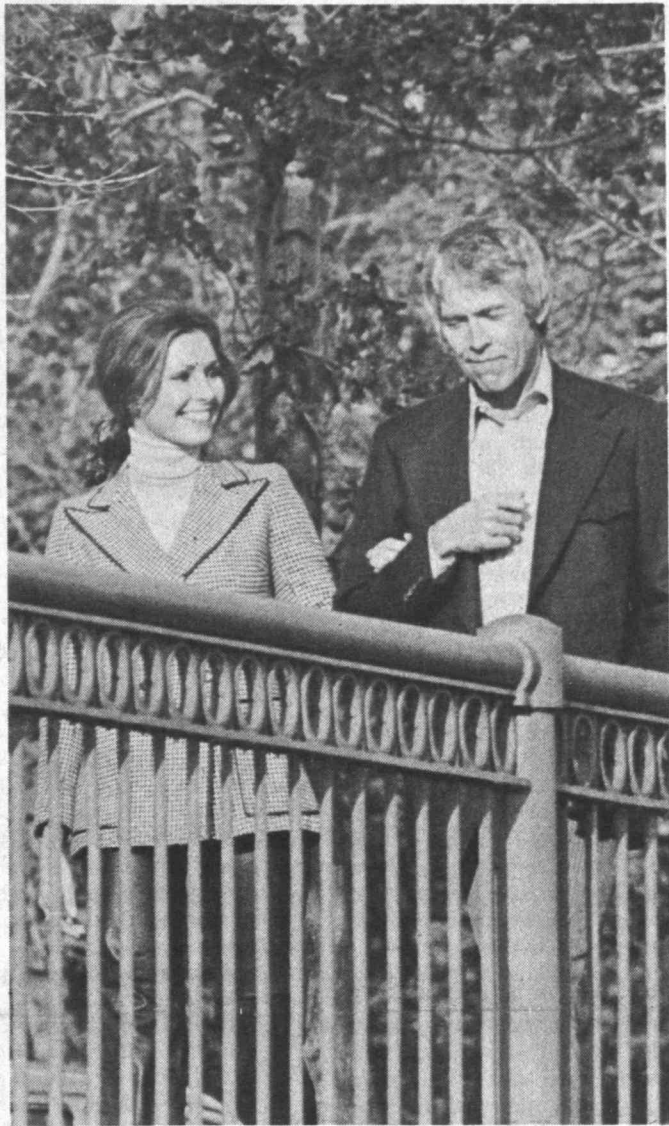


## Hollywood Visits MIT

There was excitement at the Sailing Pavilion last Thursday when James Coburn and Jennifer O'Neil completed the final scene in their new movie, *A Case of Need*. Two large trucks containing sound equipment, cameras and dressing rooms drew a sizable crowd to watch the proceedings. The troupe came to MIT specifically in order to get a background of sailboats on the River. The Nautical Association was happy to oblige. The film, an MGM production directed by Blake Edwards, will be released early next year.

--Photos by Bob Lyon



## Northgate Sues Somerville Board in Apartment Rent Control Issue

Northgate Community Corporation, the real estate affiliate of the Institute, on Friday filed a complaint in the District Court of Somerville against the Rent Control Board of the City of Somerville, according to Antony Herrey, director of the Institute Real Estate Office.

The suit asks the court "to determine and declare that the August 18, 1971, decision of the Somerville Rent Control Board is incorrect and that the 33 apartments held under long-term lease by Northgate Community Corporation are not 'controlled rental units' within the meaning of the

Rent Control Act, but are exempt or excepted from the provisions of the Act."

The action pertains to apartments located at 50 Craigie Street in Somerville.

"Northgate leased this building upon its completion in 1968 for occupancy by MIT affiliated people," Mr. Herrey said. The Corporation is seeking this action primarily in order to reserve these units for persons affiliated with the Institute.

implications for the School as well as the probable direction of architecture and planning at MIT in the years ahead.

Held at the Faculty Club, the meeting will begin at 7:30pm, preceded by dinner at 6:15pm. Alumni Advisory Council members are invited to bring other alumni, who may be interested in hearing Dean Porter's discussion. For more information, call the Alumni Association, Ext. 4874.

## Dean Porter to Be Speaker at Alumni Advisory Council

Professor William L. Porter, Dean of the School of Architecture and Planning, will be guest speaker at an Alumni Advisory Council meeting next Monday, November 1.

An advocate of computer usage and systematic analysis of creative processes, Dean Porter will discuss "New Directions in the School of Architecture and Planning." He will express his views and their

## IAP Planning Office to Offer Funding Aid

The Independent Activities Period (IAP) Planning Committee has \$10,000 available to help support IAP activities which show unusual educational promise.

Decisions on awarding funds will be made by an ad hoc committee of faculty and students chosen from the IAP Policy Committee and the Student Committee on Educational Policy IAP Task Force. Requests for funds will be judged by the Committee on the basis of independence, originality and creativity.

"Any individual student, faculty member or group may apply, including groups formed specifically for an IAP activity," says Joel Orlen, Assistant to the Provost and Chairman of the IAP Planning Committee. "Letters of application should be submitted to the IAP Planning Office (Room 5-207) as soon as possible."

The letter of application should include a brief and specific description of the proposed activity,

the names of persons involved and a reasonably detailed budget.

"The Committee is prepared to consider awards of up to \$500 or more if proposals suitable for such a large share of the total funds are received," Mr. Orlen reports. "But most awards will be for projects of \$200 or less.

"Priority will be given to activities less likely to take place during the regular semester, and to activities that depend heavily on student initiative," according to Mr. Orlen. "In the case of larger grants, priority will be given to projects that benefit more than just a few people. We expect that all awards will be made by December 3, so that the funded activities can complete planning before Christmas vacation.

"The Committee has agreed in advance to decline to support certain types of expenditures," he says. "For example, travel expenses and living costs will not be

(Continued on page 8)

## New Collection Program Will Recycle Newspapers, Cans

A new student-run recycling program for newspapers and metal cans will begin a trial period at the end of this month. Alpha Phi Omega and the Ecological Action Committee (EAC) will be in charge of collecting cans and newspapers around the campus, with the logistical support of Physical Plant.

The responsibility for the operation of the program will rest upon students. A monitor will place containers for discarded papers and cans in each dormitory. Collection bins will also be placed at several locations in the main buildings, including the lobby of Building 7 and along the main corridor.

Because of the limitations of the processing equipment, newspaper is the only form of paper that can be recycled. Any kinds of metal cans may be recycled, but cans should be cleaned if they contained food and labels should be removed.

After a collection bin has been filled, it will be removed and stored at a central location. When a sufficient number of bins have been collected, the entire load will be picked up and taken away for recycling. The Salvation Army will pick up newspapers, but the Institute will have to hire a truck to remove the cans.

The trial period for the program will continue for three weeks. If, at the end of that time, the collection volume has proved sufficient to justify it, recycling will likely become a permanent policy.

## Standard Time Returns Sunday

Not only is next Sunday (October 31) Halloween, it is also the end of Daylight Saving Time this year.

While small witches and goblins roam our neighborhoods with cries of "trick or treat," we'll lose an hour of evening daylight.

Eastern Standard Time actually goes back into effect at 2am Sunday, but it's a good idea to turn your clocks back one hour before retiring on Saturday night.

## Investment Study Report Available

Last spring the Executive Committee of the MIT Corporation formed a subcommittee on corporate proxy issues. Later, in consultation with the subcommittee, the administration of the Institute arranged for a special study project on these issues which was conducted over the summer by Dr. Edward H. Bowman, Professor of Management in the Sloan School. Professor Bowman's report, entitled *University Investing and Corporate Responsibility*, has now been published and is available both in the Information Center, Room 7-111, and the Office of the Assistant to the Chairman of the Corporation, Room 10-205.

## Inside This Week's Issue

The Institute Calendar for Wednesday, October 27 through Friday, November 5, will be found on pages 4 and 5. The ads this week are on page 7.

MIT scientists are developing a radio wave probe which will search for water beneath the lunar surface. See page 6.

Professor John Wulff and his colleagues in metallurgy are working on alloys for use in orthopedic repair and replacement of damaged bones. See page 8.

## Charley Gibbs Will Get There on Time--Even in Rush Hour

It's rush hour, traffic is creeping along, taxicab horns are blaring impatiently. Somewhere in the midst of this commuter's nightmare sits a black sedan--its driver calmly assuring his passengers that "We'll get there on time."

The driver is Charles Gibbs; the car is MIT's "executive automobile." The passengers are usually from the Office of the President and Chancellor or Chairman of the Corporation. But they might be government officials, foreign dignitaries or visiting educators. Or Mr. Gibbs might be alone.

Whatever the situation, Mr. Gibbs is always on the go, as are the people he serves. Time is essential--his passengers may have to catch a plane or get to an important meeting. Mr. Gibbs explains, "They're very busy people and can't afford to waste time. My job, or service, is to help them save time. While I worry about the traffic, they can read, discuss business, write letters, study reports, or whatever."

## International Meteorological Prize Awarded to Charney

Professor Jule G. Charney of meteorology has been awarded the annual International Meteorological Organization (IMO) Prize for his "outstanding work in meteorology and international collaboration."

Professor Charney received the IMO Prize at a reception given in his honor last Friday. Dr. D.A. Davies, Secretary-General of the

Mr. Gibbs is a friendly man with an infectious grin and gentle humor. He makes a special effort to establish a rapport with his passengers. Responding to his good nature, they frequently put their work aside and strike up a relaxed conversation. "That's the most interesting aspect of my work," says Mr. Gibbs. "I like the people--each one has a different personality and different ideas, but I enjoy talking with all of them. Our conversations brighten what might otherwise be a rather monotonous job."

Mr. Gibbs doesn't really look like a chauffeur--he doesn't wear the stereotype uniform and cap--nor does the MIT car look like an "executive automobile." It's just an ordinary black four-door sedan, right down to what Mr. Gibbs refers to as "the mess in the back seat." Actually, this "mess" is a small library of magazines, ranging from *Life* and *Time* to *Sports Illustrated*, *McCall's*, *Money Matters* and *Gardening Di-*

*gest*. This collection of magazines is just another way that Mr. Gibbs keeps his passengers happy. He says, "Some of these men don't get a chance to read for mere pleasure. Driving to and from the Institute provides the perfect opportunity, so I keep the magazines in the car just in case Dr. Wiesner or one of the other men wants to find out what's new in indoor plants this month."

Driving the MIT car is a full time job for Mr. Gibbs. His hours are somewhat erratic but "it all depends on how much demand there is for my services," he explains. "When there's a lot of activity going on, like during the inaugural period, I naturally spend more time on the job."

He continues, "For me, this is really like a regular job. I spent 21 years in the Marine Corps and six years on night duty with the MIT Campus Patrol--I know what it's like to work very irregular hours. Now, I even have most of my weekends free. My family no longer asks who that strange man is when I come home at night."

When he isn't shuttling here and there in the MIT car, Mr. Gibbs "rests up for the next day. Actually," he says, "I'm an avid outdoorsman, along with my wife and two sons. We spend our leisure time camping, fishing or hunting. We also enjoy participatory sports like tennis, swimming and bowling. We can't relax just by sitting in front of the television every night. We're not spectators at all."

That's Mr. Gibbs--always on the go and loving every minute of it.

## Combined Job-Processing Begins on New IPC Facility

Staffs of both computer centers have been working for several months to minimize the inconvenience the merger will cause to users at both universities. The work load on the 155 will double, however, which means longer queues and job turn-around times. Nevertheless, the IPC believes service should be reasonable and expects that long-range benefits of the joint venture will more than offset the reduction in service.

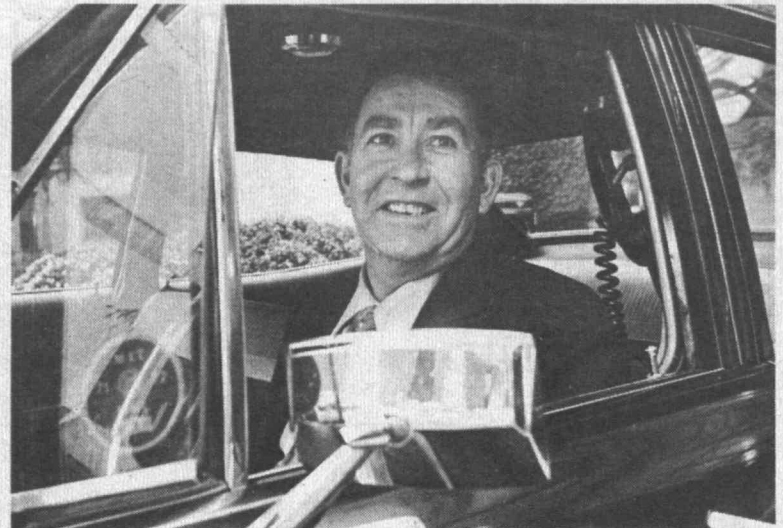
## Placement Lists Recruiting Dates

Representatives of the following companies and institutions will be on campus this week. Students interested in talking with them should call the Placement Bureau, Ext. 4733 to arrange appointments.

October 27: the Naval Civil Engineering Laboratory.

October 28: Amoco Production Company; Proctor and Gamble, International Division.

October 29: B. F. Goodrich Company; New York University, School of Law.



Very much in the driver's seat is Charley Gibbs in the Institute's executive automobile.

—Photo by Margo Foote

## Seven to Vie for 'Ugly Man' Title in Annual APO Contest

Some strange people will be lurking in the halls of the Institute next week. They will be a widely assorted group, but whether tall or short, fat or thin, bearded or clean-shaven, all will clearly possess one feature in common: ugliness.

November 1-5 is election time for Alpha Phi Omega's annual Ugliest Man on Campus contest. The list of rugged individualists who will be out soliciting votes for the title includes Oded Feingold '73, from the Hillel Society; Scott Evernden (Mr. Natural) '74, from Sigma Phi Epsilon, Dave de Bronkart '72, from *The Tech*; Leon Rivchun (Ugleon) '74, from Chi Phi; Dave Toland (Crud the Spud) '75, from Phi Kappa Theta; Herman Quincy Witherspoon '75, from Burton House; and Paul Wagoner (the Great Court Jester) '74, from Phi Beta Epsilon.

Candidates for the honored title campaign throughout the halls and offices of MIT. Spectators to their antics may vote for the ones they like, or dislike, most, by donating money. Votes are a penny apiece.

At the close of the balloting, APO tabulates the votes and proclaims the candidate with the most money the winner. The new UMOC receives a dinner for two courtesy of the Top of the Hub, while the more than \$2,000 collected each year is sent to CARE for distribution to needy people throughout the world.

Last year, Deja Vu, the baby alligator, netted \$700 in winning the contest. Overall, some \$2,200 was sent to CARE to buy food for Pakistani refugees in the wake of last November's disastrous flood.

## Haus Honored at EE Meeting

Dr. Hermann A. Haus, professor of electrical engineering, has received the 1971 Western Electric Fund Award for teaching and research from the New England Section of the American Society of Electrical Engineers.

Presentation of the award was made recently at the annual meeting of the section at Bridgeport, Connecticut.

Dr. Haus was cited for his "outstanding performance as a teacher of electrical engineering; for major contributions to the theory of noise in electron devices; for new theoretical developments on the interaction of electrical fields and moving polarizable matter; and for fundamental researches on gaseous lasers."

The citation read in part: "Hermann Haus' combined career as teacher, scholar, and research engineer is an inspiring example of the fact that there need not be a dichotomy between superb teaching and an illustrious research career, and that when the two are carried out at the highest levels, both teaching and research flourish."

World Meteorological Organization (WMO) in Geneva, Switzerland, made the presentation. Recognized as a world leader in the fields of dynamical meteorology and oceanography as well as numerical weather prediction, Dr. Charney is Alfred P. Sloan Professor of Meteorology and also serves as chairman of the US Committee for the Global Atmospheric Research Program.

The WMO Executive Committee noted that Dr. Charney, using a "powerful combination of physical insight and mathematical skill, is continuing to make major contributions to the science."

## Free Tennis Play Offered at Carr

The Athletic Department has announced plans for an open house to introduce the new J.B. Carr Indoor Tennis Center to the Institute community. A one-hour free play time is available to all athletic card holders on Thursday and Friday, October 28 and 29, from 8am to 10pm. Reservations for free play may be made only in person at the Carr Tennis Center. The facility will be closed on Saturday, October 30.

Regular season reservations are available at seasonal and hourly rates. The 22-week winter tennis session will begin Sunday, October 31, and last through Saturday, April 1, 1972.

The daily hours from 2 to 6pm have been reserved for student use. There is no additional charge to students who have athletic cards.

For further information and application forms, call ext 1451 at the Tennis Center.

## Biomedical Study Booklet Available

The Committee on Biomedical Engineering and the Harvard-MIT Program in Health Sciences and Technology has prepared a booklet entitled *Biomedical Engineering*. Copies are now available in the Information Center (Room 7-111) and in the director's office of the program (16-512).

The brochure outlines the Institute's graduate study programs and courses of instruction in biomedical engineering and summarizes major research efforts being carried out in that area by various departments, laboratories and research centers.

### TECH TALK

Volume 16, Number 17  
October 27, 1971

Editor  
Joanne Miller

Staff  
Robert M. Byers  
Linda Omohundro  
Ty Rabe

Business Manager  
Paul E. Johnson

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Please address all news and comment to the Editor, Room 5-111, Ext. 3277.

# MIT Explains Job Opportunities at Student Careers Convocation

MIT was well represented at last week's Cambridge Careers Convocation with five separate booths providing information on possible careers in and around the Institute.

More than 2,500 high school students took the opportunity to discuss careers possibilities with representatives of 66 career areas

who were present. The convocation was sponsored by the Cambridge Rotary Club and the Chamber of Commerce in cooperation with the Cambridge School Department.

The convocation divided careers into four broad categories: communications, energy and propulsion, human services and ma-

terials and processes. Both private industry and public services were included.

Attending from MIT were representatives of Personnel, the MIT Press, the Draper Laboratory, the Financial Aid Office and Dr. Edgerton with his strobe display.

The program was not a recruiting effort by the participants. "Kids that age are called upon to make decisions about what they want to do," says Jack Newcomb of Personnel. "Yet they know very little about what different kinds of work actually entail. We were there to answer their questions.

"The high school students were really curious about the various choices open to them. We got a lot of good questions and some off-beat ones, too. My favorite was one boy who wondered 'what are the chances of getting a football scholarship to MIT?'"

## Harleman Receives Engineering Award

Dr. Donald R. F. Harleman, professor of civil engineering, has been awarded the Karl Emil Hilgard Hydraulic Prize from the American Society of Civil Engineers.

This prize is given to the author or authors of a paper which is judged to be of superior merit, dealing with a problem of flowing water, either in theory or practice. Professor Harleman and two co-authors, Professor E. R. Holley of the University of Illinois and Professor Hugo B. Fischer of the University of California at Berkeley, were awarded the prize for their paper "Dispersion in Homogeneous Estuary Flow." This study was published in the August 1970 Journal of the Hydraulics Division of ASCE.

Professor Harleman is associated with the Ralph M. Parsons Laboratory for Water Resources and Hydrodynamics. He is conducting research on water quality and pollution control.

The Registrar's Office reminds students that the final date to make a change in registration without a process charge is December 1, and not October 29, as shown on some academic calendars.

December 1 is also the final date on which subjects can be dropped by correction cards.

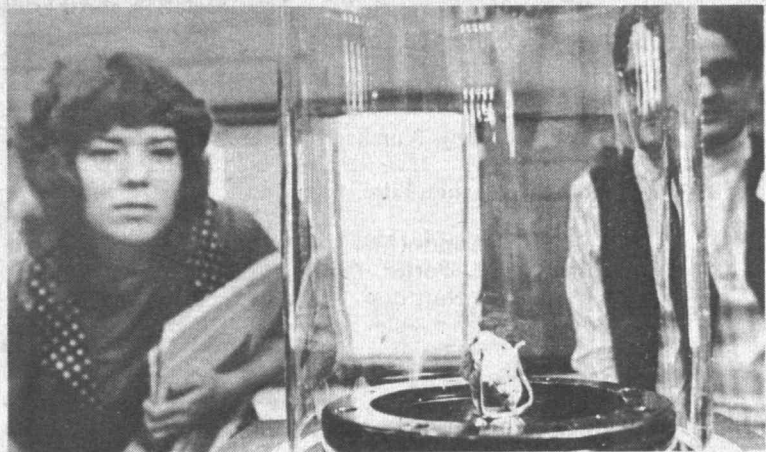
## MIT Press to Hold Annual Book Sale

The MIT press will hold its annual Bonanza Book Sale November 3-5 at the Sala de Puerto Rico in the Student Center. More than 15,000 copies of damaged or shelfworn books will be available at 50 to 95 percent off regular price. The selection will represent all subject matters and disciplines from the complete MIT Press catalog, including nearly 900 titles now in print.



Always entertaining is Doc Edgerton's traveling strobe show. Here Doc and students watch Marko Slusarczuk, '74, operate the single piddler hydraulic happiness machine.

—Photo by Margo Foote



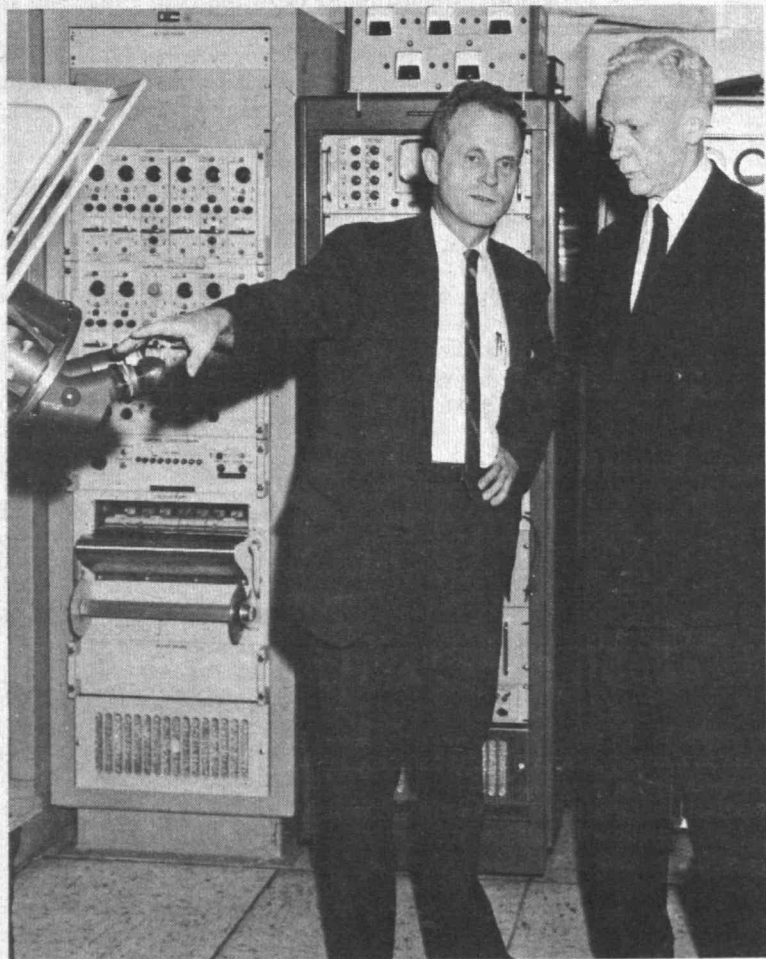
The Draper Lab's moon rock drew glances from curious students at the Careers Convocation.

—Photo by Margo Foote

## Pistol Marksmanship Course Offered

The MIT pistol and Rifle Club is offering a course in basic pistol marksmanship starting Thursday, October 28 and continuing for the next four Thursday evenings. Classes will be held from 6:30 to 8:30pm in the pistol range at

Dupont Gymnasium. The course is limited to the first 20 adult members of the MIT community who apply, and there will be a \$10 fee to cover pistols, ammunition and targets. Those interested in applying should call Herald Sulahian at Ext. 3989.



Couve de Murville, French foreign minister from 1958 to 1968 and premier of France from 1968 to 1969 under Charles deGaulle, was an MIT visitor Tuesday. In Boston for speaking engagements, deMurville asked for and was given a tour of the Draper Laboratory's Apollo Building (75 Cambridge Parkway) where the guidance and navigation systems used to guide Apollo command and lunar modules to the moon and back were developed and where they are programmed for each mission.

## New Urban Program Named Honoring Late Whitney Young

The Institute's new Community Fellows Program has been named in honor of the late Whitney M. Young, Jr., President Jerome B. Weisner announced last week.

Mr. Young was executive director of the National Urban League and a member of the MIT Corporation at the time of his sudden death last March. He had been a member of the visiting

committee for the Harvard-MIT Joint Center for Urban Studies from 1966 until 1970 when he was elected to the Corporation. The Corporation voted to name the program in honor of Mr. Young at its meeting earlier this month.

The first group of 11 Whitney Young Community Fellows began a year of work here at the beginning of the fall semester. (See Tech Talk, September 22, 1971.)

## Musical Theatre Guild Seeks Authors, Composers for Show

The MIT Musical Theatre Guild has announced a call for authors and composers for Tech Show '72. Tech Show is MIT's original musical comedy which has been produced by the students each year since 1899.

During November the Guild will be looking for ideas, stories or scenarios for the production which is scheduled for April. Authors and composers will be selected by December so that they will have the January Independent Activities Period to develop the script and score. Faculty advisor to the production is Professor A. R. Gurney, Jr.

The Guild will hold an open, informal meeting at 7:30 Thurs-

day evening, November 4, in the Little Theatre for all members of the community who might be interested in participating in the production. Potential authors and composers are especially invited to attend. Refreshments will be served.

The Musical Theatre Guild was formed at the beginning of the fall semester, merging Tech Show, the Gilbert and Sullivan Society and the Classical Musical Society. Membership in the Guild is open to everyone in the community. The Guild's first production, Gilbert and Sullivan's *The Pirates of Penzance*, is scheduled for November.



**Scuba Club \***  
"Artificial Respiration" by Joe Kuchta, MIT Safety Office. Lecture and film "The Pulse of Life." Wednesday, October 27, 8pm. Room 20E-017.

**AC (Corporation Joint Advisory Committee) \*\***  
K.R. Wadleigh will discuss housing. Copies of the Woman Report should be available for distribution at this meeting. Thursday, October 28, 5:30pm, Bush Rm. 10-105).

**G \***  
Meeting for vote of amendment. Monday, November 1, 8pm, Student Center.

**ology Action \***  
Meeting. Monday, November 1, 8pm, Student Center.

**ch Dames \*\*\***  
Presentation of slides of Russia. Tuesday, November 2, 8pm, Student Center.

**ite Water Club \*\*+**  
Session. Tuesday, November 2, 8-10pm, Alumni Pool.

**ok of the Week \***  
Formal discussion over dinner of *Future Shock* by Alvin Toffler. Wednesday, November 3, 5:15-7:15pm. Ashdown Dining Hall (table near the door). Anyone who has read the book is welcome. James Snell, Ext. 4922.

**ba Club Pool Session \*\***  
Wednesday, November 3, 8pm, Alumni Pool.

**er House SPAZ Jogging Club \*\***  
Monday, 10:45pm, Baker House Second Floor West.

**7/DL Duplicate Bridge Club \*\***  
Every Sunday, 7pm, Blue Room, Walker, every Tuesday, 7pm, Student Center, Rm. 491.

**ollywinks Association \***  
Meeting Monday, 8-11:30pm, Student Center, Rm 473.

**o Club \*\***  
Every Monday, Wednesday, and Friday, 5pm; every Saturday, 1pm. Exercise Room, duPont Gym. Beginners welcome.

**ing Club \***  
Every Monday and Thursday, 5pm, Student Center, Rm 473.

**ysical Guitar Society \*\***  
Classical and Flamenco guitar classes: private, Mondays, 6-9pm; group, Thursdays, 5pm-8pm. Rm 1-136. For reservations or more information call 661-0297.

**tical Association \*\***  
Sailing Shore School. Repeated every Monday and Wednesday, 5:15pm, Sailing Pavilion.

**by Club \*\***  
Every Tuesday and Thursday, 5:00pm, Briggs Field. For more information call Wayne Book, Ext. 5095, or Ron Book, Ext. 2452.

**ing Club \*\***  
Fencing. Every Tuesday, 6-9pm, Fencing Rm. DuPont Gymnasium.

**e Tennis Club \*\*\***  
Meeting and practice session. Every Wednesday, 6-10pm, Tea Club Lounge, Armory.

**ing Association \***  
Meeting and school, first Thursday of every month; general meetings, third Thursday of every month. 7:30pm, Student Center, Rm 473.

**nce Fiction Society \***  
Every Friday, 5pm, Rm 1-236.

**an Folk Dance and Lore \*\*\***  
Sponsored by Boston Indian Council, Inc. Every Friday, 7pm, Student Center, Rm 407.

**ent Homophile League \***  
Regular meeting and mixer. Every Friday, 7:30pm. Mission Church, 33 Bowdoin St, Boston.

**ge Life/Campus Crusade for Christ \*+**  
Fellowship training classes. Five week series of lectures and seminars for all followers of Jesus interested in learning to communicate their faith. Every Friday starting October 29, 7:30pm. For additional information call Professor Paul Samuelson x6739 or Bob Williams at 536-6868.

**ge Club \*\***  
Duplicate Bridge. Every Saturday, 1-5pm, Student Center, Rm 473. Admission is \$2 per term or 75 cents per session.

**s Club \*\***  
Every Saturday and Sunday, 1:30-5:30pm, Student Center, Rm 407.

## Music

**Monday Noon Hour Concerts \***  
Featuring April Showers, MIT Symphony flutist, and John Williams, Institute organist, on the harpsichord. Thursday, October 28, 12:10pm. MIT Chapel.

## Movies

**Last Summer \*\***  
LSC. Friday, October 29, 7pm and 10pm, Rm. 26-100. Admission 50 cents.

**He & She \*\***  
LSC. Saturday, October 30, 7pm and 9:30pm, Rm 26-100. Admission 50 cents.

**House of Wax \*\***  
LSC Classic series. Sunday, October 31, 8pm, Rm 10-250. Admission 50 cents.

**Kiss Me Deadly \***  
Film Society. Monday, November 1, 8pm and 10pm, Rm 10-250. Admission \$1.

## Mixers

**Friday Afternoon Club \*\***  
Music, conversation and all the cold draft Budweiser you can drink. Every Friday, 5:30pm. Ashdown House, basement Games Room. Admission: men \$1 and women free, must be over 21.

**Phi Kappa Sigma \*\***  
Biannual open bid free beer blast skuffle. Band for entertainment. Couples only. 530 Beacon St. Boston, on the evening of October 30.

## Dance

**Modern Dance Technique Class \*\***  
Elementary/Intermediate. Every Monday, Wednesday and Friday, 5:15pm, McCormick Gym.

**Tech Squares \***  
Square dancing every Tuesday, 8-11pm, Rm 10-105. For more information call dormline 0-888 or 492-5453.

**Dance Workshop \*\***  
Modern dance classes. Elementary, Tuesdays and Thursdays, 10am and 2pm. Intermediate, Tuesdays and Thursdays, 12noon. General classes open to the community, Thursdays, 7pm. Admission: \$2 for the community, free for students. McCormick Gym. For more information, call Cha-Rie Tang, dormline 0908.

**Friday Afternoon Dance Break \***  
Folk Dance Club. International folk dancing on the oval lawn in front of Kresge. Every Friday, 12:30-1:30pm.

**Folk Dance Club \***  
International folk dancing. Every Sunday, 7:30-11pm, Sala de Puerto Rico.

**Folk Dance Club \***  
Balkan folk dancing. Every Tuesday, 7:30-11pm, Rm 407, Student Center.

**Folk Dance Club \***  
Israeli folk dancing. Every Thursday. 7:30-10pm, T-Club Lounge, Armory.

## Exhibitions

**Creative Photography Gallery \***  
Exhibit of photo-silkscreens by Paul Wigger and Sam Wang. Daily through October 29, 12n-7pm, Creative Photography Gallery, W31, Third floor.

**Alfred Leslie, Philip Pearlstein, Wayne Thiebaud: Contemporary Views of Man \***  
Collection of paintings portraying the human figure in a representational manner. Sponsored by Committee on the Visual Arts. Hayden Gallery. Monday-Thursday, 10am-5pm; Friday, 10am-9pm; Saturday, Sunday, holidays, 1pm-5pm.

**Works by Henriette Grindat \***  
Reporter-photographer. Creative Photography Gallery, Friday, November 5 through Tuesday, November 30, 12n-7pm, building W31, 3rd floor.

## Athletics

**Varsity Soccer \***  
Boston College. Wednesday, October 27, 3pm, Briggs Field.

**Junior Varsity/Freshmen Soccer \***  
Bryant & Stratton. Friday, October 29, 3:30pm, Briggs Field.

**Women's Sailing \***  
CCT. Saturday, October 30, 9:30am, Charles River Lower Basin.

**Varsity Sailing \***  
Open regatta. Saturday, October 30, 10am, Charles River Lower Basin.

**Varsity Soccer \***  
Tufts. Tuesday, November 2, 2pm, Briggs Field.

**Junior Varsity/Freshmen Soccer \***  
Phillips Exeter, Wednesday, November 3, 3pm, Briggs Field.

## Religious Services and Activities

The Chapel is open for private meditation from 7am to 11pm every day.

**Hillel\***  
Hebrew classes, every Wednesday starting October 27 (advanced, 12n-1pm; intermediate, 6-7pm; beginners, 5-6pm), Rm. 2-333.

**Hillel \***  
Talmud classes every Wednesday starting October 27. 4-5pm, 312 Memorial Drive.

**Hillel \***  
Yiddish classes, every Wednesday starting October 27 (advanced, 7-8pm; beginners, 8-9pm). Rm. 8-205.

**Hillel \***  
Brunch and informal conversation with Professor Bernard Gould, Biology Department. Sunday, October 31, 11am. Bush Rm. (10-105).

**Tech Catholic Community \***  
General meeting for fall term and discussion of future goals, ideas for Christmas and IAP. Sunday, October 31, 6pm. Interface basement of Religious Counselors' Office.

**Hillel Graduate Discussion Group \***  
Samuel Lasry of Madrid will speak on the portrayal of Jews from Spain and Morocco. Monday, November 1, 8pm, Rm 441, Student Center.

**Hillel \***  
Medieval Jewish History and Modern Jewish History classes. Call Hillel office Ext. 2982 for scheduling.

**Hillel \***  
T'hilim (Book of Psalms) class. Every Tuesday. 5-6pm, 312 Memorial Drive.

**Praying, Singing, Sharing Meeting \***  
United Christian Fellowship. Every Tuesday, 7-8pm. East Campus Lounge.

**Christians for Dinner \***  
United Christian Fellowship. Every Tuesday, 6-7pm. Walker Dining Hall (under the sign of the fish).

**Christian Bible Discussion Group \***  
Every Thursday, 12:15pm, Rm 20B-031. For information, call Professor Schimmel, Ext. 6739 or Ralph Burgess, Ext. 2415.

**Islamic Society Prayers \***  
Every Friday, 1pm, Kresge Rehearsal Rm B.

**Vedanta Service \***  
Every Friday, 5:15pm, Chapel. Discussion hour, 6pm, Ashdown Dining Hall.

**Hillel Religious Services \***  
Every Friday, 7:30pm, and every Saturday, 9am, Chapel.

**Roman Catholic Mass \***  
Every Sunday, 9:15am, 12:15pm and 5:15pm, Chapel.

**Christian Discussion Group \***  
Bible study and discussion of Christianity today. Every Sunday, 9:30-11:00am, McCormick Seminar Rm A. For more information call Ron Gamble, Ext. 6712 or 547-4279.

**Christian Worship Service \***  
Every Sunday, 11am, Chapel.

**Free Draft Counseling \***  
Hillel, 312 Memorial Drive, Ext 2982. Call or visit, 10am-5pm.

**MIT Hillel Religious Services \***  
Monday-Friday, 8am, Rm 7-102.

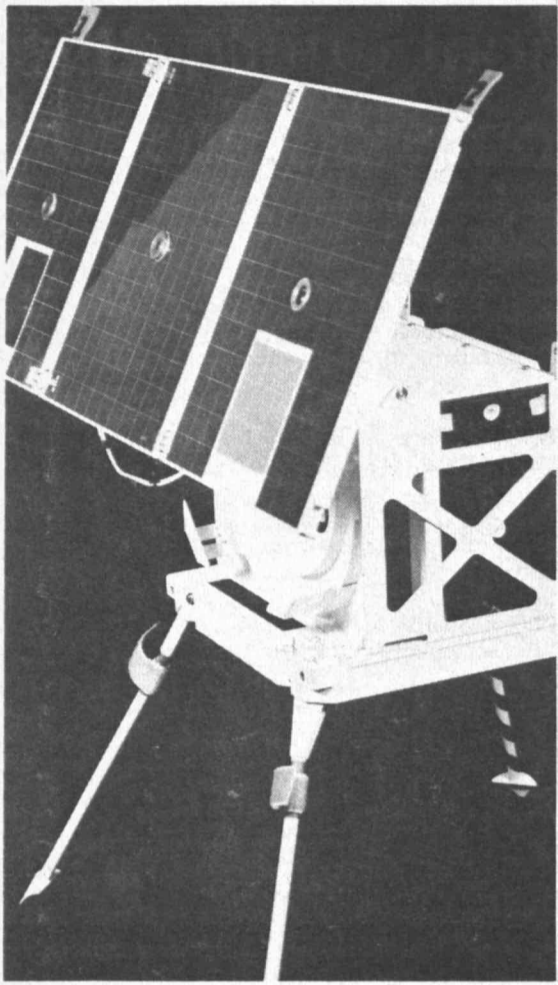
## Don't Forget

Application may be made to the **Activities Development Board** to obtain funds for capital expenditures and for minor space renovation. Recognized MIT community activities are eligible. Application forms may be obtained in Rm 7-101. Applications submitted by November 1 will be acted upon by November 15.

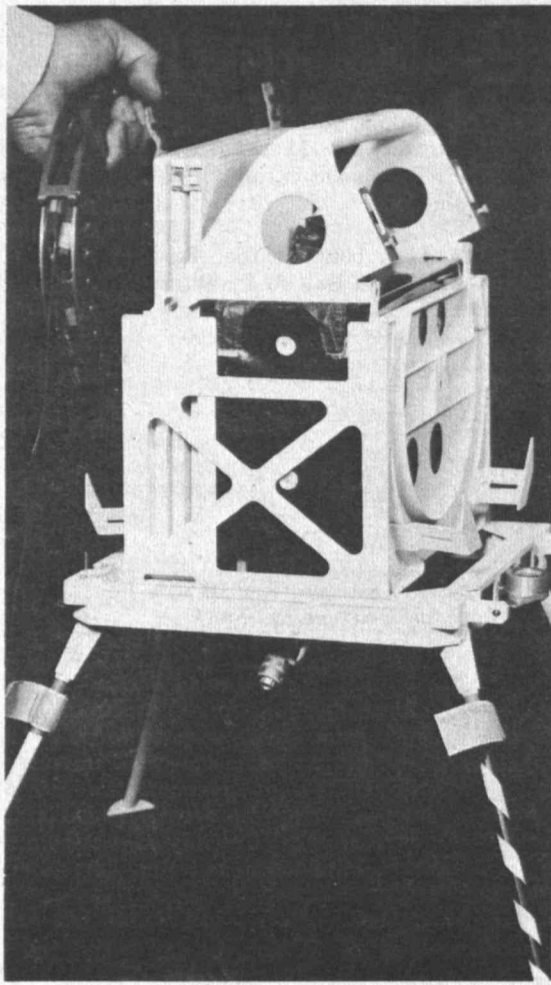
**MIT-Red Cross Blood Drive**  
Fall blood drive. 1000 pints goal. Donation by appointment please. See your solicitor or TCA, W20-450 for a form. Monday-Friday, November 8-12, 9:45-3:30pm, Sala de Puerto Rico, Student Center. For more information call Ext. 7911.

**\*Open to the Public**  
**\*\*Open to the MIT Community Only**  
**\*\*\*Open to Members Only**  
†Freshmen interested in departmental program encouraged to attend.

Send notices for November 3 through November 12 to the Calendar Editor, Room 5-111, Ext. 3279, by noon Friday, October 29.



The hardware for the Apollo 17 experiment which will search for water beneath the surface of the moon consists of a small radio receiver (above left)



to be mounted aboard the mission's roving vehicle, and a 15-pound transmitter (above right) operating independently on solar power cells.

## Experiment to Seek Water on Moon

A radio wave probe designed by scientists at MIT will search for water beneath the moon's surface in an experiment planned for Apollo 17.

The experiment was conceived months ago by scientists at MIT's Center for Space Research. At that time they had little hope of finding water on the moon, but a recent report that water vapor had been detected erupting through cracks in the lunar surface has heightened the importance of the water probe.

In the experiment, called the Surface Electrical Properties Experiment, an astronaut will unroll four 115-foot lengths of wire in a X-pattern on the ground to serve as antennas. High frequency radio signals will be beamed into the lunar surface by a 15-pound transmitter. The signals that bounce back from beneath the surface are to be picked up through the wire-antennas by a small receiver

mounted on the Apollo 17 roving vehicle. A tape recorder will also be attached so that the return signals can be received and recorded at a number of locations as the rover moves about.

The astronauts are to bring back the tape recorder for analysis by scientists. The principal investigators are Dr. M. Gene Simmons, professor of earth and planetary sciences here, and Dr. David W. Strang, head of the geophysics branch of the Manned Spacecraft Center.

The report of water vapor on the moon was made by Dr. John W. Freeman and Dr. H. Kent Hills, Rice University physicists. They based their findings on data radioed from instruments left on the moon by the Apollo 12 and 14 astronauts. The data indicated a cloud that gave off signals characteristic of water. Lunar scientists have been cautious in their reaction to the report, however, since

earlier examination of lunar rocks have pointed to the conclusion that the moon was devoid of any form of water. If the new findings are correct, the water would probably come from a great depth beneath the moon's surface. The probe for Apollo 17 could detect such a reservoir at a depth of six miles or less.

The landing site for Apollo 17, the nation's last scheduled moon-landing mission, has not been announced.

## Zacharias Report Proposes Open University to Meet Educational Needs

An "Open University" has been proposed for the Commonwealth by a committee chaired by Institute Professor Jerold R. Zacharias.

The study was commissioned by the Massachusetts Board of Higher Education and undertaken by the Education Development Center, Inc.

The proposal projects an increase in the numbers of students from 75,000 in public higher education this year to 216,000 by 1980. Aside from sheer numbers, there is a need to provide education for a much broader socio-economic range of students. To do this, the committee calls for more diverse and flexible forms of higher education.

The committee suggests "a new form of state university which, among its several innovative characteristics will contain an external degree program." The new university would be a non-residential institution offering both under-

## Community Urged to Give to UF-UBA Drive Now

Give once. And for all! The Institute's United Fund-United Black Appeal drive began last week. Posters are popping up throughout the corridors and solicitors are visiting offices and labs to collect pledges.

The overall goal of the Massachusetts Bay United Fund is \$15.2 million and the Institute hopes to contribute as much as possible to that target. In his letter to the community last week, President Jerome B. Wiesner said, "I hope that each of us, in the midst of our own concerns about the state of the economy, will consider the needs of the many others around us who look to voluntarily supported agencies for help... We cannot let ourselves forget those who have immediate needs; their needs are greater than ever this year."

Chairman of this year's drive is Professor Frederick J. McGarry of Civil Engineering. He explains that "the key to having a successful campaign lies in getting everyone to participate." During the Institute's five-week drive, everyone will be asked to make contributions, either by direct gifts or through payroll deductions. Payroll deductions are frequently preferred because they space giving over a period of several weeks to a year.

Everyone is affected by the financial squeeze, but we should remember that our United Fund contributions will help make our community a better place to live. The MBUF helps support 218 health, family, child-care and youth agencies in the area—including many which are used by members of our own community. By making one contribution to the United Fund, we are saved from answering about 340 separate appeals for donations, almost one every day.

The Institute is continuing an experiment which began last year. In addition to supporting the United Fund, those who so desire may donate pledges or gifts to inner city needs supported by the United Black Appeal. A separate pledge card is included in the campaign materials for this purpose.

When a solicitor visits your office, keep the United Fund motto in mind—Give once. And for all.

## Info Center Offers Materials

The following materials are now available in the Information Center (Room 7-111):

—*Report of the President for the Academic Year 1969-1970.* This report, published annually, describes events, progress and problems encountered by MIT's academic and administrative departments during the last academic year.

—*The Collegiate Guide to Boston,* a booklet describing all aspects of student life in the Boston area. Contents include sections on transportation, apartment hunting, music and theater, restaurants, cinema, sports, skiing, maps of the city, and others.

—An information sheet on the Independent Activities Period which will be held from January 2-28. In addition to background information, this leaflet lists the IAP coordinators for each department and laboratory.

—Weekly Placement Office announcements listing schedules for job interviews. The announcements include information about the interviewing company, job description and location, and desired educational background.

## Fall Blood Drive Expects Large Donor Turnout

More than 400 donors have already signed up for the 1971 Fall Blood Drive, to be held November 8-12 in the Sala de Puerto Rico. Student organizers of the drive have set a goal of 1,000 pints of blood to be collected.

This is the second year that the fall drive has been sponsored by three student organizations—Alpha Phi Omega, Technology Community Association, and the Interfraternity Conference—in conjunction with the Red Cross.

In the past the drive was a relatively small affair lasting one or two days. This year, however, the number of available beds in the Sala will be doubled and the drive will go on for a full week.

Donors who have already signed up should be receiving postcards soon informing them of their computer scheduled appointment times. If for some reason a donor cannot keep his appointment, he should call the Blood Drive office on Ext. 7911 for rescheduling.





Left to right are: Ralph A. Sayers of RLE, Mrs. Wiesner, Dr. Wiesner and Jack Newcomb of Personnel at the Silver Club and Quarter Century Club Dinner.

—Photo by Margo Foote

## Silver and Quarter Century Host Wiesners at Party

More than 150 members of the Silver Club and the Quarter Century Club got together recently for their joint fall meeting at the Faculty Club. Special guests for the occasion were Dr. and Mrs. Wiesner.

Master of ceremonies was H. H. "Nick" Carter of chemical engineering, who introduced Mrs. Mary Howe, of Summer Sessions, and Robert Radocchia, of Walker, presidents of the two groups. Ralph A. Sayers, of RLE then spoke briefly, greeting the Wiesners, and presented a mug to Dr. Wiesner with "congratulations and best wishes from your fellow members."

Entertainment for the gather-

ing included Kelly McClanahan and Maureen Ahern of Purchasing with songs accompanied by guitar and piano. The MIT Logarithms also sang, and the evening concluded with dancing.

The Silver Club will hold its regular fall meeting on Friday, November 12, at 5:30pm at the Faculty Club

## Applications for Limited IAP Funds Being Accepted

(Continued from page 1) allowed for individuals engaged in an activity away from MIT. However, costs of organizing or otherwise implementing a project away

At the Massachusetts Institute of Technology, John Wulff, is directing a research program firmly based in classical metallurgy and aimed at improving the basic stuff of implants.

Wulff's group has come up with a modification of vitallium, which they call MIT no. 7, which adds molybdenum to cobalt and chromium. This alloy, with suitable heat treatment, shows a significant improvement in both strength and workability over the traditional case of wrought vitallium, and is also more resistant to

from the Institute are not ruled out."

For further information, write or call the IAP Planning Office, Ext. 1973.

# Metallurgy Team Improving Alloys Used to Replace Damaged Bones

(Editor's Note: Following is one of a group of articles from the current issue of Mosaic, the magazine of the National Science Foundation, that all together survey current research nationwide in biomedical, engineering and science-materials, artificial organs, prostheses, etc. Featured in this article is recent work of John Wulff, professor emeritus of metallurgy at MIT, and his associates in improving vitallium and titanium alloys for use by orthopedic surgeons in repair and replacement of damaged bone.)

be used in articulated implants, such as hip and knee joints.

On another front, Wulff's team is attempting to develop a superior stress- and crevice-resistant alloy based on titanium. An alloy currently under test in his laboratory is primarily titanium with small additions of aluminum, molybdenum, and vanadium. Preliminary tests indicate that this alloy has mechanical strengths more than twice as great as specified for orthopedic use by the American Society for Testing and Materials.

Wulff's team has also learned that the addition of a very small proportion of the metal palladium—about two-tenths of a percent—cuts down corrosion tremendously. They have also developed a pretreatment for implants that greatly increases the passivity of the surface of the material—for the body's purposes, the only part of the material that counts. This pretreatment, a simple technique which can easily be used in the operating room, consists of placing the implant in a solution bearing either palladium or platinum in ionic form. The ions adhere to the surface, forming a passive film. Wulff points out (as does Roger Staehle at Ohio State) that, for the purposes of the body, most metallic implants are actually ceramics. This occurs because the surface of the implant that the body interacts with, has a very thin (but extremely inert) film of either absorbed oxygen or chemical oxide of the metal. (A ceramic is ordinarily a metallic oxide material.)

The materials developed in Wulff's laboratory are tested in a simulated human environment at the MIT laboratories. At the same time, some of the newer materials are being tested for their interactions with soft tissue in animal hosts by Jonathan Cohen, a surgeon who is currently attempting to develop methods of further hardening MIT no. 7 so that it can be used at Massachusetts General Hospital. Furthermore, Wulff

maintains extensive contacts in both the metal manufacturing and orthopedic communities to keep up-to-date on the problems of both the fabricator and the user.

## Adams to Read Ghost Stories

Miss Ruth M. Adams, President of Wellesley College, will read ghost stories to the students in celebration of Halloween. The reading will take place Sunday evening, October 31 in the MIT Lounge of the Schneider College Center, beginning at 8pm. Following the stories the movie *The Haunted Palace*, starring Lon Cahney and Vincent Price, will be shown. MIT students are welcome to attend.

## Hirschfeld Named AEG Chairman

Professor Ronald C. Hirschfeld of civil engineering was elected chairman of the New England Section of the Association of Engineering Geologists at an organizational meeting held recently at the Faculty Club. Professor Hirschfeld was instrumental in the formation of the section which was established this past summer.

## MAC to Recycle Cards in Storage

Project MAC has announced that the punched card files presently in storage at the Metropolitan Warehouse in Cambridge will be returned to the government the week of November 15, and the cards recycled. If you have cards stored there and wish to keep them, please call Gary Walker at Ext. 5854 before November 12 in order to have your cards removed and saved.

## NEREM to Hold Annual Meeting

Dr. Paul L. Kelley of MIT's Lincoln Laboratory is chairman of a Conference on Pollution Measurement and Control that will be held early next month in Boston as part of the 1971 Northeast Electronics Research and Engineering Meeting (NEREM).

Starting November 2, one day before the official NEREM opening, the first day of the pollution conference will deal with air pollution monitoring and control. The second day, November 3, will center on monitoring fresh water and marine environments.

NEREM, sponsored by the northeast chapters of the Institute of Electrical and Electronics Engineers, will be held November 3-5, at the Sheraton-Boston Hotel and the John B. Hynes Memorial Auditorium. General chairman this year is Dr. Herbert Sherman of MIT's Lincoln Laboratory and Beth Israel Hospital.

## Mrs. Yates to Retire as Placement Officer

Mrs. Evelyn Yates will retire at the end of October after a 30-year career during which she has become one of the most respected university placement officers in the nation.

Mrs. Yates came to MIT in 1942 to become assistant to the late Nathaniel McL. Sage, then Director of Placement and of the wartime Division of Industrial Cooperation. Before that she served in the Appointments Office at Wellesley College, a job she found unsatisfactory because of the lack of serious career ambition then common among Wellesley students.

Mr. Sage once wrote of Mrs. Yates' arrival, "She came and asked for instructions, and I told her I did not have any. I told her it was an individual job and she would make it or break it in her way."

Since then, Mrs. Yates has clearly made it, as a number of letters from industrial personnel directors attest. "Among the many excellent college placement offices throughout the country, I have always found yours to be the most helpful and effective," one wrote. An alumnus said "I would



Mrs. Yates in her office at the Alumni Placement Bureau.

like to express special thanks to Mrs. Evelyn Yates and the Alumni Placement Bureau for the excellent job she is doing."

During Mrs. Yates' tenure as Alumni Placement Officer the statistics of the office have accurately reflected the general employment situation. In periods of recession, such as the early 1950s and now, the number of jobs available falls, and the number of alumni registering rises. Conversely, during the boom of the mid 1960s, the number of positions rose substantially, while the number of alumni applicants was

slightly lower.

In the 20 years since the Korean War, more than 160,000 positions have been listed with the Alumni Placement Office and some 23,000 alumni have registered with the office. Mrs. Yates has succeeded in making nearly 4,300 matches.

During the coming year alumni placement, a part of the Office of Career Planning and Placement, will be coordinated by Miss Kathleen Gallery, Miss Linda Stantial and Jay W. Hammerness. Robert K. Weatherall is director of the office.