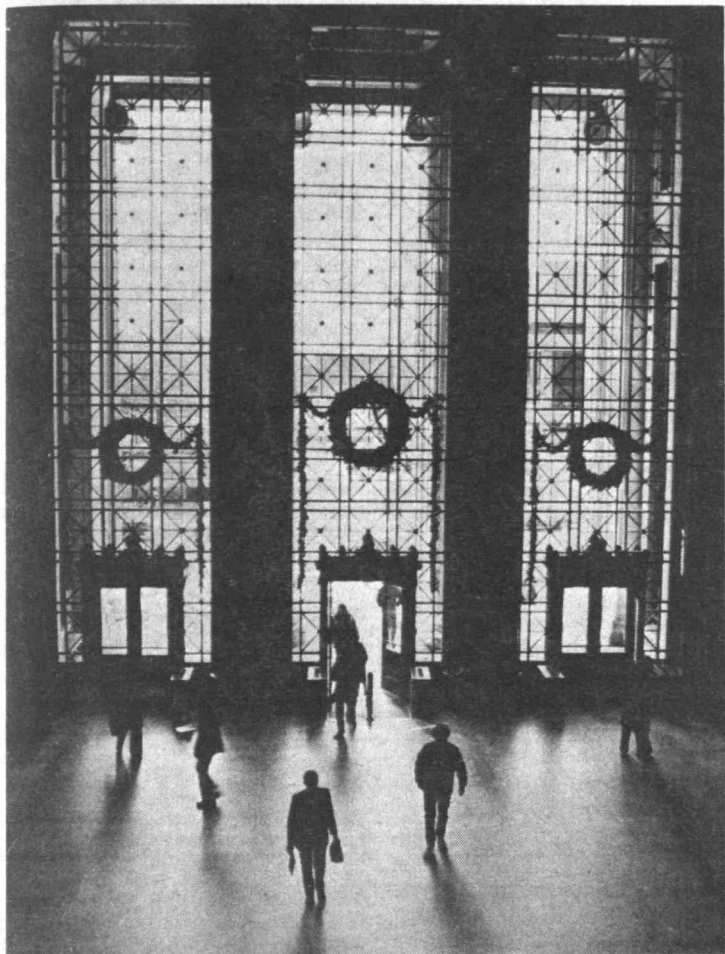


## Holiday Gathering Friday



—Photo by Calvin Campbell

A Holiday Gathering for the entire MIT Community will be held Friday, Dec. 12 from 11:45-2pm in Lobby 7. An open reading of the Christmas section of Handel's Messiah and brass music will be performed. Vice President John M. Wynne invited all members of the Community to attend and partake of the refreshments.

The festivities are part of a continuing series of holiday events including a noon-hour cello concert in Lobby 7 Thursday, Dec. 11, and the annual Christmas midnight concert Friday evening (see inside article). All events are being presented by MIT's Lobby 7 Committee.

## Kelly Competition Announced

The Department of Humanities and Course XXI have announced the 1975-1976 competition for the I. Austin Kelly III Prizes in humanistic scholarship by M.I.T. undergraduates.

The prizes, established last year, bear the name of the donor, a 1926 graduate of the Institute and long-time supporter and patron of the humanities here.

According to Professor Travis Merritt, the director of Course XXI, the aim of the Kelly competition is to

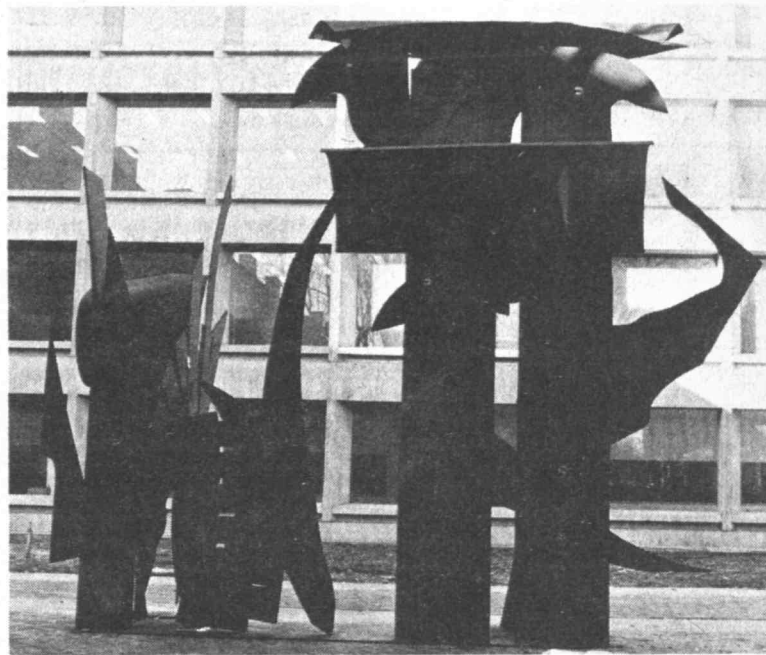
promote serious and intensive scholarly work in literary studies, history, musicology, anthropology, archaeology and interdisciplinary humanistic areas. Two prizes of \$250.00 each are awarded annually for sustained essays (5,000 to 10,000 words) judged excellent by a panel of faculty readers.

Entries should be submitted at the Course XXI Office, 14N-305, not later than April 16, 1976. Details on rules and guidelines for the competition are available from Professor Merritt, x3-4446.

## Ceremonies Mark Installation Of Louise Nevelson Sculpture

Ceremonies marking the installation of a major sculpture by Louise Nevelson, one of America's most celebrated contemporary artists, will be held Wednesday afternoon, Dec. 10, at MIT.

The sculpture, a large black steel construction entitled *Transparent Horizon*, stands at the northeast end of MIT's East Campus Houses quadrangle and adjacent to MIT's new chemical engineering building designed by I.M. Pei. Basically a shallow, open construction with a passage wide enough to walk through, *Transparent Horizon* measures 20 feet high by 21 feet long and



Louise Nevelson's "Transparent Horizon."

A conversation among sculptress Louise Nevelson, Professor Wayne Andersen, chairman of the MIT Committee on the Visual Arts, and the audience will be held from 5-6pm today, Wednesday, Dec. 10, in Room 9-150. The conversation, which is open to the MIT community, is one of the events marking the installation of Nevelson's sculpture, *Transparent Horizon*.

weighs approximately 10 tons. The piece is composed of abandoned metal scraps as well as deliberately fabricated shapes, both vaguely assuming botanical and architectural configurations and evoking the "found wood" assemblages that have become Nevelson's insignia.

Announcement of the acquisition of the Nevelson sculpture by MIT was made by Professor Wayne Andersen, chairman of the MIT Committee on the Visual Arts.

The artist contributed the design of her work to the Institute to foster a

(Continued on page 8)

## Kepes to Speak

Gyorgy Kepes, director emeritus of the MIT Center for Advanced Visual Studies, the academic year's second Compton Lecturer, will speak at 4:30pm Thursday, Dec. 11 in Kresge Little Theatre.

Professor Kepes, a noted painter, designer, author and educator, will discuss "Means and Meanings in Today's Art."

## Drive Announced For Gilliland Chair

A drive to raise \$1,000,000 to endow the Edwin R. Gilliland Professorship of Chemical Engineering was announced today by Howard W. Johnson, Chairman of the MIT Corporation.

## Thursday Brings Crafts Delights

Wall hangings, pottery, plants, puppets, dolls and home-made food are a sampling of goods to be sold at the annual Technology Wives Organization's Christmas craft sale in the lobby of building 10, Thursday (Dec. 11) from 8am to 4pm.

All items on sale are made by TWO members. The participating wives set their own prices and receive 90 percent of the price. The remaining 10 percent of the money goes toward an interest-free loan awarded at the end of the school year to a TWO member who wishes to continue her education.

land, who rose to international acclaim for his pioneering work in the field of chemical engineering. Dr. Gilliland died in 1973.

Paul M. Cook, president of Raychem Corp. of Menlo Park, Cal., a member of the MIT Corporation, has been named chairman of a National Sponsoring Committee spearheading the drive, Mr. Johnson said. The committee of leading executives in the chemical and petroleum industries.

(Continued on page 7)

## No Paper

*Tech Talk* will not be published December 24 and 31, 1975, because of the holidays. Deadline for listings in the Institute Calendar and Institute notices for the period December 17 through January 7, 1976, is noon Friday, December 12.

Regular publication will resume with the issue of January 7, 1976.

## 'Talking Music' With a Computer is Easy at MIT No Longer Conversation in a Foreign Tongue

By William T. Struble  
Staff Writer

How can a musician "talk music" with a computer?

Very easily, if he happens to be in the Massachusetts Institute of Technology Experimental Music Studio.

There he encounters a computer-based music system (complete with organ keyboard, music display, and sound synthesizer) that enables him to converse in musical language and

Professor Vercoe's work in the Experimental Music Studio was reported by New York Times science writer Victor K. McElheny in the December 3 edition of *The Times*.

which promises to be a powerful tool in musicological research and in composition. The organ keyboard is the input console to the computer. The computer, a PDP 11/50, was a gift of the Digital Equipment Corp., Maynard, Mass.

The question of "talking music" with a machine arises in the context of some of the most progressive research and creative activity in music today, according to Barry L. Vercoe, MIT associate professor of music and director of the project.

When a music historian wishes to find the "unknown composer" of a 15th century chanson (such as *Je ne vis oncques la pareille*, one of the hits of its time), he may use the computer to compare its stylistic characteristics with those of hundreds of other known songs of its day, Professor Vercoe says.

Or, when a contemporary composer wishes to obtain a "perfectly accurate synthesis" of a new electronic composition whose rhythms are too complex to be adequately performed on a standard Moog synthesizer, he may also use the computer—either to control a collection of sound-synthesizing equipment or perhaps to "perform" the entire

piece using digital synthesis techniques. How does a composer enter the information of a musical score

into a computer?

Up to this time musicians have had to make do with strings of letters and



MUSICAL COMPUTER—Anthony Lake, Richard Steiger and Carl Howe "talk music" with a computer-based system that includes an organ keyboard input, display of standard music notation on the scope, hard copy music print-out, and digital synthesis of the sound.

numbers.

"However, while the card punch and the teletype are just fine for some things," Professor Vercoe says, "they make very poor musical instruments. 'Talking music with a machine' has traditionally meant conversation in a foreign tongue. And it has always been the musician who had to learn the other language."

At the Experimental Music Studio, he says, "the boot is on the other foot now."

The computers there are being taught to converse in the musician's language—standard music notation. Using a high-resolution scope, the system can display about 20 lines of music at a time. The composer can "scroll around" to any part of his large score-in-progress, make some changes, and ask to hear the result. The computer will then synthesize a complete performance of the score.

(Continued on page 5)

## Payroll Office Deadlines

The Comptroller's Accounting Office has issued the following schedule for Hourly, Student, Voucher, and Biweekly payrolls for the weeks of Christmas and New Year's. The consecutive holiday weeks make it imperative that each department or laboratory fulfill its responsibility in complying with this schedule. Cooperation is asked so that the Payroll Office may insure accurate and timely payments.

| Payroll          | Deadline                  | Comment  |
|------------------|---------------------------|--|
| Hourly Payroll   | Monday, December 22, 1975 |  |
| Student Payroll  | 2:00pm                    | Time cards, Adjustment Request must be delivered to the Cashier's Office (10-180) by 11:15am for messenger pick-up service or hand-delivered to the Payroll Office no later than 2:00pm. |
| Biweekly Payroll |                           |  |
| Voucher Payroll  | 10:00am                   | Payroll Vouchers must be hand-delivered to the appropriate office, the Office of Personnel Relations (E19-284) or the Student Employment Office (5-122), no later than 10:00am.          |
|                  | Monday, December 29, 1975 |  |
| Hourly Payroll   | 2:00p.m.                  | Same as above.   |
| Student Payroll  |                           |  |
| Voucher Payroll  | 10:00am                   | Same as above.   |

## INSTITUTE NOTICES

If your club or other activity is planning to meet during vacation or IAP, please contact the Calendar editor by 12 noon Friday, Dec. 12. Otherwise your notice will be removed from the Institute Calendar or Notices and will not be reinstated until a new listing is received.

## Announcements

All Foreign Students—If you are going home for Christmas vacation, come get a Certificate of Eligibility (I-20 or DSP66) from Foreign Student Office, Rm 3-107.

Freshman Evaluation Forms are due in Friday, December 12. Instructor turn-in deadline is Wednesday, Dec. 31 (changed from Jan. 2 because of Institute closing).

Basic Pistol Marksmanship Course—Thurs, Jan 8, 6:30pm, duPont Pistol Range. Fee: \$20, covers everything. Open to first 20 members of community to register. Registration: Tom McLennan, x3-3296 or Andy Platias, x8-1417 Draper.

Day Care—Immediate opening in the Technology Children's Day Care Program for child 3-5 years old. For information call the Child Care Office, x3-1592, Rm 4-144.

R/O Co-ordinator—The Freshman Advisory Council is looking for a creative, innovative, responsible undergraduate to serve as 1976 R/O Co-ordinator. Salary—\$1,000. Proposals due by 1/12/76. FAC Rm 7-103.

UNICEF Christmas Cards and Calendars—Now on sale at TCA, Stu Ctr 4th fl, 11am-3pm. Many different designs, including assorted, as well as wall & desk calendars.

MIT Furniture Exchange—Open Tues & Thurs, 10am-2pm, 25 Windsor St., to buy and sell. Tax free donations gladly accepted.

Discount Tickets—Available for Wed, Dec 10 BSO open rehearsal. TCA, Stu Ctr Rm 450, x3-4885.

## Humanities

Spring Term Subjects Qualifying toward the Humanities, Arts, and Social Sciences Requirement

Undergraduate students may wish to take note of the following changes in subject listings for the spring term.

A. New Distribution Subjects. The following subjects have been approved to receive Distribution credit:

21.303 The Middle Ages (Douglas)

21.366 European Intellectual History Since 1850 (Wurgaft)

21.382 Revolution in the Twentieth Century (Bell)

21.503 Approaches to Archaeology (Steinberg, Wetterstrom)

B. Distribution Subjects Being Repeated. The following Distribution subjects, which were offered in the fall term, will be repeated in the spring term.

4.901 Creative Seeing (Chadwick) limited enrollment

21.020 Shakespeare: Art and Meaning (Lamson)

21.061 Introduction to American Literature (Barbour, Perry) enrollment limited to 25 students per section

21.110 Introduction to Literature (Donaldson, Merritt, Sirota) enrollment limited to 25 students per section

Mass. Attorney General's Office Boston MA  
Students with backgrounds in economics and statistics will work in the research and preparation of expert testimony on the request of the small loans industry to raise the maximum allowable rates for loans of under \$3000 made to consumers.

Pay or credit available. For more information contact Prof. Martha Weinberg, E53-425, x3-5261 or the UROP office.

### Eastern Colleges Science Conference

This conference to be held at Rhode Island College from April 1-3, 1976 will provide a forum for the presentation of undergraduate research papers. This year a special invitation is made for papers on the history of science in the US. The presentation of a paper is not a prerequisite for attendance.

### Energy Laboratory

An undergraduate is invited to participate in a project with the Energy Lab investigating coal supply in the US.

The work involves estimating regionally disaggregated supply curves for coal to be used in a series of policy analyses. The student would be responsible for computer programming; some statistical estimation and statistics equivalent to 14.04 and 14.30 or 14.31 is desirable. It is anticipated that the time commitment will be about 10 hours per week, although that is flexible.

Pay or credit available. Interested students should call or see Martin Zimmerman, x3-3414, E40-179.

### Department of Civil Engineering

A student is invited to conduct research which combines data processing, fuzzy mathematics, and semantic variables. The objective of the project would be to develop and test techniques for applying natural language and imprecise reasoning to complex problems which require qualitative judgment in addition to quantitative analysis.

Knowledge of or interest in learning about statistics and multidimensional scaling, familiarity with local computer usage, and ability to work independently are all important personal qualifications.

Contact Professor Stanley West, x3-3965, 1-276.

### Children's Hospital

Boston, MA

Two projects are currently available: Relation between the Myoelectric Signal and Muscle Tremor; and Analysis of Electromyographic Signals (muscle signals).

## UROP Speakers

The MIT Alumni Association is looking for UROP students returning home for the holidays and/or IAP who would be willing to speak about their projects to alumni audiences in or near their home towns.

Interested students are asked to contact Leena Kiirats or Joe Martori, Rm. E19-438, x3-3878.

### Tufts University

Boston, MA

School of Medicine  
1) Immunochemistry of blood group antigens and antibodies: Development of methods for measuring minute amounts of antigen on cell surfaces and in solution. Use of affinity chromatography to purify blood group antigens for structural and biosynthetic studies. 2) Chemical structure of antigens and relation to function in processing or tolerance: Synthesis of artificial conjugates to test their ability to react with lymphocyte cell receptors in vivo and in vitro. 3) Lymphocyte Molecules: Study of lymphocyte surface molecules by immunologic means and determination of their role in immune phenomena.

### James McCormack Memorial Fund

A fund has been established in memory of James McCormack to encourage and support undergraduate research in areas relating to

technology and its applications to the problems of man, society, and the arts.

Proposals for materials and supplies support, travel expenses, and some stipend support are welcome.

### Environmental Law

A private law organization involved in researching the legal and technical issues of environmental protection and regulation would like to involve students in the preparation of court cases for litigation.

## Other Opportunities

Information and applications for the National Research Council Laboratories Research Associateships 1976 of Canada for research in science and engineering are available in the Career Planning and Placement Office, Rm 10-140. Applications and supporting documents should be received in Ottawa not later than Jan. 15, 1976.

## MIT Club Notes

Backgammon Club\*—Wed, 7:30pm, Rm 4-151. Bring boards.

MIT Ballroom Dancing Club\*\*—The club will be very active this term with frequent workshops & dances. New members welcome at all functions. Info & times: Carl Sharon or Doug King, 536-1300.

Beefaroni Chess Club\*—Alternative chess club. Interested in playing relaxed serious chess. Info: Gary Kaitz, 494-8234 or x5-6304 Dorm.

Bridge Club\*—ACBL Duplicate Bridge. Open pairs Tues & Thurs, 7pm, Stu Ctr Rm 473.

MIT/DL Bridge Club\*\*—ACBL Duplicate Bridge. Tues, 6pm, Walker Memorial Blue Rm.

MIT Chess Club\*—Meetings Sat, 12n-7pm, Stu Ctr 407.

MIT Figure Skating Club\*\*—A chance for figure skaters who feel confident at skating forwards and who can at least make an attempt to skate backwards to meet as a group. Sun, weather permitting, 11:30am-1pm, skating rink. Free, need athletic card & skates.

Hobby Shop\*\*—Mon-Fri, 10am-6pm, Rm W31-031. Fees: \$10/term for students, \$15/term for community. Info, x3-4343.

Math Club\*—Meeting Sun, 4pm, Rm 4-182.

Numismatic Society—Meets Wednesdays, 7pm at TDC, 372 Memorial Dr.

Psi Club\*—For all graduates of Silva Mind Control. Wed, 5pm, Rm 1-236.

MIT Science Fiction Society\*—Invites people to the world's largest science fiction library, Stu Ctr Rm 421, and to its zany weekly meeting, Fri, 5pm, Rm 1-236.

Shotokan Karate Club\*\*—Rigorous training for intercollegiate competition & self-defense, given by 6th degree black belt. Mon & Wed, 8pm, duPont wrestling rm; Sat, 1pm, duPont 2nd fl dance rm.

MIT Soaring Association—Christmas party, Sat, Dec. 13, 8pm, Bush Rm 10-105. Music, dancing, \$4 per person includes food & drink.

Space Habitat Study Group\*—Interdisciplinary studies on space colonization. Wed, 7:30pm, Rm 4-270. Office, Rm 24-415.

Strategic Games Society—Sat, 1pm-1am, Walker Rm 309 & 318. Offers opponents and discounts on merchandise to members plus gaming & periodical library. Info: Paul Bean, 266-6108.

Student Homophile League\*—Gay Lounge, Rm 50-306, open daily for lunch & random other hours, x5-6745 Dorm. Tom, Contact Line, x3-5440, provides info, referrals, counseling or just talking to gay persons. Meetings 1st & 3rd

Sun every month, Gay Lge. Consult bulletin board, Bldg 3, for info.

Student Information Processing Board\*—Meetings Mon, 7:30pm, Rm 39-200. Info: x3-7788.

MIT Tae Kwon Do\*\*—For information call Barbara Illowsky, 492-4945.

The Tech—Organizational meetings Wed & Sun night, Stu Ctr Rm 483. New staff members in all departments are always welcome.

Technique—MIT yearbook needs photographers, writers & workers. Sat, 11am, Stu Ctr Rm 451, x3-2980.

MIT Baha'i Association\*—Will gather Mon, 5pm, Rm 8-105, every other week (Dec 1 & 15).

Tiddlywinks Association\*—Wed, 8pm, Stu Ctr Rm 473.

Voo Doo\*\*—General meeting Sun, 2pm, Rm 50-318.

MIT Wheelmen\*—Meetings Tues, 7:30pm, Rm 1-203.

## Religious Activities

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

Bible Study at Tang Hall. Every Tues, 10pm in Tang Hall, Apt 19F.

Bible Study\*—Enjoy the good word of God. Wed, 12n, Int'l Students Lge, Walker 2nd fl, Mem Dr side.

Black Christian Fellowship\*—Bible study Wed, 7pm, Masterton Lge, E Campus. Prayer group Mon-Fri, 12:15pm, Walcott 310, E Campus.

Prayer Time\*\*—Lunch hour Bible classes led by Miriam R. Eccles. Fri, 1-2pm, Rm 20E-226. All are welcome.

Campus Crusade for Christ\*—Family Time Fri, 7:45pm, Rm 37-252.

Celebration of Holy Communion\*\*—MIT Lutheran & Episcopal Ministry. Wed, 5:05pm, Chapel. Supper following, 312 Memorial Dr.

Christian Worship Service\*—Sun, 10:45am, Chapel. Refreshments following service.

Hillel\*—Traditional services Fri, 4pm, Koshers Kitchen & Sat, 9am, Chapel.

Islamic Society\*\*—Prayers Fri, 1pm, Kresge rehearsal Rm B.

Vendanti Society: Meditation & Gita\*—Led by Swami Saravagananda. Fri, 5:15pm, Chapel.

Tech Catholic Community—Dec. 10, 8:15pm in Student Center—Advent Penance Service, confessions heard before; Dec. 11, 7:30pm, Chapel—Christmas Vigil Service; Dec. 14, Masses, 9:15am, 12:15pm and 5:15pm, Chapel; Weekday Mass during Advent: Tuesdays and Thursdays 5:05pm and Fridays at 12:05pm until the last day of class, Dec. 12, Chapel.

## Echoes

### 50 Years Ago

Phonoflms, the most improved form of talking movies, were shown for the first time at Tremont Temple, and President Sam Stratton invited the company to display the apparatus on Tech's campus.

Professor Norbert Wiener was invited to the University of Goettingen to deliver a series of lectures on his work on harmonic analysis.

### 40 Years Ago

The Mark Twain Association and MIT presented a lecture by the famed humorist, Dr. George E. Vincent, on "The Role of Humor."

Technology was challenged to an Intercollegiate Chess Tournament by the Carnegie Institute of Technology.

### 25 Years Ago

An exhibit of sculpture, mobiles and stables by Alexander Calder opened at Hayden Gallery.

The Lecture Series Committee presented a program on "Education for Freedom," moderated by Professor Karl Deutsch of the Department of History.

Prepared by Ethel I. Newell, MIT Historical Collections x3-4444.

Tech Talk  
Volume 20, Number 19  
December 10, 1975

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21.111 Reading and Writing of Poetry (Spacks) enrollment limited to 20 students  
21.712 The Bible and Western Tradition (Jones)

C. New Elective Subjects. The following new subjects, most of which are not listed in the 1975-76 Catalogue, may be taken for elective credit toward the Requirement:

1.191 Planning Socio-Technical Systems for Human Productivity and Well-being (West)

21.743 Essay Workshop (Dworsky)

21.752 Contemporary European Social Thought [G] (Ringer)

21.754 Utopian Fiction [G] (Goodheart)

21.756J Problems in Twentieth Century Architecture and Philosophy [G] (Andersen, Congleton)

21.918 Seminar II: International Students and Participation in Development (herman)

21.955 The Structuring of Time in Music (Bamberger, Epstein)

23.26 The Inferno of Gunter Grass (Dyck)

Note: See the class schedule for subject times and places. Students should also check the 1975-76 Catalogue for other eligible distribution subjects.

## New UROP Listings

For more detailed information on Urop opportunities listed, MIT undergraduates should call or visit the Undergraduate Research Opportunities Program Office, Room 20B-141, Ext. 3-5049 or 3-4849 unless otherwise specified in the listing. Undergraduates are also urged to check with the UROP bulletin board in the main corridor of the Institute.

### Free Trip to UROP: A Student Symposium

Join us on a tour through selected exciting, exotic, and esoteric UROP projects. Your UROP student guides will fascinate and delight you with provocative descriptions of the joys of undergraduate research. Free food. Bring a friend. Wed., Jan. 7, from 1-5 in Room 9-150.

### Boston Energy Office

Boston MA

The Boston Energy Office, a student run city agency, has begun a study of waste oil recycling for metropolitan Boston. Students with background in science, engineering, economics, or political science are encouraged to join in this work.



MIT graduate Peter W. Hwoschinsky of Westgate Apartments, center, recently received the first William E. Jackson Award presented by the Radio Technical Commission for Aeronautics of Washington, D.C., for outstanding work in the field of aviation systems. Hwoschinsky, who received the plaque and \$1,000, is congratulated by Professor Rene H. Miller, right, head of the Department of Aeronautics and Astronautics. A replica of the plaque was presented to the department by

Professor Walter M. Hollister, left, who supervised Hwoschinsky's award-winning thesis on the OMEGA navigation system for general aviation. Hwoschinsky, a private pilot, received an SB in 1971 and SM and the Degree of Engineer in Aeronautics and Astronautics in June. His research was supported by a grant from the National Aeronautics and Space Administration to Professor Robert W. Simpson, head of the Flight Transportation Laboratory.

# Final IAP Guide Out

The 40-page Final Guide to IAP is being distributed this week.

The Final Guide includes 169 new offerings submitted since publication of the First Guide last month, an increase of nearly 39 percent. Very few offerings were cancelled so the total number of activities is expected to be around 560, a new record, according to Joan Friebely of Design Services, who assembled the Guides.

Listings submitted too late for publication in the Final Guide will be published in the IAP section of the Institute Calendar when Tech Talk resumes publication in January.

Like the First Guide, the Final Guide shows an increase in listings of activities of interest to the working population at MIT. For example, cooking seems to be a trend this year, with listings in Chinese, Mexican, vegetarian, macrobiotic, and good, easy and nutritious cuisines.

The Hobby Shop offers an introduction to its facilities for those who would like to turn a salad bowl. Historical Collections plans a seminar series called "They Were There," a look at MIT's past led by people who were there. The Department of Physics will repeat its popular "Physics for Everyone" noontime lecture series, while the Research Laboratory of Electronics lists "Poor Richard's Short Course on Kites and Kite Flying" and the Department of Biology offers "Beer Making."

## Health Sciences Fund Elects Mrs. Whitaker as Trustee

Mrs. Helen F. Whitaker, widow of the late U.A. Whitaker, was elected a Life Trustee of the Health Sciences Fund at its fall meeting on November 19.

Over a period of many years she has shared her husband's interests in MIT, while he was a Life Member of the Corporation. Both she and her husband took great pride in sharing in the development of teaching and research in the Life Sciences and Medicine on this campus. The Whitaker Building for the Health Sciences contains a plaque which acknowledges their endowment which made the construction possible.

It was also the Whitaker family which made the first pledge toward the endowment of the Health Sciences and Technology Program and which also created the Whitaker Faculty Chair in Biomedical Engineering.

During her brief visit to the MIT campus, Mrs. Whitaker and the trustees of the Health Sciences Fund met with the graduate students who hold appointments as Health Sciences Fellows and reviewed their doctoral thesis research. In addition,

The Community Service Fund's poster sale of photographs of astronomical objects from Kitt Peak National Observatory proved delightfully successful. All posters were sold within an hour on Monday, (Dec. 8). More posters have been shipped from Kitt Peak and the sale will resume in the Building 7 lobby as soon as they arrive—Monday (Dec. 15) at the latest. The photographs will be available singly at \$1, or in sets of four for \$3. Sample posters may be seen in the corridor near the Foreign Students' Office.

## For Weather, Dial 3-1234

Weather information is back, better than ever—and free, too.

Through a hook-up with the National Oceanographic and Atmospheric Administration (NOAA) Weather Radio, information is available on the Centrex system by dialing x3-1234. By using the internal extension, there is no message unit charge.

Information offered is extensive. In addition to what can be expected for today and tomorrow, NOAA Weather Radio includes brief reports for selected cities in the region, ocean conditions and the extended outlook.

Weather information can be obtained by dormitory residents by dialing 125 through the dorm line system.

The Telecommunications Office urges forecast seekers to use the internal lines as an economy measure.

Mrs. Whitaker met with the medical students in the joint Harvard-MIT Health Sciences and Technology Medical Program. She also had the opportunity to discuss academic matters with Dr. Robert W. Mann, the occupant of the Whitaker Chair in Biomedical Engineering.

Mrs. Whitaker is planning to return to MIT in April when the trustees of the Health Sciences Fund plan to meet with the MIT faculty and their collaborators in the Harvard teaching hospitals to review their research supported by the Health Sciences Fund.

## Solow to Speak

Dr. Robert M. Solow, Institute Professor and professor of economics at MIT will speak of "The Coming Planned Economy?" at the MIT Club of Boston, Thursday, Dec. 11 at 12:15 at the Aquarium Restaurant in Boston.

The cost for attending the luncheon is \$4.25, payable at the door. For reservation contact Ms. Leena Kiirats, x3-3878.

# Now on the Market Innovation Center's Latest: TV Tennis

By PATRICIA M. MARONI  
Staff Writer

Students at MIT are moving into the Christmas gift trade with the lowest priced electronic tennis game ever to hit the consumer market.

Television Tennis, conceived, researched, and developed by five students in MIT's Innovation Center, is being offered to department stores at a retail price of around \$65, making it a much better buy than similar games by competing manufacturers.

Glen Dash, who graduated from MIT last June and has been working as a chief engineer to Executive Games, Inc., of Boston, manufacturer of the product, said, "The inventive aspect of this project was the challenge of making an engineering idea work for a reasonable price."

"All the scientific know-how in the world accomplishes very little," he said, "unless an engineer understands that the process of inventing also embodies marketing, entrepreneurship, and production."

Actual production of the game was encouraged by Peter Stepanak, president of Executive Games, Inc., who had read about the MIT Innovation Center in the *Wall Street Journal* last winter.

Although already retired from the high-risk business of home games, he was impressed by the Center's study of the mental processes behind inventing as well as the practical problems of commercialization. The question he brought to MIT was: "Can the Center invent and collaborate to meet a market demand for the inexpensive revision of a product now costing more than \$100?" A contract between the MIT Center and Executive Games, Inc. was signed in April.

Besides Dash, the students who are participating are David Agans of Middlesex, N.J., Michael Shields of



SURE-HANDED students inventors Glen Dash, left, and David Agans demonstrate Television Tennis, the lowest priced home electronics game on the market.

Fairfax, Va., Gabor Szakacs of Tampa, Fla., and Joseph Corkery of Moline, Ill., all seniors in electrical engineering.

Working steadily since last March with Lamar Washington, general manager of the Innovation Center Co-op Program and Professor Francis Lee of the Department of Electrical Engineering and Computer Science, they have produced the simplest and most compact TV tennis game on the market. It has the advanced features of an automatic paddle and a practice wall for viewers who want to play alone.

The game, consisting of a master panel with two hand-operated controls and a smaller switching box, operates on Channel 3 of any black-and-white or color TV set.

Integrated circuits account for the unit's compactness and the feature of displaying boundary lines on the TV screen without using a plastic overlay.

Distribution of approximately one quarter of a million units is expected to be completed by the first quarter of 1976. Dash said penetration into

the available market would be achieved on a personal level, without the aid of national advertising.

According to Dr. Y.T. Li, director of the MIT Innovation Center, the games project is part of an industry-supported program that was initiated to accommodate more advanced projects "higher up on the ladder of product development." These projects usually evolve from invention ideas submitted by MIT faculty, staff, and persons with outside proposals.

"The yield in knowledge and resources from these projects in turn bolsters fledgling student efforts, which are generally funded by the National Science Foundation," he explained.

Asked about the prospects for a Christmas season market entry, entrepreneur Dash said, "At times it's been only five percent invention and 95 percent perspiration. But after seven design phases and a concentrated 'course' in sales, we have been told by retailers like Sears and Gimbels that we have a real winner on our hands."

## CAES Offers 'Autorecord'

Faculty members preparing textbooks may now take advantage of "autorecord" facilities at CAES which videotape lectures for augmenting and illustrating the printed word.

The autorecord facilities enable one to make a videotape entirely unaided, using a control panel to direct three cameras. The basic cost is \$15 hour for studio use plus the cost of the tape. An easy-to-use edit room, adjacent to the studio, is also available at low cost.

Trained personnel will familiarize new users with the equipment and a number of students experienced in its use are available to help.

John Fitch, manager of the self-study program at CAES, has experience in this field and will suggest how videotaped materials might complement text. For further information, please call Mr. Fitch, x3-7061.

## For Energy Conservation Continued Cooperation Urged

MIT's intensive energy conservation program, which has produced substantial savings, went into its third year this month with a renewed call for cooperation.

"Sustaining and increasing the savings require the continued effort and enthusiasm of the entire MIT community," Carl W. Hage, the environmental engineer said. "While the Physical Plant Department controls most of the energy consumption on campus, some 25 percent is controlled by individuals throughout the Institute."

In the first year of the program,

## 'Owl' Concert December 12

Members of the MIT Chamber Players will present their second annual holiday "owl" concert this year at midnight, Friday, Dec. 12, in the Lobby of Building 7.

For the event, the Players will offer a program including Brandenburg Concerto No. 3, by J.S. Bach, Septet, Op. 20, by Beethoven, and Serenade for Winds, Op. 7, by Richard Strauss.

Violist Marcus Thompson, assistant professor of music and director of the MIT Chamber Music Society, will conduct the Bach and the Strauss works. In addition, the Players will be joined this year by numerous guests, including members of the Chamber Music Society and musicians from outside the MIT community.

Following custom, the Chamber Players will offer a third, slow movement for the Brandenburg Concerto No. 3, for which Bach wrote only two allegro movements. For this, they have selected the largo movement from Bach's Sonata No. 6 in G Major for violin and harpsichord.

Chairs will not be provided for the informal concert, and the audience is asked to bring pillows or other aids for seating.

"Previews" of the midnight concert will be heard at noon on Wednesday, Dec. 10, in Lobby 7.

Hage said, consumption of steam was reduced 25 percent, electricity 17 percent and chilled water for air conditioning, when adjusted for weather, 21 percent. The second year saw steam consumption reduced an additional 15 percent, electricity 7 percent and chilled water 31 percent.

In spite of these reductions, Hage said, MIT's utility bill has climbed from \$3.5 million in fiscal year 1973 to an estimated \$6 million in fiscal year 1976.

But without the reductions, he added, the fiscal year 1976 utility budget would have been \$7.7 million.

The operating budget for fiscal year 1976 is \$247 million. The projected deficit is \$3.4 million, which will have to be met out of reserves or funds functioning as endowment. It is expected that the budget for fiscal year 1977 will have to be cut \$3 to \$6 million to substantially reduce the deficit that year.

Hage had these suggestions for saving energy at home as well as at MIT during the cold weather:

- Set thermostats or other controls, where available, to 68° in occupied areas, and lower temperatures in unoccupied areas.
- Reduce the temperature at night or when higher temperatures are not required.
- Avoid the unnecessary opening of doors or windows.
- Avoid the unnecessary use of electric heaters.
- Turn lights off when not in use.
- Avoid the operation of electrical appliances, such as coffee makers, etc., when not actually being used.
- Report equipment malfunctions, particularly those which affect energy consumption, to the Physical Plant Work Control Center. Dial the letters FIXIT (3-4948).
- Take the initiative. Think of ways that you and your associates can save energy, and implement them.
- Pass ideas or suggestions to the environmental engineer. Dial the letters ENCON (3-6266) or 3-4755.



WALL-TO-WALL PEOPLE responded to the annual MIT Press Book Sale in the Sala de Puerto Rico last week. During the three-day sale, more than 54,000

books—out of 55,000 offered—were sold, bringing in a total of some \$57,000 to the Press's coffers.

—Photo by Calvin Campbell

# THE INSTITUTE CALENDAR

December 10  
through  
December 21

## Events of Special Interest

**A Conversation between Sculptor Louise Nevelson, Professor Wayne Andersen and the Audience.** Wed, Dec. 10, 5pm, Rm 9-150. Sponsored by the MIT Committee on the Visual Arts celebrating the installation of Louise Nevelson's work, *Transparent Horizon*, on the MIT Campus.

**Technology Women's Craft Sale** - Thursday, Dec. 11, 8am-6pm in the Building 10 Lobby. Annual Christmas Craft Sale.

**Means and Meanings in Today's Art** - Artist Gyorgy Kepes, Compton Lecturer and Director Emeritus of the Center for Advanced Visual Studies. 4:30pm, Thursday, Dec. 11. Kresge Little Theater.

**MIT Holiday Celebration** - Everyone in the Institute is invited to this annual holiday party. Cookies and cider. Music by the MIT Brass Ensemble. Friday, Dec. 12, noon, Bldg. 7 Lobby.

## Seminars and Lectures

### Wednesday, December 10

**The Academic Department as a Context for the Learning Environment** - Professor Martin Trow, sociology, Graduate School of Public Policy, University of California at Berkeley. Division for Study and Research in Education Seminar. 12noon, Rm 20C-117. A light luncheon will be served.

**Evolution of the Method of Optimum Design** - Professor Ray C. Johnson, Higgins Professor of Mechanical Engineering, WPI. Mechanical Engineering Systems and Design Seminar. Noon, Rm 3-465.

**Generating 2D Expansion Functions for a 3D Synthesis Code** - Ron Chin. Reactor Physics and Numerical Methods Doctoral Seminar. 3pm, Rm NW12-222.

**Social Responsibility of Research Institutions: Bell Telephone Laboratories** - Sally Hacker, Mellon Postdoctoral Fellow in Humanities and Engineering, MIT. Technology Studies Seminar. 4pm, Rm 20D-205.

**New Coal Technology** - C. Breuer, Numerical Methods for Calculating Multidimensional Flow and Temperature Fields in PWR's - R. Masterson. Nuclear Engineering Doctoral Seminars. 4pm, Rm NW12-222.

**Israeli American Forum** - panel and open discussion on racism in the Middle East. Participants: Ben Nitay, Avi Shai Amir, Rami Mangubi. 8:30pm, Student Center, mezzanine lounge. Everybody is invited.

### Thursday, December 11

**Exact Wave Solutions of the Boltzmann Equation** - Professor William Allis, Professor of Physics, Emeritus, MIT. Plasma Theory Seminar, 11am, Rm 36-261.

**Analysis of Human Vestibular Responses and Caloric Stimulation** - Dr. Robert Demers, McGill University. Manned Vehicle Laboratory Seminar. 11am, Rm 3-343.

**Early Childhood Development: The Parent as Primary Educator** - Alison Lavin, teacher/home visitor, Brookline Early Education Project. Parents Discussion Group. Noon, Rm 10-340.

**Variations on the Theme: Optical Heterodyne Detection** - Professor M.C. Teich, Columbia University. EECS Seminar. 2pm, Rm 36-428.

**Clinical Computer Systems for Monitoring Electro-cardiographic Rhythms\*** - Dr. Floyd M. Nolle, Division of Cardiology, Northwestern University Medical School. Biomedical Engineering Center for Clinical Instrumentation Seminar. 3pm, Rm 33-206.

**Rheology and Processing Thermoset Polymers** - Professor Chirs Macosko, Department of Chemical Engineering, University of Minnesota. MIT-Industry Polymer Processing Program. Mechanical Engineering Polymer Processing Seminar. 4pm, Rm 37-187.

**The Combustion of Unconfined Vapor Clouds** - David Lewis, MIT. Mechanical Engineering Seminar. 4pm, Rm 3-343.

**Gamma Ray Excision Repair in Mammalian Cells** - Dr. P.A. Cerutti, Professor of Biochemistry, Department of Biochemistry, University of Florida. Nutrition and Food Science Seminars. 4pm, Rm 16-134.

**Darwin: Survival and Chance** - Howard E. Gruber, Institute of Cognitive Studies, Rutgers State University, Newark. Humanitas, an Evolving Perspective, Technology and Culture Seminar. 4pm, Rm 9-150.

**The Explosion of M82: Fact or Fashion?** - Philip Morrison, Institute Professor, Professor of Physics, MIT. Physics Colloquium. 4:15pm, Rm 26-100.

**The Windpower Alternative Energy System** - William E. Heronemus, University of Massachusetts. Energy and the Environ-

ment Seminar Series, Lowell Institute. 7pm The New England Aquarium Auditorium. Free.

### Friday, December 12

**Ten Classic Bloopers in Airport Terminal Design\*** - Professor John Wiley, Flight Transportation Laboratory, MIT. Center for Transportation Studies Seminar. Mezzanine Lounge Student Center. Buffet 12 noon, \$1. Lecture 12:45pm, free.

**MHD Stability of Elongated Low-Beta Toroidal Plasmas** - Harold Weitzner, Courant Institute of Mathematical Sciences, University of New York. Plasma Dynamics Seminars. 4pm, Rm 36-261.

**General Reactor Simulation Modelling** - E.S. Yoon; **Diffusion of Serum Albumin and its Role in Ultrafiltration** - A. DiLeo. Chemical Engineering 10.991 Seminars. 2pm & 3pm, Rm 10-105.

**RF Heating Experiments in the ATC Tokamak** - W. Hooke, Princeton Plasma Physics Laboratory. 4pm, Rm 36-261.

### Monday, December 15

**Adaptive Quantization of Picture Signals Using Spatial Masking** - Aron Netravali, Bell Telephone Laboratories. Cognitive Information Processing Group Lecture. Noon, Rm 36-428.

**Residential Patterns and Social Integration of Turkish Workers in Cologne** - Dr. John Clark, lecturer in geography, UCLA. Migration and Development Study Group Series. 12noon, Rm E53-482.

**Non-Recoiling Bacteria: Some Exploratory Mossbauer Experiments on the Physical State of Iron Compounds in E-Coli** - Professor S. G. Cohen, Hebrew University, Jerusalem. 3pm, Second Floor, conference room, NW14-2009. Coffee before.

**New Combinatorial Invariants Associated with Polyhedral Cones** - Dr. Thomas Zaslavsky, MIT. Applied Mathematics Colloquium. 4pm, Rm 2-338. Coffee, 3:30pm, Rm 2-349.

**A Microprocessor Specifically Designed for Running High Level Programming Language\*** - Thomas F. Knight, Jr., Artificial Intelligence Laboratory, MIT Biomedical Engineering Center for Clinical Instrumentation Seminar. 4pm, Rm 36-428.

### Tuesday, December 16

**PDP-II Users Group Meeting** - 2:30pm, Rm 26-406.

**Verification and Symbiosis: the State of the Art vs. the Art of the State** - Amron Katz, assistant director of the ACDA. New Technologies and International Security Seminar. 4pm, E53-482.

**Normalized Gene Expression in Teratocarcinoma Cell Differentiation** - Dr. Beatrice Mintz, Institute for Cancer Research, Fox Chase, Pa. 4:30pm, Rm 6-120. Coffee at 4pm, 5th floor, Bldg 56.

### Thursday, December 18

**Coulomb Gas in 2 + Epsilon Dimensions** - Dr. C. Deutsch, Universite Peris-Sud, Orsay. Plasma Theory Seminar. 11pm, Rm 36-261.

**Physics of Karate** - Professor Michael Feld, associate professor of physics, MIT. Physics Seminar. 4:15pm, Rm 26-100.

### Friday, December 19

**Dissipative Trapped Electron Instability in Tokamak** - W. Manheimer, Naval Research Laboratory. Plasma Dynamics Seminar. 4pm, Rm 36-261.

## Community Meetings

**The Wives Discussion Group\*\*** - Led by Myra Rodrigues, social worker; Charlotte Schwartz, sociologist, and Carol Hulsizer. Wed, Dec. 10, 2:15pm, Ashdown House, first floor dining room, baby sitting. Topic: New Careers For Women and Approaches to Getting a Job.

**Technology Wives Christmas Party** - Saturday, Dec. 13, 10am, Bush Room (10-105). \$50. Puppet and refreshments. If you are attending call 628-6631 or 484-1716.

**Homebirth, Inc.** - General meeting, everyone welcome. Discussion on how to have your baby within the comforts of home. Child care will be provided. Sunday, Dec. 14, 6:30pm, Rm 16-134.

**MIT Women's Forum** - All women welcome to a holiday open-house, refreshments. Monday, Dec. 15, noon, Rm 10-105.

**MIT Diet Workshop\*\*** - Thurs, 12n-1pm, Stu Ctr Rm 491.

## Social Events

**24 Hour Coffeehouse\*** - Enjoy relaxing conversation, piano playing, games, inexpensive food, candy & drinks. Open 24 hours per day, 7 days per week, Stu Ctr 2nd fl lge.

**Over 30's Singles Club** - Luncheon meeting in Stu Ctr East Lge (small dining room off Lobdell) Fri, 12:30-1:30pm. New members always invited. Alice, x3-3400.

## Movies

**L'Atalante** (Vigo 1934) and **Un Chien Andalou** - Film Society, Friday, Dec. 12, 7:30 & 9:30 Rm 6-120. Admission \$1.

**Cat Ballou** - LSC. Friday, Dec. 12, 7 & 9:30pm, Rm 26-100. Admission \$.50, ID required.

**The Getaway** - MidNite Movie, Fri, Dec. 12, 12m, Sala. Free, ID required. Bring blanket.

**African Queen** - LSC. Saturday, Dec. 13, 7 & 9:30pm, Rm 26-100.

Admission \$.50, ID required.

**Film and Video Program** - Works by recipients of the Massachusetts Arts and Humanities Foundation's Creative Artist Senior fellowships (Alfred Guzetti, Ed Pincus, Jon Rubin, Andrew Kojan and Donald Burgy). Sponsored by the University Film Student Center. Sat., Dec 13, 8pm, Kresge Little Theater. Free.

**The Other Way** - Humanities Film Series. Mon, Dec. 15, 9:30-10:30. E52-369.

## Lobby 7 Events

**Music for Solo Cello** - Egbert Hoogenberk, works by Beethoven, Schumann, Debussy. Dec. 11, noon.

**Holiday Celebration** - Treats and music by the MIT Brass Ensemble. Dec. 12 at noon.

**MIT Chamber Players - Midnight Concert** - Fri, Dec. 12, 12:30-1:30 Bldg. 7 Lobby. Program: Bach's Brandenburg Concerto No. 1, Schubert's Two Cello Quintets, Strauss' Serenade in E flat major, Winds, Op. 7. Free. Preview of concert the same day at noon in Bldg. 7 Lobby.

## Music

**Chapel Concert** - Martin Pearlman, harpsichord. Noon, Thursday, Dec. 11.

**MIT Jazz Concert** - Fri, Dec. 12, 8:30pm, Kresge. Featured Groups: the Festival Jazz Ensemble, the Halbert White Quintet and the Concert Jazz Band. Free.

**Christmas Concert - The Fine Arts Chorale** - Wed., Dec. 11, 8:30pm. Kresge Auditorium. Program: Joseph Messner's Mass in G major; Allan Bush's The Winter Journey and Nancy Plummer Fox's The Christmas Fantasy. Tickets \$3 (\$2 for students). Reservations 335-2134.

**Chamber Music Society Concerts\*** - Wed, 5:15pm, music library Bldg 14E.

## Theatre and Shows

**Auditions for "The Alchemist"** - The MIT Dramashop production. Wed., Dec. 10, 7:30pm. Directed by J.D. Everingham, designed by Cecelia Eler, William Fregosi, Ed Darna and Joe Tolentino as artist in residence.

**MIT Community Players** - Auditions for Shakespeare's Hamlet. Dec. 14-17, 7:30-9:30pm. Student Center.

**Armageddon - A Vegetarian Hand Grenade In Four Acts** - Tuesday, Dec. 16, 8pm, Rm 54-100. Repeat of the science fiction radioplay by the East Coast Karmic Annex. Sponsored by the MIT Withyou Club.

## Dance

**Moves for Children** - Dance plays by Toby Armour inspired by Lewis Carrol, Edward Lear and Genesis I. Presented by the New England Dinosaur. Dec. 19-23, Kresge Little Theatre. Performance times: Fri, Dec. 19; 7pm, Sat, Dec. 20; 3pm; Sun, Dec. 21 3pm, 7pm; Mon & Tues, Dec. 22, 23, 3pm. Free to MIT community. Monday, Dec. 22. Tickets: \$1.50 for children, \$2.50 for adults. Reservations 253-4720 or 491-3133. Group rates available.

**MIT Folk Dance Club\*** - **International:** beg-intermed Sat, 7:30-11pm, Sala. **Balkan:** advanced Tues, 7:30-11pm, Stu Ctr Rm 491. **Israeli:** all levels Thurs, 7:30-11pm, Sala. **Easy International:** Fri, 12n, Kresge Oval or Bldg 7 Lobby, depending on weather.

## Exhibitions

**MIT Historical Collections\*** - Permanent exhibition Mon-Fri, 9am-5pm, Bldg. N52, 2nd floor. **Bicentennial Exhibit:** Katharine Dexter McCormick, '04, exhibit in Bldg 4 corridors.

**Schumann at Work on a Song\*** - Music Library exhibit of manuscript facsimiles & pictures. Daily, Bldg 14E.

**Creative Photography Lab Exhibit\*** - Works by Melissa Shook exhibit beginning Fri, Nov 21, thru Dec. Hours: 10am-10pm.

**Hart Nautical Museum\*** - Permanent exhibit of rigged merchant and naval ship models, half models of yachts and engine models. Open daily in Bldg 5, 1st floor.

## Athletics

**Home Schedule** - Wed. Dec. 10, Varsity Hockey, RIC, 7pm; Thu, Dec. 12, Varsity Indoor Track - Alumni Meet, 5:30pm; Sat, Dec. 13, V Rifle, Norwich, West Point, 9pm.

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 their department and field.

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

Send notices for December 17 through January 7 to the Calendar Editor, Room 5-111, Ext. 3-3279, before noon Friday.

# Track Team Records Near Miss Vs Brandeis

By PETER M. CLOSE  
Director of Sports Information

MIT's much improved track team (1-1) threw a scare into perennially strong Brandeis last Saturday before losing 68-66½. The Engineers mile-relay quartet, anchored by junior Rich Okine (Aflao, Ghana), edged the Brandeis entry by 2 seconds, with a time of 3:42.5. The win drew Tech to within a half point of Brandeis, 63-62½, with one event, the two-mile relay, remaining in the meet. Brandeis, anchored by sophomore Paul Fahey, ran to a Rockwell Cage record 8:22.6, defeating MIT's 8:25.6 for the meet victory 68-66½. Worcester Polytech was a distant third with 13 points. Junior Frank Richardson (Sac City, Iowa) ran to within 4.4 seconds of the Cage two-mile record, winning in a fast 9:28.4. Senior co-captain Mike Ryan (Warwick, R.I.) scored 9 points himself, placing in four events.

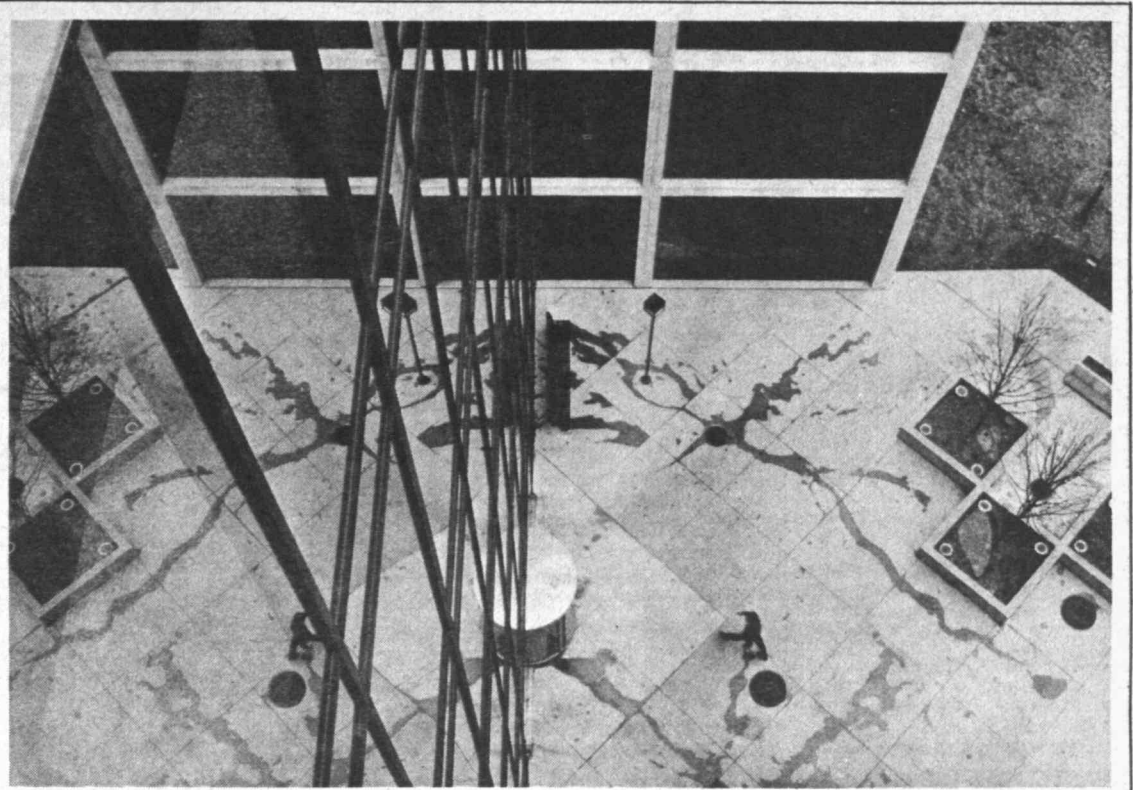
Tech's wrestling team (3-0) won a fantastic come-from-behind 23-22 victory over Wesleyan in last weekend's triangular meet action. After the first round of wrestling, MIT found itself down 13-0, losing their first four matches. With three matches to go, MIT was losing 22-10 and victory appeared quite remote. Sophomore Steve Brigham (Gretna, Ill.) got the ball rolling with a pin over his 126-lb opponent. Then junior Steve Brown (Vandalia, Ohio), a jayvee wrestler for MIT last year, decisioned former New England 150-lb champ Doug Hurd 6-4 to bring the score to 22-19, Wesleyan. The deciding match saw MIT freshman Bruce Wrobel (Evergreen Park, Ill.) earn a superior decision 12-2 for four points and the MIT 23-22 team victory. MIT easily defeated Bowdoin 35-15 for their third win of this undefeated season.

MIT's fencers (2-1) got back on the winning trail defeating Brooklyn College 14-13 and Colgate 20-7 in last weekend's competition. In the Brooklyn College meet, junior Richard Reimer (Richmond Hill, N.Y.) scored a perfect 3-0 in the foil to lead Tech to a 6-3 foil team margin. The Tech epee team, led by junior Arlie Sterling (Norfolk, Mass.) added six more points to give MIT the deciding 14-13 edge. Against Colgate, sophomore Mark Smith (Jamaica, N.Y.) won his sixth straight bout of the day in the foil as Tech overmatched Colgate 20-7.

MIT's pistol team (3-0) was supposed to have an "off" year this winter, but the Engineer shooters are undefeated after their first three matches. Two-time All-American Steve Goldstein (Providence, R.I.) is once again Tech's top gun. Goldstein fired an 819 out of a possible 900 to lead MIT over Villanova 3173-2993 in Northeast Intercollegiate League competition last Saturday. Junior Phil Brucati (Floral Park, N.Y.) has moved into the number two spot, firing an 800 x 900.

In women's club sport action, the gymnastics and swimming teams posted their first ever victories last week. In a triangular swim meet, MIT defeated Southeastern Massachusetts University 77-38 and Wheaton College 77-63. In gymnastics, MIT scored a 51.10-44.8 victory over the University of Pennsylvania.

Coming up: MIT's alumni trackmen will try to make it two straight over the incumbent varsity this Friday. Last winter, the alumni defeated the varsity 60-53. The alumni will feature past Tech greats Dave Wilson, '73, pole vault record holder; Brian Moore, '73, discus, indoor shot



REMNANTS OF RAIN make an interesting pattern on the entry plaza of the Fairchild Building, reflected on the building's glass facade.

## 'Talking Music' With a Computer is Easy

(Continued from page 1)

The system also will provide the composer with a hard copy music printout if he wants it.

"Although the sound synthesis part is not unlike text-to-speech translation," Professor Vercoe says, "the manner in which it must be specified is quite different."

"Moreover, the manner of writing a score becomes important. Composers used music paper not just to display music, but to permit quick

changes. A phrase played into a computer via an organ keyboard sometimes appears wrong when seen in context. We therefore had to develop a graphical Music Editor that would enable the computer to be at least as practical as pencil, paper and eraser."

The Experimental Music facility is used by students taking the subject, Electronic Music Composition (21.628). It is also beginning to attract the attention of professional composers from the Boston area and other parts of the country.

Meanwhile, the combined power of

the PDP-11/50 computer and the IMLAC PDS-4 display system provides an environment for other computer-music research, including more flexible man-machine dialogues, more suitable high-level languages, and improvements in digital-audio interfacing, Professor Vercoe says.

Such research and associated system support provide more than enough challenge for MIT graduate Carl Howe, graduate student Richard Steiger, and undergraduates Robert S. Ballard, Anthony B. Lake, and Gregory W. Sims, according to Professor Vercoe.

put record holder; Jim Flink, '64, 100, 220 yard and indoor 50 yard record holder. The field events are scheduled for 5:30pm and the running events for 7:00pm at Rockwell Cage.

### Holiday Season Food Service Schedule

#### Student Center

|   |   |                         |
|---|---|-------------------------|
| Friday, Dec. 19                             | Lobdell - Breakfast                                 | 7:30 a.m. to 10:00 a.m. |
|   | Lunch   | 11:00 a.m. to 2:00 p.m. |
|   | Dinner  | 5:00 p.m. to 7:00 p.m.  |
|   | Twenty Chimneys                                     | Closed                  |
| Saturday, Dec. 20                           | Twenty Chimneys                                     | 8:00 a.m. to 7:00 p.m.  |
|   | Lobdell   | Closed                  |
| Sunday, Dec. 21                             | Twenty Chimneys                                     | 9:00 a.m. to 7:00 p.m.  |
|   | Lobdell   | Closed                  |
| Monday & Tuesday<br>Dec. 22-23              | Lobdell - Breakfast                                 | 7:30 a.m. to 10:00 a.m. |
|   | Lunch   | 11:00 a.m. to 2:00 p.m. |
|   | Dinner  | 5:00 p.m. to 7:00 p.m.  |
|   | Twenty Chimneys                                     | Closed                  |
| Wednesday, Dec. 24                          | Twenty Chimneys                                     | 8:00 a.m. to 2:00 p.m.  |
|   | Lobdell   | Closed                  |
| Thursday, Dec. 25                           | Lobdell & Twenty Chimneys Closed                    |                         |
| Friday & Saturday<br>Dec. 26-27             | Twenty Chimneys                                     | 8:00 a.m. to 7:00 p.m.  |
|   | Lobdell   | Closed                  |
| Sunday, Dec. 28                             | Twenty Chimneys                                     | 9:00 a.m. to 7:00 p.m.  |
|   | Lobdell   | Closed                  |
| Monday, Tuesday, Wednesday<br>Dec. 29-20-21 | Lobdell - Breakfast                                 | 7:30 a.m. to 10:00 a.m. |
|   | Lunch   | 11:00 a.m. to 2:00 p.m. |
|   | Dinner  | 5:00 p.m. to 7:00 p.m.  |
|   | Twenty Chimneys                                     | Closed                  |
| Thursday, Jan. 1                            | Lobdell & Twenty Chimneys Closed                    |                         |
| Friday, Saturday<br>Jan 2-3                 | Twenty Chimneys                                     | 8:00 a.m. to 7:00 p.m.  |
|   | Lobdell   | Closed                  |
| Sunday, Jan. 4                              | Twenty Chimneys                                     | 9:00 a.m. to 7:00 p.m.  |
|   | Lobdell   | Closed                  |
| Monday, Jan. 5                              | Lobdell and Twenty Chimneys Resume Regular Schedule |                         |

Walker Food Service will be closed from 6:30 p.m. Thursday, Dec. 18 to Breakfast Jan. 5, 1976.

MacGregor & Baker Dining will be closed from 6:00 p.m. Thursday to Breakfast Jan. 5, 1976.

Last day for all Board Plans is Thursday, December 18, 1975.

15 Meal, 19 Meal and Point Plan for IAP and Spring Term are available in all dining units.



When the sun shines, the railing along the Charles River casts a lattice-like pattern on the sidewalk.

# CLASSIFIED ADS

Ads are limited to one per person per issue and may not be repeated in successive issues. All ads must be accompanied by full name and Institute extension. Only Institute extensions may be listed. Members of the community who have no extensions may submit ads by coming in person to the Tech Talk office, Room 5-111, and presenting Institute identification. Ads may be telephoned to Ext. 3-3270 or mailed to Room 5-111. Please submit all ads before noon, Friday, December 12. They will be printed on a first come first served basis as space permits.

## For Sale, Etc.

Redecorating — approx 50 yds gold nylon carpeting, exc cond, \$250, will neg if all 50 yds not wanted. Call x8-4419 Draper.

Lime green lady's down parka, sz lg, worn 2x, cost \$75, sell \$25. Dr. O'Pray, x3-1501.

Ski boots sz 5 & 10, cheap, 170 cm metal skis, \$15. John, x8-2006 Draper.

Hood unit for old fashioned wd burner stove, 2 warming ovens, exhaust fan & florescent lgt, bolts on to old stove. Call x3-2250.

HP 25 calculator, \$160; HP 25 calculator security cradle, \$20. Chuck, dorm line 5-9587.

10" Post Versalog slide rule, \$10; 5" Post Versalog slide rule, \$8; 10" K&E Decitron SR, \$10; 10" K&E Log Log Duplex Decitrig slide rule, \$10. Wee Yee, dorm line 5-9587.

Moving must sell: Hitachi 19" b&w TV; dbl bed; Hoover canister vacuum, mtl desk & chr; work table & swivel chr; 5 dwr chest, GE clock-weather radio; pole lamp, etc; all perf cond. Michel, x8-1494 Draper.

Standard sz violin \$120. Call x5311 Linc.

2 Atlas watherguard tubeless 4-ply snows w/5 hole rims for Olds, G-78-14, replaces 8.25-14, exc cond, \$40. Call 489-1727 evgs.

Harrington upright piano, blk, exc cond, \$250. Mike, x5773 Linc.

Radial snows: 165 SR 14, \$15/pr; Dunlop 145-13, \$30/pr; 4 unused Audi brake shoes & clymer manual, best. Bruce, x7457 Linc.

Twin bed; dbl bed; desk; 2 chrs; 2 chests of drws; vacuum cleaner; pots & pans; etc. Call 738-8166.

Set of weights, 130 lbs w/bar, \$25. Walter, Un4-0556.

Sony port tape recorder, reel to reel, \$15. Roger, x3-7273.

Sears 1800 BTU AC, \$150; 2 General G75-15 (8.25-15) snows, \$10/ea. Call 489-3013 after 7:30.

Lg Aurora Racing car set, more than 30 ft of 2-lane roadway on custom 4'x8' table w/built in storage drws, 6 cars, other access, \$40. Call 862-1935.

K table w/3 chrs, \$35. Euren, x8-3501 Draper.

Brwn carved westrn saddle, padded seat, matching breast plate & bridle, show cond, reasonable, gd Xmas present. Debbie, x5481 Linc.

Pr snow retreats, H78-14, used 1 seas, \$20. Jerry, x8-2861 Draper.

Free: 2 tires w/rims 15" from '61 Rambler. Don, x5869 Linc.

Pr. 205-15 Sears studded radials mtd & bined on Mercury rims, used 1 seas, exc cond, \$50. John, x5832 Linc.

L Schick consol deluxe beauty salon, pract nw, used 2x, \$20. Hazel, x3-2593.

Desk w/chr, \$12; pr ski boots. Call 492-6793 aft 7.

2 steel belted, studded, ww snows, sz 7.35x4, mounted on 14" Plymouth rims, brand nw, cost \$135, put approx 800 miles, w/ sell \$75 or best. George, 484-9337 evgs.

Color film for Poloroid Land camera sq shooter 2, \$2; VW hubcaps, old round style, \$2 each. Erica, x3-2117.

Bose 501, 1 yr old, \$200. Ken, 492-3348.

5 gal terrarium w/light & plant; also assorted violets. Dick, x3-7220.

Konica auto reflex 35mm camera w/f1.7 lens & case, fine cond, \$150; Konica-Hexion 135mm telephoto lens, lk nw \$100; both for \$200. Ken, x3-2339.

Several stamp collections; 3, 4 vol world wide in gd nr-nw albums; 1 vol world wide; Canada; Portugal; Africa; also precancel & perfin collections; lots of covers. Call for details, 332-8753 aft 6.

Pr E 78x14 4 ply Firestone, ww studded snows on Ford Torino rims, exc cond, used 1 seas, \$40. Betty, x3-7230.

Sears dynaglass belted snows B78-13, used 1 seas. \$15 pr. CC, x3-7573.

Pentax Spotmatic w/f1.4 50mm lens, incl soft leather case, lenshood, mnting shoe, filter, shutter release cable, \$190; Vivitar auto zoom lens, 95-205mm, f3.8, \$100. Ho, x3-6740.

2 lg modrn table lamps, \$10/ea; 2 gigham blu & wh bed spreads, \$5/ea; tall bureau, \$10; Juliette AM-FM table radio, \$10; 20 pop records (Ray Conniff, Johnny Mathis, etc) 75 cents each. Call 944-8738.

Mtd snows for BMW 2002, \$25/ea or best. Frailey, x3-4974.

Twin set of pickett slide rule w/leather cases & box, barley used, lk nw, \$20; outdoor VHF, UHF, FM antenna, easy to install, can be folded, \$15. Mehran, 547-8636 evgs.

Golf clubs, Wilson "Top Notch" 3,5,7,9, & putter, 1,2½,4¼ woods & bag. Perf for beginner, prof qual clubs, \$10; Aquarium, 15 gal O'Dell all glass, fluor lite, pump, htr, filter & scenery, perf cond, \$125 value, \$50. Hank Goodman, x8-4166 Draper.

W sz 6 Byson ski boots, used 2 days, \$20 or best. Ken, 646-6394 evgs.

Toys: rocking horse, zoo, elec oven, bldg blocks, Fisher Price circus; girls ski wear, sz 7-9; boots, sz 1. Call 862-6509.

Alto sax & case, exc cond, \$150 or best; telescope w/tripod, 60mm, \$12. Len, x3-3317.

Musical child no longer in tune, Yamaha trumpet, gd cond, \$125 w/case. Steven Allen, x8-3934 Draper kp trying.

Stereo equip: 180 watt amp, tm tble, 60 watt spkrs, 25 watt spkrs, reverb unit, Sony TC 630 reel to reel & more, \$900 for the lot or w/ sell separate. Carl, x5794 Linc.

2 snows, H78-15, belted county traction, ww, multi-mile, 4 plies-2polyester cord +2 glass belts (sidewalls 2 plies-polyester cord), best. Dorothy, x8-2868 Draper.

RCA stereo component system, AM-FM recvr, 2 spkrs, nw stylus, gd working cond, \$100; W sz 7/8 genuine rabbit knee length coat, brand nw, \$50. Michele, x3-2459.

3 bikes: Equipe (France) 10 spd, M, brand nw, w/ sell sep. Lynne x3-6320.

Sears dishwshr, perf cond, \$50; lg teal cabinets w/shelves, drws & hanger space, nego; bureau, \$15; sew mach, \$30; lwn mower, 1 rider, nds repair, nego. Susan, 235-0320 ext 515.

L-78-15 stud snows, Firestone Town & Country, \$40/pr. Call x3-1585.

17" wd boat w/trailer, nds work, best. Call x3-6911.

Tuner, AM-FM stereo, exc cond, \$75. Chuck, x3-6032.

Full sz walnut bed w/box sprg & matt, \$100; Solid mahogany DR table w/6 chrs, table pad & leaf, \$100. Rose, x3-2101.

Xmas present: brand nw mink jacket from Eur, my wife is allergic to mink, nvr worn, sz 10, nego. Call x3-1661.

Gibson 15 cube ft upright freezer, frost-free, wh, lk nw, \$250 or best. Bob x8-1231 Draper.

Auto burglar alarm, nw & complete in box, \$30. Sarkis, 266-2968.

Gas range, 36" w/built-in 30,000 BTU gas space htr, old but works well, \$30 or best. Bill, x217 Linc.

Wh w/brwn spot Fr rabbit fur coat, below knee hrdly worn, \$150. Linda, x3-7023.

Hammond organ, less 2 yrs old, orig price \$2,000, w/ sacrifice for best. Call 396-8591 aft 2pm.

Empire 999 TE/X deluxe stereo crtrdg, used 2 mo, exc cond, complete w/mntg, hdwre & instr, list \$65, sell for \$15. John x5525 Linc.

Blk hide-a-bed sofa, dbl bed, gd cond, \$100. Lee, x3-2961.

Xmas rug, Greek motif, all wool, nwly made, Sienna, green, blu & gold, \$40. Betsy, x3-1961.

2 tires, 613 ww, w/ pass inspec, free. Steve, x8-3754 Draper.

Sale of childs clothing, 3 dresses, 1 crawler set, coat & leggings for 1-2 yr girl. Brand nw, nvr worn, may be seen 11:30-12:30, rm 16-420.

2 belted snows, 1 seas old, H78-15, \$38/pr; KLH model 52 AM-FM stereo rcvr, less than 2 yrs old, immaculate cond, \$250 or best; Monarch typwrtr by Remington, gd cond, \$20. Call 266-7797.

Phillips GA 212 trntble, ADC XLM cart (nds nw stylus), \$105; Dynaco PAT 4 (nds nw boards) \$55; Stereo 80 (replaced output transistors) \$95; together \$140 (not incl trntble). Jim, x3-7175 aft 6.

Pole lamp, \$15; buffet, gd cond, \$10. Call x3-7138.

AR XB trntble, 14 mo old but lk nw, w/6 mo Stanton 500 EE crtdg, \$80. Fred, x3-3623.

Gorgeous Xmas cactus, loaded w/buds to bloom Xmas in hand-made fine clay hanging pot, \$25. Carol, x3-1332.

Mahog DR table, 6 solid mahog Chippendale chrs; china closet, sidebrds; table lamps, paintings; 60mm telescope, guitar, etc. Call 876-4328 evgs.

Radio-contrl 32" model: Grand Banks 42 motor yatch cabin & superstruct to be blt; Servo elec pwr, digital proportional control, mini hdwr & bldg materials provided, \$160. Bill, x3-1332.

2 H78x15 snows, Norsemen glass belted w/wheels, \$40 or w/ swap for G 78x14. Call 843-4647.

Manhattan vol of MIT Press plan for NYC set, \$10. Andrew, 266-5742 aft 8pm.

DR furn, round table 36" w/18" leaf, 4 chrs, hutch, set for \$150; chrome & glass chandlr, \$75. David, x3-6291.

Moving, must sell furn, dbl bed, AC,

car, '68 Saab V4. Patil, 494-0390.

Handsome homemade 2 story doll hsew/attached garg removable roof, approx 24x20x20, w/some furn, \$30; HO train set, mostly nw, 2 eng, 4 cars, control, assort track & joiners, \$30. Call x3-3391.

Dshwshr, wsh mach, dryer, Kenmore, all v gd cond, avail Jan, best; ACs, Philco, 6000 BTU, v gd cond, \$60 or best, Carrier 8500 BTU, \$35 or best. Call x3-2576.

Overhead garg dr, 5 panel, 8'w x 6'6" h, walnut color; stereo stand, holds 2 spkrs & compoenets, queen sz matt & spr; den couch & chr; pic window drapes; droadloom; child & adult sz ice skates. Stan, 471-0845, nites or wknd.

Rex rotary elec duplicator/mimeo, \$250. Steven, x3-1639.

Volvo 122 & 144 wheels & 122 misc parts; MG wire wheels; 165 HR 14 radials & radial snows; Honda 350 nds word, best. Also free M kittens, 6 wks. Mike, x3-7779.

Fischer skis, 205 cm, Tyrolia bindings, \$45 or best. Call 628-4383.

## Vehicles

'64 VW bug, factory rebilt eng, gd running cond, \$300 or best. Gretchen, x3-3510.

'65 Ford Galaxie, sell for parts, best offer. Bill Breen, x7185 Linc.

'65 Mustang convert, fall sticker, \$225. Fred, x3-3831.

'66 Rambler Am, 6 cyl, standard, 20 mpg, \$400. Sue, x3-5797.

'66 Ford Mustang, gd running cond, nw tires, \$250, lvg country, must sell. Tasso, x3-7028.

'67 Ford Ranch Wgn, lks gd, runs gd, gd tires, w/ be junked 12/31/75, make an offer. Strandberg, x3-2562.

'68 Saab wgn, gd running cond, \$600. Call x3-6811.

'68 Chrysler wgn, Town & Country, full pwr, AC, gd cond (some rust), \$650. Call 235-4133.

'68 Impala, AC, pwr str, snows, leather seats, mint cond, rust free. Call 494-8741 evgs.

'69 coronet wgn, nw brakes, exc cond. Call x3-4939.

'69 Road Runner convert, exc cond, \$600. Ken Collins, x3-4212.

'69 VW bug, auto, rebilt eng & trans, nw brakes, muff, bearings. 98 K, best. Call x3-7283.

'69 Volvo, 142S, nw exhaust sys, exc cond, \$1,400. Jeff, x3-3666.

'69 V8 Camero convert, exc running cond, but nds body work; nw snows, shocks, muffler & battery, orig owner, 60 K, \$600 or best. Call 332-5365 aft 6:30pm.

'70 Dodge window sport van, V8-318, auto, exc mech cond, seats 8, \$1,800. Dave, x3-4524.

'70 Toyota Corona Mk II, 4 dr, standard, v gd cond, attractive interior, steel radials, 25-30 mpg, v depend, first offer over \$1,200. Call x8-2577 Draper.

'70 Falcon/Torino wgn, 6 cyl, auto, radio, htr, mnt studded snows, \$550. Paul, x3-7287.

'71 Toyota Corolla 1600, 4 dr, auto, 39 K, 1 owner, \$750. Call 861-1662.

'71 Ford Pinto, standard, gd cond, \$1200. Call 492-6691 evgs.

'71 Chevy Vega hatchback, 51 K, 4 spd, lvg country, \$950 or best. Flemming x3-6943.

'72 Gran Torino, 2 dr, hrd tp, 351 V8, auto pwr str & brake, AC, vinyl roof, \$2,250. Tom, x3-7414.

## Housing

Back Bay, avail Jan 1, sublt w/option to lease, 1 BR apt, modrn K, tile B, clse to bus stop, \$185 incl ht + ht water. Call 247-1129 evgs.

Brighton, nice bright 2 BR, nr T, lg K, ht incl, \$250. Ruby, x3-3132.

Brookline: nice furn rm in priv home, all util incl, \$25/wk. Call 738-4685 aft 2.

Burlington, 3 BR split, DR, study, garg, fin fam rm, gas ht, on quiet st, avail end Jan, low 40s. Call x3-5959.

Burlington, Mass, 4 BR Cape, on hill, 9x18 maple cab K w/dsh washer & self-cleaning stove, ww carpet throughout, gas incinerator, 1½ B, conv loc, \$30,900. Call 272-9133.

Cambridge, Central Sq, lg 5 BR apt, 15 min walk fr MIT, lg K, LR, porch, avail immed. Walt or Sidney, x3-7787.

Cambridge, Fresh Pond area, 2 BR, AC, parquet flrs, pool, \$315/mo, avail 2/1. Lee Linsky, x3-1782.

Chelsea, Woodlwn sec, 3 rms, no pets, patio, yd, sec deposit & ref, \$155 + util. Angelo x5713 Linc.

Somerville, sublt, avail Jan 1, modrn 2 BR, d/d, fully carpeted, AC, nr transit, \$285 incl ht. Lloyd x3-7220.

Somerville, 1 BR apt, MIT bldg, 50 Craigie St, apt 24, carpeted, furn K, Indry, pkg space 1 car, AC, avail Jan 1, \$250 incl ht. Call 666-2294.

Somerville, sublt, Xmas holidays only, modrn 2 BR apt, pkg incl, w/w, dishwshr, etc, \$70/wk, sec dep nego. Villota, x3-6746.

Ski hse, 4 BR, nr Sugarloaf, Me, to shr fo7 seas w/3 or 4 other couples, professional couple only. Steve, x7394 Linc.

Ski rental, Campton, N.H. (10 mi to Waterville Valley) Comfortable old hse, sleeps up to 14, 2 B, frpl, suana. Rent by week or weenend. Larry Berman, x8-3584 Draper.

Ski rental: Fryeburg, Me, 3 BR chalet w/frpl, 10 min Pleasant Mt, 20 min N Conway, \$125/wk. Steve, x5584 Linc.

## Animals

Gerbils, 6 mo, free. Call x3-5876.

Nd temp (now to 9/1) loving home for v tame, personable parakeet, glad to pay. Jolie, 277-6667.

Free: male gerbil w/cage & wheel. Ginger, 237-3949 evgs.

Free: 2 mice. Dave, x3-5980.

## Lost and Found

Found: wrist watch in front of bldg 41, Dec 1. Carl Benner x3-2250.

Found: puppy approx 3 mo, honey color, blk collar, bldg 7. Barbara x3-7791.

Lost: Bl athletic jacket w/wh C.G. insignia & number 73 on front. Disappeared in Baker lib area. Contact: J. Anthony, 494-8537 evgs.

## Wanted

Riders wanted to S. Cal, leave between Dec 27 & Jan 2. No return. Steve Greene, 494-0330.

Ride to Phila Dec 18 or later. Call 861-2051 aft 5.

F wants to sub 1 BR apt or studio, 1/76 to 9/76, Camb/Som, responsible, quiet. Call x3-6462.

Child car seat: Petersen Safety Shell model 74/75. Jeanne, x3-5264.

Ride to Balt or anywhere in Md, lvg anytime aft 4:30pm Mon, Dec 15. W/ share driving \$ exp. Joel, 547-1420.

Used console piano in gd cond, w/ move it. John, x3-6977.

Ride to Utica, NY area a couple of days before Xmas & Utica to Cambridge, a cple of days aft Xmas, 1 child, 2 adults, w/ pay, also w/ share rented car, etc. Barb, 494-8316.

Stu flute; metronome; elect typewriter. Call x7500 Linc.

Urgenly nd ice skates for 9 yr old boy, for sale, rent or loan, hurry. Sam Benichasa, x8-3686 Draper.

Stu nd for psych experiment w/pay, pls leave name & phone number w/Judy, x3-6047.

Ride wanted to Chicago, lve earliest Dec 18 aftnoon & return latest 2/2 mon. Call 876-6939 5-7pm only.

2nd hand book, *Architectural Graphic Standards*, 5th ed, Ramsey-Sleeper, pub Wiley, w/ pay. Eykamp, x3-5685.

Traveling over IAP? Avid beer can collector w/ buy your brew in exch for empty cans from S & Cntrl Amer, Asia & Africa. Martin, x8-1159 Draper.

Driving to Fla, want rider, lvg 12/22. Call 354-3836 evgs.

## Roommates

Rm in Ashdown Hse, on campus, furn, avail early Jan, Jan rent free, must be MIT grad stu. Bruce, x3-5848.

1 BR avail in Tang 20D, 2/1, unusual nic apt & nice people. Bent, 494-0364 evgs.

Rmmate wanted to shr lrg attractive 2 BR apt at 445 Marlborough St with 2 MIT stu, start anytime from now to Feb 1. George, 266-6281.

M or F to share N Cambridge hse w/1 F grad stu, \$150 incl ht + util. Gina, x3-6886.

F or M rmmate wanted b6 3 MIT grad stu, apt nr Central Sq; own rm, rent \$55/mo, avail Jan 1. Isaac or Jorge, 864-0105 aft 6pm.

M or F for lg 6 rm apt, Beacon St., 2 min from MIT, furn, own rm, \$155 incl ht, avail 12/20. Alejandro, x3-6849.

F rmmate to share 4 BR apt, Coolidge Cmr, Brkline, own lg BR, nr T, \$85.25/mo incl ht, prkg avail. Gay x3-7170.

Share a hse nr Central Sq; 1 prsn needed by 1/1/76 or 2/1/76 to fill hse w/2 M, 1 dog; spacious, sunny, lg K, LR, den, upstrs ww, 15 min walk to MIT, 3 min to T, some furn avail. \$100/mo + util. Joel, Dave, Dee, 492-7597.

Central Sq, Cambridge, M rmmate wanted, own rm, quiet, \$97.50/mo incl util, 10 min to MIT. Dick or Mike, 661-7131.

Responsible F rmmate, 23+ for spacious modrn 2 BR duplex, Cambridge nr BU bridge, dishwshr, wsh/dri, safe bldg, non-smoker, no pets, \$137.50 incl ht + prkg, avial 1/1 or 2/1. Janet, x3-7726.

Wanted rmmate, 5½ rm apt in Cambridgeport, LR, DR, K, 2 BR, bk porch, \$140/mo incl ht + util, immed or Jan 1. Joan, x3-6737.

## Carpools

Needham (Birds' Hill) to Draper or MIT, 8-5, flex. Marc, x8-3108 Draper.

Rider or carpool from Derry, NH to MIT. Ken MacAskill, x3-4239.

## Miscellaneous

W/ babysit full or part time for yg child at my Eastgate apt; w/ also occas babysit weeknites & weekends.

# POSITIONS AVAILABLE

This list includes all non-academic jobs currently available on the MIT campus. Duplicate lists are posted on the women's kiosk in Building 7, outside the offices of Special Assistants for Women and Work (10-215), and Minority Affairs (10-211), and in the Personnel Office (E19-239). Personnel interviewers will refer any qualified applicants on all biweekly jobs Grades II-IV as soon as possible after their receipt in Personnel. Persons who are not MIT employees should call the Personnel Office on extension 3-4251.

Employees at the Institute should continue to contact their Personnel Officers to apply for positions for which they feel they qualify.

Dick Higham 3-4278  
Pat Williams 3-1594  
Carolyn Sheer 3-1595  
(secretary — Dixie Chin)

Virginia Bishop 3-1591  
Mike Parr 3-4266  
Ken Hewitt 3-4267  
(secretary — Joy Dukowitz)

Sally Hansen 3-4275  
Evelyn Perez 3-2928  
(secretary — Susan Bracht)

Spans. Res. Staff, Executive Officer, Program Management and Technical Coordination for Meteorology Dept. international multi-institutional oceanographic research project. Monitor organization, scheduling of administrative activities, supervision of funding status, briefing of project co-chairmen. Will be responsible for field logistics of multi-ship operation, including field coordination center and management of pilot programs. Extensive sea-going experience and expertise with current oceanographic measurement technology and engineering (including mooring and density techniques) required. Recent supervisory experience in oceanographic field programs, proposal writing. Applicants must be available to travel frequently. D75-240 (12/10).

Admin. Staff, Project Planner, Planning Office to assess Institute faculty needs; prepare long and short range planning studies; research, write, edit information for facilities programs and for participation in Design Review; prepare presentation materials (tables, schedules, graphic illustrations); interview users to determine functional needs; participate with consultants and client team to evaluate design proposals for Design Review. Requires: BA in architecture; minimum 3-4 years architectural and planning project experience. Architectural Registration desirable. A75-68 (12/10).

Admin. Staff, Admin. Asst., Information Processing Center to help develop and prepare budget; review expenses; forecast expenditures; prepare periodic cost analyses, operating reports. Will also perform other related administrative duties. Requires analytical, as well as written and verbal communication skills; ability to work well with people. A75-69 (12/10).

Acad. Staff, Asst. Rotch Librarian for Visual Collections to administer visual collections (slides, photos, plans, drawings, films, videotapes) in architecture, 19th, 20th century painting, environmental art and urban design. Duties include acquisitions, public service activity and supervision of support staff. MLS, plus minimum of 3 years experience in architecture or visual collections graduate degree in art history or graduate level knowledge of architecture and art history required. Candidates should have working knowledge of European languages, supervisory and administrative skills. C75-32 (12/3).

Admin. Staff, Acquisitions Editor, in the MIT Press to continue lists in Life Sciences, Physical Science and Mathematics. Responsibility includes creation and execution of plans to continue publications of works appealing primarily to the scholarly, professional, research and advanced text markets. Book publishing background, demonstrated success in developing similar publishing programs, familiarity with the named subject areas required. A75-67 (12/3).

Tech. Asst. IV, temporary, part-time, in the Research Laboratory of Electronics to assist in data collection on child language acquisition. Duties will include administering of speech exercises to 2-3 year olds in home and day care center sites, transcription of tapes. Previous experience working with 2-3 year olds, typing skill, required. Part-time on an as-needed basis through Project completion (several weeks). B75-664 (12/10).

Secretary V to Director, Project MAI (a computer science research lab of 260 people) to take and transcribe shorthand; arrange appointments; handle varied administrative duties. Will also work with other secretaries in providing general support for lab: type; handle payroll responsibilities. Requires: minimum 5 yrs. commensurate experience; ability to work under pressure. 40 hr/wk. B75-660 (12/10).

Secretary V to Head of Optical Maser Division, Physics Dept. will schedule meetings and seminars; arrange travel; take and transcribe shorthand dictation

(letters, technical reports, manuscripts); maintain files; coordinate work of other secretary in peak periods. Good typing and shorthand skills plus 5-10 years secretarial experience required. College degree, preferably English major, desirable. B75-306.

Secretary V to head of Atomic and Solid State Division, Physics Dept. to handle general secretarial duties including some technical typing; handle contract budgets; arrange meetings and travel. Will also handle some secretarial duties for faculty and graduate student members of Division. May supervise additional secretary. Excellent typing, minimum of 3 years secretarial experience required. Shorthand helpful. B75-646 (12/3).

Secretary IV to Director of Center for Advanced Engineering Study project involving development of curriculum materials and teacher training for technical institute of Iran. Handle general secretarial duties (correspondence typing, filing, etc.). May handle additional duties related to preparation of teaching materials (edit manuscripts, page layout; preparation of camera-ready copy), and teacher training activities (schedule teaching sessions; assist teachers with travel and other arrangements). Excellent typing, organizational skills necessary. Journalistic and/or graphic arts experience desirable. B75-657 (12/10).

Secretary IV to two faculty members in Nutrition and Food Science: type correspondence, papers, proposals from draft and machine dictation; draft responses to routine correspondence; order reprints and supplies; answer phones. Typing, English grammar skills, ability to work under pressure required. Knowledge of biological and/or chemical terminology helpful. B75-658 (12/10).

Secretary IV, temporary, part time, to Head of Library Collections Development Department: type correspondence; order supplies; maintain files; prepare student and bi-weekly payrolls. Will also handle check-in, claim, and order form process for technical reports. Requires: college degree, organizational and typing skills, ability to work independently; Secretarial and/or library experience desirable. 20 hr/wk. (9-1, M-F). Jan.-June, 1976. B75-659 (12/10).

Secretary IV in Dean for Student Affairs Office will handle general secretarial duties for the Undergraduate Seminar Program, including preparation of materials for publication, accounting procedures; respond to inquiries concerning Seminar Program and Freshman Advisory Council; handle secretarial duties for Assistant to the Dean and other projects as required. Excellent typing, sensitivity in dealing with people, required. B75-663 (12/10).

Secretary IV to the Rotch librarian and professional staff, will type correspondence, reports; take staff meeting minutes; handle payroll and petty cash procedures; arrange equipment maintenance and repair; order supplies; collect statistical data; maintain special files; assist with other library duties including occasional coverage at circulation desk. Organization and typing skills, ability to handle detailed work and familiarity with bookkeeping procedures necessary. B75-647 (12/3).

Secretary IV for Undergraduate Program in Urban Studies and Planning to serve as liaison between Program director and students: compile data, maintain records; type course material, reports, correspondence; duplicate, collate materials; answer phones; arrange appointments, meetings; Will also handle general student inquiries and assist in registration process. Office experience, excellent typing, organizational and interpersonal skills required. Secretarial school training desirable. B75-648 (12/3).

Secretary IV to 3 physicians, Medical Dept. will coordinate calendars, schedule appointments; transcribe medical histories from machine dictation; maintain files; May occasionally chaperone routine physical examinations. Excellent typing, ability to transcribe medical terminology required. Some college training preferred. B75-655 (12/3).

Secretary IV in Energy Lab will type technical manuscripts; type and edit on computer terminal; maintain budget records and files; compose routine correspondence; answer phones. High school graduate, or equivalent, technical and manuscript typing skill, familiarity with bookkeeping procedures required. B75-656 (12/3).

Secretary IV to Regional Directors Alumni Fund, will type correspondence and other material; develop and maintain donor file; arrange travel. Assist other secretaries as required. Excellent typing skills and shorthand, several years experience required. Public contact background helpful. B75-645 (12/3).

Secretary III in Lab of Architecture and Planning will type technical material on computer terminal; answer phones; arrange travel; maintain and edit files for computer system. Excellent typing, ability to handle detailed work required. Position full-time but can be adjusted to 25 hrs/wk to accommodate selected candidate. B75-650 (12/3).

Comp. Op. IV in the Laboratory of Nuclear Science to operate PDP-10 computer system for precise measurement of films of bubble chamber particle interactions; set up and run operations; mount and dismount tapes; run utility programs; keep detailed log of production; may calibrate PEPR measuring device, aid programmers and engineers in solving hardware and software problems, train new operators. Selected candidate will be instructed in scientific objectives of computer operation. Working experience with PDP computer, ability to work with minimal supervision required. 40 hr/wk. B75-654 (12/3).

Library Gen. Asst. III in Catalogue Dept., Libraries: type master catalogue entries on OCLC 100 terminal; perform clerical aspects of reclassification and cataloguing; type reference cards; handle other related duties as necessary. Some college or business school training, excellent typing, ability to handle detailed work with accuracy required. Library experience helpful. 35 hr/wk, noon-8pm. B75-653 (12/3).

Payroll Clerk III-IV in the comptroller's Payroll Office will compile totals of payroll charges from Institute departments; process adjustments and other special procedures (vacation charges, etc) as required. Facility with figures, accuracy with detailed work and discretion in the handling of sensitive information necessary. Applicants must be able to communicate effectively on payroll matters with Institute staff and faculty. B75-642

Sr. Clk. III in Registrar's Office, to work with Undergraduate records: transcribe grades; check computer input and output; enter registration related data into CRT visual input machine; answer telephone inquiries; handle assigned undergraduate departments as well as other related duties within office. Requires: excellent typing skills; accuracy with details. Some college training and office experience desirable. B75-661 (12/10).

Second Cook in Food Service to prepare all menu items; train student and other personnel; prepare related forms; maintain clean, sanitary work station. Extensive background in mass food production and creative presentation for banquets, as well as knowledge of portion control and preparation timing required. Supervisory experience helpful. 40 hr/wk. H75-171 (12/10).

General Helper, hourly, in Graphic Arts Service to perform a variety of routine jobs: cleaning, oiling, supply of raw materials to various department sections. High school graduate, or equivalent, required. 40 hr/wk. H75-163 (12/3).

The following positions have been FILLED since the last issue of *Tech Talk*:

B75-600 Secretary IV  
B75-636 Secretary III  
H75-137 Waitress  
A75-53 Admin. Staff  
H75-125 Electrician  
B75-642 Payroll Clerk III-IV

The following positions are on HOLD pending final decision:  
H75-157 Technician C  
E75-43 Eng. Asst.

The following positions were still available at *Tech Talk* deadline. The date following each position is the date of the most recent *Tech Talk* issue in which the position was described.

ADMINISTRATIVE STAFF:  
A75-26, District Officer, Resource Devel. (11/12)  
A75-56, Sr. Consult./Trainer, Personnel Development (10/8)  
A75-59, Applications Programmer, Off. of Admin. Inf. Syst. (10/22)  
A75-60, Systems Analyst, Off. of Admin. Inf. Syst. (10/8)  
A75-63, Asst. Director, Development Off. (11/5)  
A75-64, Area Coordinator/Systems Analyst, Off. of Admin. Inf. Syst. (11/12)  
A75-65, Acquisitions Editor, MIT Press (12/3)  
A75-66, Staff, Writer, Resource Planning (12/3)

BIWEEKLY:  
B75-253, Sec. IV, Mech. Eng. (11/19)  
B75-273, Sec. IV, Mat. Sc. & Eng. (7/9)  
B75-351, Sec. IV, Sloan School (11/26)  
B75-427, Comp. Op. IV, Off. of Admin. Inf. Syst. (9/10)  
B75-475, Sec. V, Chemistry (11/12)  
B75-543, Sec. IV, Chem. Eng. (10/15)  
B75-560, Computer Operator III-IV, Lab. for Nuc. Science (10/22)  
B75-580, Sr. Clerk III, Admissions (10/29)  
B75-585, Sec. III, Mat. Sc. & Eng. (10/29)  
B75-590, Sec. III-IV, Res. Lab of Elec. (11/19)  
B75-593, Sec. IV, Resource Devel. (11/5)  
B75-603, Sec. IV, Urb. St. & Pl. (11/5)  
B75-627, Sec. III, Meteorology (11/26)  
B75-629, Sec. IV, Lab. for Nuclear Science (11/26)  
B75-630, Sec. IV, Lab. for Nuclear Science (11/26)  
B75-632, Sr. Acctg. Clk. V, Medical (11/26)  
B75-634, Sec. III-IV, Nuclear Eng. (11/26)  
B75-637, Sec. III, Sloan School (12/3)  
B75-638, Sec. IV, Cent. for Internat. Studies (12/3)  
B75-639, Sec. V, Humanities (12/3)  
B75-640, Sec. III, Admissions Off. (12/3)  
B75-644, Sec. IV-V, Provost's Off. (12/3)

ACADEMIC STAFF:  
C75-29, Assistant Science Librarian, Science Library (11/12)  
C75-30, Tech. Instructor, Mech. Eng. (11/12)  
C75-31, Asst. Humanities Librarian, Science Library (11/19)

SPONS. RES. STAFF:  
D75-8, Biophysicist, Nat. Magnet Lab. (6/25)  
D75-48, Economist, Energy Lab. (6/25)  
D75-107, postdoc. res., Lab. for Nuc. Sc. (6/25)  
D75-111, Programmer, Artificial Intell. Lab. (6/25)  
D75-112, Engineer, Energy Lab. (6/25)

# Gilliland Professorship

(Continued from page 1)

tries is seeking to complete its work by early March, 1976, when the Department of Chemical Engineering will open new facilities on the MIT campus. A nationwide appeal for support is underway among the more than 5,000 alumni and friends of chemical engineering at MIT.

Mr. Johnson said: "I express MIT's deepest appreciation to Mr. Cook and the members of the National Sponsoring Committee for their initiative in organizing this drive. As former students, friends and colleagues, we are all indebted to Dr. Gilliland for his distinguished contributions to chemical engineering education and his prodigious research achievements, which have advanced our industrial technology on a wide scale. We welcome this opportunity to honor his memory in this most fitting way."

Mr. Cook said: "This distinguished Professorship will bring timely and much needed help to the Department of Chemical Engineering, which carries major responsibility for strategic inputs to the solution of urgent national problems in energy resources, environmental quality, basic materials, and chemical processes—all of which are fundamental to our industrial strength."

When the Edwin R. Gilliland Professorship is fully funded, Mr. Johnson said, "it will be an important addition to MIT's faculty endowment. As such, it is a top priority of the MIT Leadership Campaign currently underway, which includes in its \$225 million goal \$50 million in new faculty professorships. Gifts and pledges to the Gilliland Professorship will advance the MIT Leadership Campaign as well as the drive to increase alumni contributions through the MIT Alumni Fund. We are heartened by the leadership being taken by the Department of Chemical Engineering in staffing this drive."

Members of the National Sponsoring Committee serving with Mr. Cook include:

Colby H. Chandler, executive vice president, Eastman Kodak Co., Rochester, N.Y.; Jerry A. Cogan, Jr., president, Deering Milliken Research Corp., Spartanburg, S.C.; Herbert H. Dow, director and corporate secretary, The Dow Chemical Co., Midland, Mich.; James M. Ewell, vice president-group executive, The Procter & Gamble Co., Cincinnati, Ohio; Raymond C. Foster, Jr., chairman and president, Stone & Webster, Inc., New York, N.Y.; Maurice F. Granville, chairman of the board and chief executive officer, Texaco, Inc., New York, N.Y.; Russell L. Haden, consultant, Ridgefield, Conn.; Dr. Charles J. Harrington, vice president and general manager, Elastomer Chemicals Department, E.I. duPont de Nemours & Co.

D75-120, Systems Programmer, Lab. for Nuc. Sc. (11/26)  
D75-125, Energy Modeling, Energy Lab. (8/6)  
D75-150, Systems Programmer, Helth. Sc. & Tech. (9/3)  
D75-153, Applications Programmer, Lab. for Nuc. Sc. (9/10)  
D75-161, Economist/Policy Analyst, Energy Lab. (9/10)  
D75-166, Operations Branch Mgr., Energy Lab. (9/17)  
D75-167, end-use technology, Energy Lab. (9/17)  
D75-169, Plasma Physicist, Res. Lab. of Elec. (9/17)  
D75-178, Programmer, Center for Space Res. (10/1)  
D75-181, immunology res., Center for Cancer Res. (12/3)  
D75-202, Scientific Programmer, Earth & Pl. Sc. (10/15)  
D75-205, Research Engineer, Economics (10/22)  
D75-210, machine vision research, artificial Intell. Lab. (10/29)  
D75-219, continuing education, Chemical Eng. (11/5)  
D75-220, Executive Director, continuing education, Chemical Eng. (11/5)  
D75-222, biochemist, Nutrition and Food Science (11/12)  
D75-223, mineralogical, chemical research, Earth & Pl. Sc. (11/12)  
D75-226, neurophysiological research, Center for Space Res. (11/19)  
D75-229, Research Engineer, Energy Lab. (11/19)  
D75-230, Engineer, Energy Lab. (11/19)  
D75-232, Programmer, Center for Space Res. (11/26)  
D75-234, computer specialist, Proj. MAC (11/26)

EXEMPT:  
E75-45, Admin. Asst., Mech. Eng. (12/3)

HOURLY:  
H75-55, Tech. B., Lab. for Nuc. Sc. (6/25)  
H85-117, Tech. B., Radioactivity Center (10/15)  
H75-120, Campus Patrol Officer (10/1)  
H75-143, 2nd Cl. Eng. (10/15)  
H75-159, Cook's Helper, Student Center (12/3)  
H75-166, 167, 168, Parking Lot Attendant, Campus Patrol (12/3)

Wilmington, Del.; Dr. F.A.L. Holloway, vice president, Exxon Corp., New York, N.Y.; Samuel C. Johnson, chairman and chief executive officer, S.C. Johnson & Son, Inc., Racine, Wis.; Edward R. Kane, president E.I. duPont de Nemours & Co., Wilmington, Del.; Dr. David H. Klipstein, vice president/particulate operations, Utility Gas Cleaning Division, Research-Cottrell, Inc., Bound Brook, N.J.; William I. Koch, president, Koch International Chemical Co., Inc., Wellesley Hills, Mass.; Dr. Ralph Landau, chairman and chief executive officer, Halcon International, Inc., New York, N.Y.; Leonard P. Pool, chairman, Air Products and Chemicals, Inc., Allentown, Pa.; Dr. Arch C. Scurlock, president, Research Industries, Inc., Alexandria, Va.; Robert E. Siegfried, president and chief executive officer, The Badger Co., Inc., Cambridge, Mass.; Dr. Alexander M. Smith II, president, Chatham Research & Development Corp., Elkin, N.C.; Dr. John E. Stauffer, director of corporate planning, Stauffer Chemical Co., Westport, Conn.; and Dr. Max Tishler, university professor emeritus of the sciences, Wesleyan University, Middletown, Conn.

Born in El Reno, Ok., in 1909, Edwin Gilliland received the Sc.D. degree from MIT in 1933 and joined the MIT staff that same year as a research fellow in the Department of Chemical Engineering. He served in the department continuously until his death in 1973, with the exception of a wartime leave of absence, during which he was a director of government research in Washington, D.C.

Through his innovative research and development efforts in industrial processing, Dr. Gilliland gained recognition as an authority on fractional distillation of petroleum, production of synthetic rubber, and purification of water, and became an important national figure in engineering.

Throughout his career, Dr. Gilliland held a number of distinguished posts at the Institute, including associate director of the Laboratory of Nuclear Science and Engineering, chairman of the MIT faculty, head of the Department of Chemical Engineering, and deputy dean of engineering. In 1969 Dr. Gilliland was appointed the first Warren K. Lewis Professor of Chemical Engineering. In 1971 Dr. Gilliland was named Institute Professor, a unique honor that MIT accords an outstanding faculty member.

During the 1930s, in collaboration with Professor Lewis, and in close cooperation with the petroleum industry, Dr. Gilliland developed the fluid bed reactor technique for catalytic cracking of petroleum products. It was this technique that made possible the production of 100-octane aviation gasoline on a large scale, and it continues to be used for the production of all gasoline made in this country and much of what is produced abroad.

Working with the War Production Board from 1942-44, Dr. Gilliland had a primary role in increasing the production of rubber, another vital wartime commodity. He achieved this through the development of separating processes which made possible the first production of synthetic rubber on a commercial scale.

## Animal Facility Seeks NCI Support

The Division of Laboratory Animal Medicine of the MIT Medical Department has asked the National Cancer Institute to provide \$1.6 million of the \$2.5 million needed for renovations and alterations of facilities where professional care and supervision are provided for animals used in cancer-related biomedical research at MIT. MIT would provide the balance from other sources.

The division, headed by Dr. James G. Fox, associate professor of laboratory animal medicine, supervises and cares for all animals used in research at MIT. The proposed renovations and alterations will provide improved facilities for those animals used in cancer research primarily in the Department of Nutrition and Food Science and in the Department of Biology.

The proposed plan involves renovation of facilities located in MIT's Dorrance Bldg. (Bldg. 16), in the adjoining Uncas A. Whitaker Bldg. (Bldg. 56) and in the Horace Sayford Ford Bldg. (Bldg. E18). NCI has taken the request under advisement.

# Nevelson Sculpture Installation Celebrated

(Continued from page 1)

continuing collaboration between education and the creative process. For a number of years MIT has applied the practice of including a fraction of a percentage of the cost of a facility for artistic purposes in order to enhance the visual quality of the campus.

Dispersed throughout the Institute are sculptures by Alexander Calder, Pablo Picasso, Jacques Lipchitz, Theodore Roszak, Beverly Pepper, Jean Ipousteguy, Max Ernst, Dimitri Hadzi, and Lyman Kipp. Plans for the coming year include the placement of works by Henry Moore and Tony Smith.

Installation of the sculpture will be marked by a brief site ceremony at 3pm. Those present will include Nevelson, Mr. Pei, Professor Andersen, and Professor Raymond F. Baddour, head of the MIT Department of Chemical Engineering. The artist and Professor Andersen will hold an informal conversation with the audience in Rm. 9-150 from 5-6pm.

Preliminary discussions concerning a sculpture by Louise Nevelson for MIT were held among Nevelson, Mr. Pei, Professor Andersen and Mrs. Ida Rubin of the Council for the Arts at MIT in the fall of 1974. Nevelson then visited MIT to evaluate possible sites related to the chemical engineering facility.

A maquette for *Transparent Horizon* was presented to the Committee on the Visual Arts in May, 1975, and was enthusiastically endorsed by the members and Professor Baddour. The project was facilitated with the cooperation of the Council for the Arts at the Planning Office, and Physical Plant. The sculpture was constructed and installed by Lippincott, Inc., of North Haven, Conn., a firm devoted exclusively to the fabrication of large-scale sculpture. MIT's collection of contemporary

sculpture in public spaces is one of the outstanding university art holdings in the country, formulated to meet the educational needs of the academic program by providing significant examples of works by influential contributors to the modern movement as well as to address the issue of environmental quality.

The long-range goal of the acquisitions program of the Committee on the Visual Arts is to accumulate a

collection documenting the history of American art in process. The collection, designated the MIT Permanent Collection, now numbers more than 600 works and includes sculptures, paintings and works on paper in a variety of mediums.

Many artworks in the collection are in public and office spaces throughout the Institute and thus introduce the art experience into daily campus activity.

## Notes on the Sculpture

*Transparent Horizon* was conceived by Louise Nevelson to interact with its surroundings. As a commanding presence comparable to Alexander Calder's *The Great Sail*, now a landmark at MIT, the sculpture will attract visual attention from many vantage points in the area. Nevelson has always been interested in the concept of a total environment, and in devising works for public spaces her holistic sensibility is fully realized.

Successfully capturing in a giant steel translation the enigmatic romanticism she has forfeited in many of her public commissions of the last few years, Nevelson's newest sculpture stands out as the quintessential statement of her later style.

Ultimately, *Transparent Horizon* represents a monumental fragment of Nevelson's private universe. Tenuous associations with commonly recognized reality—plant forms and the vocabulary of architectural parts—are restructured to present a shadowy landscape of other-worldliness, a vision of a haunting mystery. Nevelson focuses attention on the overall experience of the work rather than its separate elements by covering the entire surface with black paint. Nevelson has been using metal

for the last 10 years. As with her earlier wood constructions, she makes no sketches but develops ideas by spontaneously composing and combining various elements. She works closely with metal craftsmen at Lippincott, Inc., a factory devoted exclusively to the fabrication of large-scale sculpture.

It was Nevelson's body of works in wood of the mid-1950s, culminating in the great environmental *Dawn's Wedding Feast* exhibited at the Museum of Modern Art in 1959, that firmly established her critical acclaim. Developing in a constructivist tradition and well-schooled in prevailing Cubist principles, Nevelson emerged in the early 1950s as one of the first artists to transform aggressive Surrealist imagery into a more subtle, nostalgic dream-world fantasy. By incorporating bits and pieces of objects she had gathered in her neighborhood into various arrangements—at first on a single base and then in shallow, box-like compartments uniformly painted a matt black (and in some instances white or gold)—Nevelson developed a singular manner and an artistic preeminence in America equalled only by Alexander Calder and David Smith.



DELTA UPSILON students Mark T. Suchon, left, and Harrison G. Weed reaffirm MIT's commitment to the Cambridge Just-A-Start Saturday Work Projects Program by donating weekend time at a local housing project. Volunteers in past weeks have been from Delta Tau Delta, Phi Delta Theta, and Beta Theta Pi.

—Photo by Kevin Campbell

## Fraternities Play Active Role In Cambridge Community

A total of 483 work hours were recently volunteered to Cambridge citizens by students from four fraternities at MIT as part of the newly resumed Just-A-Start Saturday Work Projects sponsored by the Cambridge Redevelopment Authority.

The most impressive aspect of the five-week effort, according to Peter W. Sleeper, program manager of Just-A-Start, was the number of helping hands offered.

More than 50 students participated from Delta Tau Delta, Delta Upsilon, Phi Delta Theta, and Beta Theta Pi.

They were responsible for rehabilitating apartments in a housing project for the elderly, the Truman Apartment House on Eighth Street in East Cambridge, and at Roosevelt Towers, a mixed family dwelling complex on Cambridge Street.

In addition, Delta Tau Delta, which last year sponsored a Christmas campaign to remove dangerous toys from department store shelves, helped refurbish St. Anthony's Church parish hall on Portland Street. The suggestion for the project came from the Rev. Joseph Oliveira, who said the students donated approximately 91 man-hours, washing walls, scraping, spackling, and painting the church hall.

"If other area universities were half as grass-rooted as MIT, it would be terribly helpful to community relations and the people who coordinate local self-help programs," Mr. Sleeper said.

Just-A-Start, which encompasses a week-day volunteer program of high school students, is supported in part by the MIT Community Service Fund. The Saturday work projects phase was recently resumed after an absence of three years.

Gordon Gottsche, assistant executive director of the C.R.A. and chief administrator of Just-A-Start in Cambridge expressed his thanks in personal letters to each fraternity.

Other service projects that the Greek-letter groups have sponsored are a spring weekend "car smash" event to raise funds for the American Cancer Society, all-day moving efforts for such groups as M.I.N.D., Inc., of Cambridge, and the annual Back Bay Alley Rally to clean up

the neighborhood around their own houses. Delta Upsilon last year won second place in their national trustees' chapter competition for community service.

Mark Suchon, president of DU and a senior in mechanical engineering, said he hoped more community groups would call the fraternities for help.

"We welcome ideas for projects, but right now we have to go out soliciting our own work. We want to get out the message that we're available and willing to do our part in the community."

## AMITA Awards Nominations

The Association of MIT Alumnae (AMITA) invites departments, students and faculty to nominate candidates for the Association of MIT Alumnae Senior Academic Award.

The award will be given on the basis of academic excellence to a woman student in the class of 1976. Factors that will be considered are cum, and depth and breadth of academic accomplishments as shown in course work, special projects, and/or thesis research. AMITA is especially interested in receiving nominations from department research advisors and members of the class of 1976.

Nominations should be submitted by Jan. 10, 1976 to:

Professor ChoKyun Rha  
Room 56-137

Recipient of the award will be announced at a Special Senior Meeting sponsored by the Alumnae on February 8, 1976.

## Dinosaur Coming

New England Dinosaur, a company known for its show, "Where the Wild Things Are," will present a children's program of three works by Toby Amour Dec. 19-23 in Kresge Little Theatre under sponsorship of MIT Dramashop. The program at 3pm Monday, Dec. 22, will be free to the MIT community.

The program is made possible by a grant from the Massachusetts Council on the Arts and Humanities. Information about tickets may be obtained by calling x3-4720.

## MIT Libraries Christmas Vacation Schedule

|               | Aero                                | Barker Eng'g. | Chemistry R.R. | Dewey  | Humanities | Lindgren | MARIC  |
|---------------|-------------------------------------|---------------|----------------|--------|------------|----------|--------|
| Thu., Dec. 18 | 9-5                                 | 9-9           | 10-4           | 8:30-9 | 8-9        | 8:30-5   | 9-5    |
| Fri., Dec. 19 | 9-5                                 | 9-6           | 11-4           | 8:30-6 | 8-6        | 9-5      | 9-5    |
| Sat., Dec. 20 | closed                              | closed        | closed         | closed | closed     | closed   | closed |
| Sun., Dec. 21 | closed                              | closed        | closed         | closed | closed     | closed   | closed |
| Mon., Dec. 22 | 9-5                                 | 9-9           | 11-4           | 8:30-9 | 8-9        | 9-5      | 9-5    |
| Tue., Dec. 23 | 9-5                                 | 9-9           | 11-4           | 8:30-9 | 8-9        | 9-5      | 9-5    |
| Wed., Dec. 24 | 9-noon                              | 9-1           | closed         | 8:30-1 | 8-1        | 9-noon   | 9-noon |
| Thu., Dec. 25 | closed                              | closed        | closed         | closed | closed     | closed   | closed |
| Fri., Dec. 26 | closed                              | closed        | closed         | closed | closed     | closed   | closed |
| Sat., Dec. 27 | closed                              | closed        | closed         | closed | closed     | closed   | closed |
| Sun., Dec. 28 | closed                              | closed        | closed         | closed | closed     | closed   | closed |
| Mon., Dec. 29 | 9-5                                 | 9-9           | 11-4           | 8:30-9 | 8-9        | 9-5      | 9-5    |
| Tue., Dec. 30 | 9-5                                 | 9-9           | 11-4           | 8:30-9 | 8-9        | 9-5      | 9-5    |
| Wed., Dec. 31 | 9-5                                 | 9-5           | 11-4           | 8:30-5 | 8-5        | 9-5      | 9-5    |
| Thu., Jan. 1  | closed                              | closed        | closed         | closed | closed     | closed   | closed |
| Fri., Jan. 2  | closed                              | closed        | closed         | closed | closed     | closed   | closed |
| Sat., Jan. 3  | closed                              | closed        | closed         | closed | closed     | closed   | closed |
| Sun., Jan. 4  | closed                              | closed        | closed         | closed | closed     | closed   | closed |
| Mon., Jan. 5  | All Libraries resume regular hours. |               |                |        |            |          |        |

|               | Music                               | Reserve Book Rm. | Rotch  | Science | Space Ctr. R.R. | Student Center     | von Hippel R.R. |
|---------------|-------------------------------------|------------------|--------|---------|-----------------|--------------------|-----------------|
| Thu., Dec. 18 | 8:30-5                              | 8-5              | 9-9    | 8-9     | 9-5             | 24 hrs.            | 9-5             |
| Fri., Dec. 19 | 9-5                                 | 9-5              | 9-6    | 8-6     | 9-5             | 24 hrs.            | 9-5             |
| Sat., Dec. 20 | closed                              | closed           | closed | closed  | closed          | 24 hrs.            | closed          |
| Sun., Dec. 21 | closed                              | closed           | closed | closed  | closed          | 24 hrs.            | closed          |
| Mon., Dec. 22 | 9-5                                 | 9-5              | 9-9    | 8-9     | 9-5             | 24 hrs.            | 9-5             |
| Tue., Dec. 23 | 9-5                                 | 9-5              | 9-9    | 8-9     | 9-5             | 24 hrs.            | 9-5             |
| Wed., Dec. 24 | 9-noon                              | 9-noon           | 9-1    | 8-1     | 9-noon          | {closed at noon}   | 9-noon          |
| Thu., Dec. 25 | closed                              | closed           | closed | closed  | closed          | closed             | closed          |
| Fri., Dec. 26 | closed                              | closed           | closed | closed  | closed          | closed             | closed          |
| Sat., Dec. 27 | closed                              | closed           | closed | closed  | closed          | {open at 8 a.m.}   | closed          |
| Sun., Dec. 28 | closed                              | closed           | closed | closed  | closed          | 24 hrs.            | closed          |
| Mon., Dec. 29 | 9-5                                 | 9-5              | 9-9    | 8-9     | 9-5             | 24 hrs.            | 9-5             |
| Tue., Dec. 30 | 9-5                                 | 9-5              | 9-9    | 8-9     | 9-5             | 24 hrs.            | 9-5             |
| Wed., Dec. 31 | 9-5                                 | 9-5              | 9-5    | 8-5     | 9-5             | {closed at 5 p.m.} | 9-5             |
| Thu., Jan. 1  | closed                              | closed           | closed | closed  | closed          | closed             | closed          |
| Fri., Jan. 2  | closed                              | closed           | closed | closed  | closed          | {open at 8 a.m.}   | closed          |
| Sat., Jan. 3  | closed                              | closed           | closed | closed  | closed          | 24 hrs.            | closed          |
| Sun., Jan. 4  | closed                              | closed           | closed | closed  | closed          | 24 hrs.            | closed          |
| Mon., Jan. 5  | All Libraries resume regular hours. |                  |        |         |                 |                    |                 |