions, and may do so by calling Donna Friedman at x3-9762.

More than 40 upperclass students participated in planning and arranging this year's R/O, working intensively during the summer. They were led by Michael Pieck, a senior in EECS from Plains, Ga., Emily Prenner, a junior in chemistry from Roslyn Estates, N.Y., and Sue Raisty, a

The Class of 1995 is expected to number 1,060 with 685 men and 375 women. It includes 174 under-represented minorities, an increase of 30 over last year. The freshmen represent 47 states and the District of Columbia and 39 other countries. Not included in the count are 65 students coming to MIT from other universities.

Nominations Wanted

The Medical Consumers' Advisory Council seeks nominations for two positions on the council: one from among support staff members and the other from the Draper Laboratory. Both must be members of the MIT Health Plan.

The Medical Consumers' Advisory Council, a presidentially appointed committee, serves as a communications link between the Medical Department and its users. Its objectives are to keep the MIT community informed of the services available through the Medical Department and to discuss criticisms and needs of the community.

Any support staff or Draper Laboratory staff member interested in being considered, or anyone who can suggest the name of a good candidate, is invited to submit name, room number and extension to Constantine B. Simonides, vice president in the Office of the President, Rm 3-209.