

## Gifts of \$100,000 Go to Arts Council

Gifts and pledges totaling \$100,000 to support the initial operations of the Council for the Arts at MIT were announced last week by Paul Tishman, chairman of the Council.

Mr. Tishman, an MIT alumnus in the Class of 1924 and a noted New York collector of African art, made the announcement October 12 to an audience of about 100 attending the first meeting of the newly formed Council for the Arts at MIT.

Citing the support of four successive MIT presidents for work in the arts, Mr. Tishman hailed recent gifts as evidence of a "major commitment to a new pace for American education."

The Council for the Arts, Mr. Tishman said, grew out of the MIT Committee on the Visual Arts, and when fully formed will support arts activities in a wide number of fields at the university. To date, the Council has made a number of small grants, including \$1,250 to

the Dance Workshop, \$2,500 to the Student Art Association, \$1,500 for the Visiting Poets Series, and \$3,730 to support work in the Laboratory for Archeological Research.

President Jerome B. Wiesner opened the meeting, after a buffet luncheon at the MIT Faculty Club. "This first meeting of the Council marks the beginning of what promises to be a long and exciting relationship," he said.

The President noted that the turnout for the Council's first meeting was a good deal larger than expected. Of the Council's 57 members, including the executive committee, 48 attended the meeting and 27 brought their spouses. There were some 25 faculty and guests, bringing total attendance to the level of 100. Among prominent figures in the arts were: Roger Stevens, first chairman of the National Endowment for the Arts and head of the John F. Kennedy Center for the Performing Arts in Washington; David Rockefeller, Jr., of the Boston Symphony Orchestra; and poets Archibald MacLeish and Stanley Kunitz.

The Council, President Wiesner said, will fill a vital role in fostering communication within the university. Citing C. P. Snow's metaphor of two cultures, President Wiesner said, "I think such a dichotomy is too simple. We have a many-culture problem, and communication among the cultures is partly a matter of language and partly a matter of cognitive style."

Stressing MIT's unique character as a university based on sci-

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## Faculty to Meet

The MIT Faculty will hold its regular October meeting in Room 10-250, starting at 3:15pm today, Wednesday, October 18.

During the first part of the meeting, the Faculty will consider a motion by the Committee on Discipline for the granting of certain academic degrees.

Following this first item of business, the meeting will be open to other members of the MIT community. The agenda includes reports of the Committee on Curricula and the Committee on Nominations, remarks by the chairman on the current and prospective business of the Committee on Educational Policy and the Faculty, and a proposed Special Laboratory on Energy.

## Superior Court Rules in 18 ROTC Cases

Eighteen of 19 persons charged with trespass in connection with last spring's occupation of the MIT ROTC building entered pleas of guilty in Lowell Superior Court Tuesday.

The remaining defendant was out of the state and his case was continued until November 1.

All 19 had previously been found guilty of trespass in Cambridge District Court and had appealed for new trials in Superior Court. In District Court, three had been given jail terms and 16 had been given fines.

Following their guilty pleas in Superior Court Tuesday, the court set aside the jail sentence for one defendant and imposed a \$100 fine. Two others were given suspended jail sentences, placed on six months probation, and fined \$100 each. The Superior Court reduced fines in the remaining 15 cases from \$100 to \$50.

## Electrical Accident Fatal to Student

Shri Krishna Singh, a physics graduate student at MIT received a fatal electrical shock Monday while working on his experiment in a laboratory in the basement of Building 4.

Physics department officials said Singh, 20, of Lucknow, India, and a resident of Ashdown House, was working with a gas laser operating at 4,000 volts when he apparently came accidentally into contact with a charged metal plate at one end of the apparatus. He was knocked unconscious and was discovered a few minutes later, at 12:20pm, by two fellow students from an adjoining part of the laboratory.

Singh received emergency aid in the laboratory, and, under a physician's supervision, was taken to Mt. Auburn Hospital by the Campus Patrol. Despite the efforts of a team of cardiac specialists, he died at 4:50pm. Memorial services organized by Professor Ali Javan and a group of close friends and colleagues were to be held in the MIT Chapel Tuesday evening.

Singh received his S.B. degree in



Mr. Paul Tishman.

—Photo by Marc PoKempner

## Man-Powered Airplane Being Built by Students

Six MIT students are building a two-man pedal-powered airplane from aluminum, balsa wood and bicycle parts which they hope to enter in a \$25,000 competition for the first successful man-powered flying machine.

The MIT student craft is a biplane with balsa wood upper and lower wings measuring 62 feet from tip to tip and a smaller balsa wood stabilizer wing jutting forward.

The wings—covered with nylon 1/1000ths of an inch thick—plus an open fuselage formed from welded aluminum struts and a pair of bicycle wheels for landing gear give the 130-pound vehicle the frail appearance of something the Wright brothers might have flown at Kitty Hawk, in the earliest days of aviation.

The difference is motive power.

Instead of an engine, Robert M.

## Soaring Symposium to Be Held at MIT

Sailplane enthusiasts will gather at MIT for the first international Symposium on the Technology and Science of Motorless Flight, next Thursday, Friday and Saturday (October 19-21) at Kresge Auditorium.

Preceding the Symposium, on Wednesday afternoon, October 18, at 1:50pm, a special program in Kresge Auditorium sponsored by the Soaring Society of America will include a film highlighting the accomplishments of that Society's members. The film, which is free to the public, will be narrated by

Paul Bikle, Lancaster, California, who holds the world altitude record for gliders, at 47,000 feet.

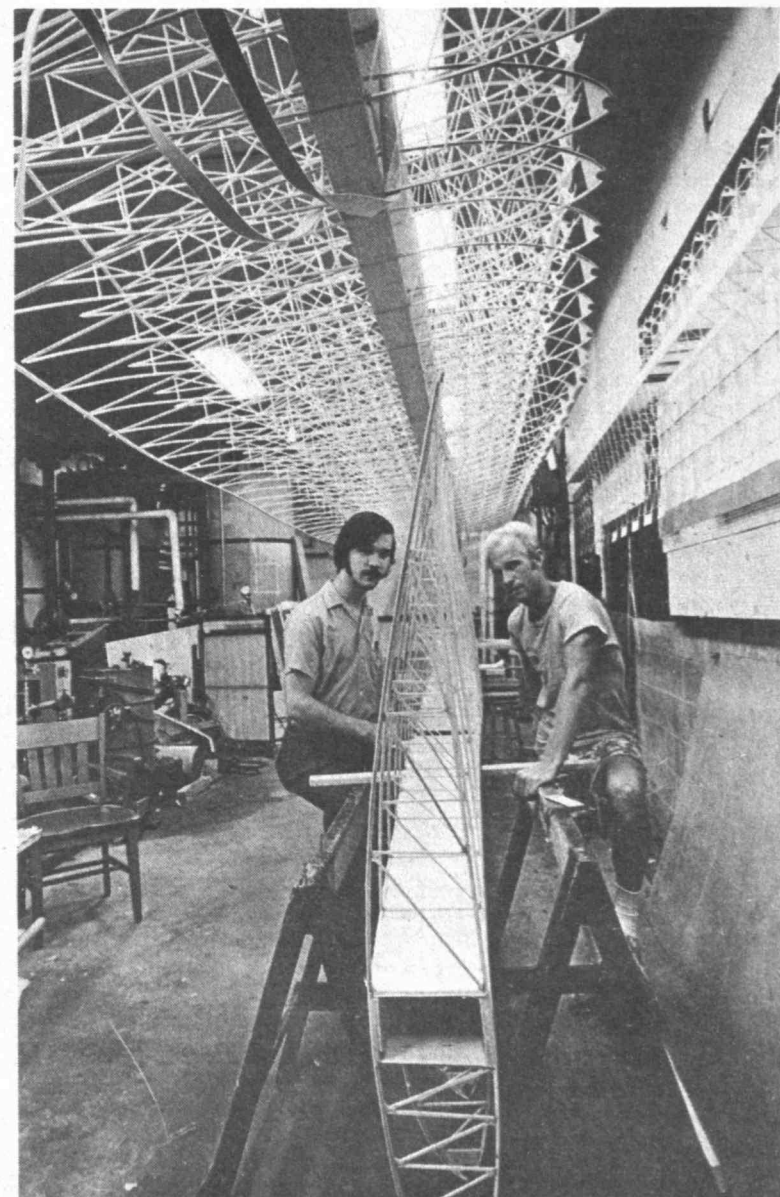
The Symposium is sponsored by the MIT Soaring Association and the Department of Aeronautics and Astronautics. The Symposium commemorates the 50th anniversary of the first serious soaring activity at MIT. In 1922, three MIT undergraduates built and transported to Europe the only American glider to compete in the international glider competition at Clermont-Ferrand, France.

At the Symposium, researchers from throughout the United States as well as from Germany, Italy and England, will present papers on topics as diverse as how sailplanes are used to conduct scientific experiments, to the materials and design required for higher performance sailplanes.

At 10:10am on Thursday (October 19), Wim Toutenhoofd and J. Doyne Sartor, senior scientists at the National Center for Atmospheric Research in Boulder, Colorado, will present papers on the use of an instrumented sailplane as a platform for cloud physics research.

An entire session, from 8:30 to 10:30am, October 20, chaired by Bernard Paiewonsky of Bethesda, Maryland, editor of *Technical Soaring*, will be devoted to structural concepts and materials.

(Continued on page 3)



Robert M. Peterson, left, and Steven Garboski, stand beside one wing of the man-powered plane. Another partially completed wing hangs overhead.

—Photo by Marc PoKempner

## Special Supplement

The Report of the President and the Chancellor for the 1971-72 academic year is included as a pull-out supplement in this week's issue.



Left to right: Professor Richard M. Douglas, Miss Natalie Nicholson, Peter Spackman of the News Office, I. Austin Kelly and Professor William N. Locke examine several examples from the collection of rare and historical books Mr. Kelly presented to the Institute last week. —Photo by Margo Foote

## I. Austin Kelly Becomes MIT Rare Books Curator

Twenty-seven rare books estimated at a value of over \$100,000, including a 15th-century illuminated manuscript, a perfect page from the Gutenberg Bible, and a first edition of Tom Paine's *Common Sense*, have been presented to the MIT Libraries by the noted New York book collector, I. Austin Kelly, III.

In an informal ceremony October 12 at MIT's Hayden Library, Mr. Kelly presented the books, which he had brought from New York by air in two plain, strong suitcases. They were given as a tribute to William N. Locke, who retired June 30 after 16 years as Director of Libraries. Announcement of Mr. Kelly's gift was first made last spring at a reception honoring Professor Locke upon the occasion of his retirement. Mr. Kelly, who is an alumnus of MIT in the Class of 1926, and Professor Locke are old friends.

In addition to Mr. Kelly and Professor Locke, those present to receive the books for MIT were: Natalie N. Nicholson, acting director of the MIT Libraries; Vincent A. Fulmer, vice president and secretary of the Institute; Richard M. Douglas, head of the Department of Humanities; and Mrs. Frances B. B. Sumner, humanities librarian.

The most valuable of the books just presented to MIT, which represent the remainder of Mr. Kelly's collection and include several of the most sought after books he acquired in his years as a collector, is the first edition of Paine's *Common Sense*. It has been appraised at more than

\$30,000, took Mr. Kelly 39 years of searching to acquire, and is a rare first issue, in perfect condition, of the famous tract issued in January 1776 by the small printing shop of Robert Bell in Philadelphia.

"I know of no better way to express my admiration for Professor Locke and for MIT than to have this important work as a permanent part of the university Library," Mr. Kelly said. Fewer than a dozen such copies of *Common Sense* are known to exist, he added. When the 47-page, two shilling pamphlet was first published, it sold over 300,000 copies in three months—the equivalent today of a book's selling six to seven million copies—and within half a year the Declaration of Independence was signed, Mr. Kelly said.

Among other books in the Kelly collection: *A Book of Hours*, brilliantly illuminated, dating from 1450; a page in perfect condition from the Gutenberg Bible; an example of incunabula, printed in Venice in the latter half of the 15th century; a pristine page printed by Caxton, the first printer in the English language; a copy of Hakluyt's *Voyages*, written between 1597 and 1600; John Eliot's *Indian Bible*, written by the pastor at the early settlement in Rox-

bury, where he invented written characters for the Indian language and taught the Indians how to read it; John Smith's *History*, including one of the rare maps that Captain Smith made of the New England coast from Penobscot Bay to Cape Cod; two books relating to George Washington, including his account of a trip to the British outpost of Ft. Duquesne, which was printed in Williamsburg in 1754, and *The Letters of Junius*, which bears Washington's signature and coat of arms; a copy of *The Federalist Papers*, in boards uncut, and of Dicken's *David Copperfield*, in parts, making both extraordinary collectors' items; examples of Hollis binding and double fore-edge artwork; a first edition of Nathaniel Bowditch's famous *American Practical Navigation* and of Frederick Jackson Turner's pioneering essay *The Significance of the Frontier in American History*.

When Mr. Kelly's gift was announced last spring, he was also named curator of rare books at MIT, and in presenting his collection said that among his first tasks in this post would be the gathering of a group of friends of the MIT Libraries to promote further acquisitions in the rare book field and provide for their care and safe-keeping at MIT.

This is not the first gift of rare books Mr. Kelly has made to MIT. At various times in the past he has presented MIT with a total of 17 rare volumes, almost all of them in the history of science. Several years ago, at Professor Locke's suggestion, Mr. Kelly gave the MIT Libraries its millionth book. It was a rare first edition, in perfect condition, of Walt Whitman's *Leaves of Grass*.

Mr. Kelly is founder of one of the first pension consulting firms in the United States, the National Employee Relations Institute in New York City. After earning a degree in engineering at MIT and doing graduate work at Harvard University, he became interested in collecting rare books while a graduate student at Trinity College, Oxford.

## Union Accepts New Contract

Physical Plant and dormitory employees represented by the Building Service Employees International Union (AFL-CIO) voted to accept a new two-year agreement with MIT in a secret ballot last Thursday.

The agreement calls for a 5.5 percent wage increase this year, 5.2 percent next year and changes in pension and Blue Cross-Blue Shield provisions.

Members of the same union, representing 130 employees at Lincoln Laboratory, had voted earlier to accept the agreement.

Mr. Davis said that negotiations are continuing with the other unions at MIT.

## W. A. Davis to Direct Internship Program

The Minority Intern Program of the Department of Urban Studies and Planning has begun its second year with a new director, William A. Davis, Jr. of Boston.

Professor Davis joined the faculty in July as associate professor of law and urban studies, according to Professor Lloyd Rodwin, head of the Department of Urban Studies and Planning.

The Minority Intern Program is a federally funded effort which supports 20 minority Master of City Planning candidates as planning interns in state and local agencies. Professor Davis conducts a weekly seminar, "Planned Change and Implementation" in conjunction with the intern program.

The students involved in the Minority Intern Program receive a stipend for the 12 hours a week they work as interns, plus money to cover a portion of their tuition. Students also receive academic credit for their work.

The Minority Intern Program is one of several field-linked programs in the Department of Urban Studies and Planning which give students the opportunity to receive academic credit for work outside

the classroom.

Besides his responsibilities with the Minority Intern Program, Professor Davis will also be teaching urban legal studies to undergraduate and graduate students.

For the past four and one half years, Professor Davis served in various capacities with the Circle Complex, a coalition of two non-profit Roxbury community economic development corporations.

A graduate of Amherst College in 1963, Professor Davis received his graduate degrees in law and urban studies at Yale University in 1968. He also studied at the University of Ibadan in Nigeria under a Rotary Fellowship in 1963 and 1964.

Last spring, Professor Davis was a visiting lecturer at Tufts University. He was a member of the Institute of Public Administration task force which designed the Human Resources Administration in New York City in 1966.

A member of the Bar of Massachusetts, Professor Davis was recently voted one of the ten outstanding young leaders of Greater Boston by the Junior Chamber of Commerce.

## New Arts Council Holds First Meeting

(Continued from page 1)  
ence and technology, he said that the Institute was not about to abandon its traditional strengths in these fields, but noted that in many art forms a recent interest in the technological could provide MIT with an important capacity to make genuine contributions. "As our programs in the arts develop," he said, "we welcome your advice and your criticism of specific elements, for there is also a danger of emphasizing the technological at the expense of the art."

Professor Roy Lamson, Class of 1922 Professor at MIT and special assistant to the president for the arts, outlined some of MIT's prior accomplishments in the arts and introduced three speakers from the faculty to explain specific areas. Wayne V. Andersen, professor of architecture and chairman of the Committee on the Visual Arts, said that student enrollment in visual arts courses had increased at MIT from 284 a decade ago to 1,055 in the current academic year. Barry Spacks, professor of English, gave examples of student work in poetry. John Buttrick, head of the music section, gave details of the many musical activities conducted throughout the university.

Following a number of site visits, the meeting reconvened for a reception and dinner at the President's House, presided over by Dr. and Mrs. Wiesner. Before dinner a film on the arts at MIT made by Professor Richard Leacock was screened and drew much applause. President Wiesner introduced before-dinner toasts to Klaus Leipmann, long-time head of the music section and director of music at MIT, Professor Gyorgy Kepes, director of the MIT Center for Advanced Visual Studies, and former President Julius A. Stratton.

Guest of honor and after-dinner speaker was Eric Larrabee, director of the New York State Council on the Arts, who described something of the work of the New York Council and placed MIT's

new effort in the context of the national arts council movement.

"The arts in the university must professionalize themselves," Mr. Larrabee said. "The failing of so many art departments has been to match the other disciplines in their intellectual capacities to conduct teaching, practice and research. MIT has so far avoided this failing in the arts. At best, the university can be the world that we want in microcosm."

### TECH TALK

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Please address all news and comment to the editorial office, Room 5-111, Ext. 3-3277.

## Holiday Notice

The Institute will observe the Veterans' Day holiday on Monday, October 23. Holiday pay provisions will be in effect for that date.

Students will have an additional day of vacation—classes will not be held on Monday and Tuesday, October 23 and 24.

# Man-Powered Plane Uses Balsa Wood, Bicycle Parts

(Continued from page 1)

long-standing offer of about \$25,000 (actually 10,000 pounds sterling) by British industrialist Henry Kremer for the first man-powered aircraft that can take off and negotiate a one-mile figure eight course at an altitude of at least 10 feet. Many have tried, but none has yet succeeded.

The MIT students are building their craft in a hanger used by the Draper Laboratory at L. G. Hanscom Field in Bedford.

Peterson and Hooper plan to present a paper on the vehicle at a Symposium on the Technology and Science of Motorless Flight to be held at MIT Friday, October 20.

Later this year, they plan to begin flight tests at Hanscom Field. Once they have the machine flying they will lay out a prescribed course, line up official judges and try for the \$25,000 Kremer prize—possibly next spring.

To start with, at least, one of the first team of pedal-pumping test pilots will be one of the students' principal sponsors, Steven Garboski of Whitehouse Station, New Jersey, a pilot and an amateur bicycle road racer.

The students began planning their craft more than two years ago when they were sophomores. They used computer analysis and computer simulation to determine design and tested models in the Wright Brothers Wind Tunnel.

They settled on the final design last fall, but despaired of being able to build the actual airplane for lack of funds.

Garboski, however, found out about the project when he dropped in to see if anyone at MIT was involved with man-powered aircraft, and agreed to help finance the construction himself. In addition, Garboski—who weighs only 140 pounds, but who is a trained athlete as the result of his bicycle road racing—agreed to be one of the test pilots in the competition.

The second man has yet to be chosen, but he will be a trained athlete with the leg power of a competitive bicycle road racer.

Two wings instead of one and two pilots instead of one make the

MIT student craft radically different from earlier vehicles which have tried for the Kremer prize. In their design, the students sacrificed streamlining for light weight. They are employing balsa wood because it is light and can be easily cut and glued. Each of the four 30-foot wings, for example, when covered with the clear nylon skin weighs only 12 pounds.

The students have already developed a flight plan for the competition. They intend to have their pilots peddle on the ground until the plane reaches 26 miles per hour. As soon as they become airborne, the plan is to climb to 30 feet as quickly as possible and maintain that altitude at a cruising speed of 18 miles per hour.

A trained athlete, they say, can produce about one-half horsepower continuously for fifteen minutes or so. The two men aboard the craft should provide more than enough power to produce level flight.

The major problem in winning the Kremer prize, they believe, will be making the two turns. As the plane banks to turn, it will lose lift and more horsepower will be needed to maintain altitude. Under the ideal conditions created in a computer simulation, however, the students have determined that the craft can make the figure eight.

The other students are Robert A. Walter, 22, of Inglewood, California, a graduate student in mechanical engineering, Edward A. Uchno, 21, of West Hazelton, Pennsylvania, a fifth year student majoring in aeronautics and biology, David A. Euler, 19, of Pittsburgh, Pennsylvania, a sophomore in aeronautics, and John H. Wendell, 18, of Omaha, Nebraska, a freshman. A student formerly with the group, Peter J. Fecanin, 22, of Carlstadt, New Jersey, has graduated from MIT and is now attending Georgetown Medical School, Washington, D.C.

Professor Eugene E. Covert of the Department of Aeronautics and Astronautics was advisor to the group throughout the craft's design stages. Professor James W. Mar, of the same department, is

advising the students through construction.

The students have received help from many sources besides Garboski. Funds have been provided by the Department of Aeronautics and Astronautics and the Undergraduate Research Opportunities Program (UROP). Dr. Charles Stark Draper, president of the Draper Laboratory and a former head of the Department of Aeronautics and Astronautics, has arranged for the students to use the laboratory's hanger and would donate up to \$1,000 himself toward project costs.

MIT provided computer time and wind tunnel time. Schwinn Bicycle Co. donated frame and parts. Richmond Corp., of California, donated the nylon wing skin, and Winfred M. Berg, Inc., East Rockaway, New York, donated drive gears and chains.

All told, the students expect the finished aircraft will have some \$11,000 in materials, services and time invested in it before it takes to the air.

## MIT to Host Soaring Event

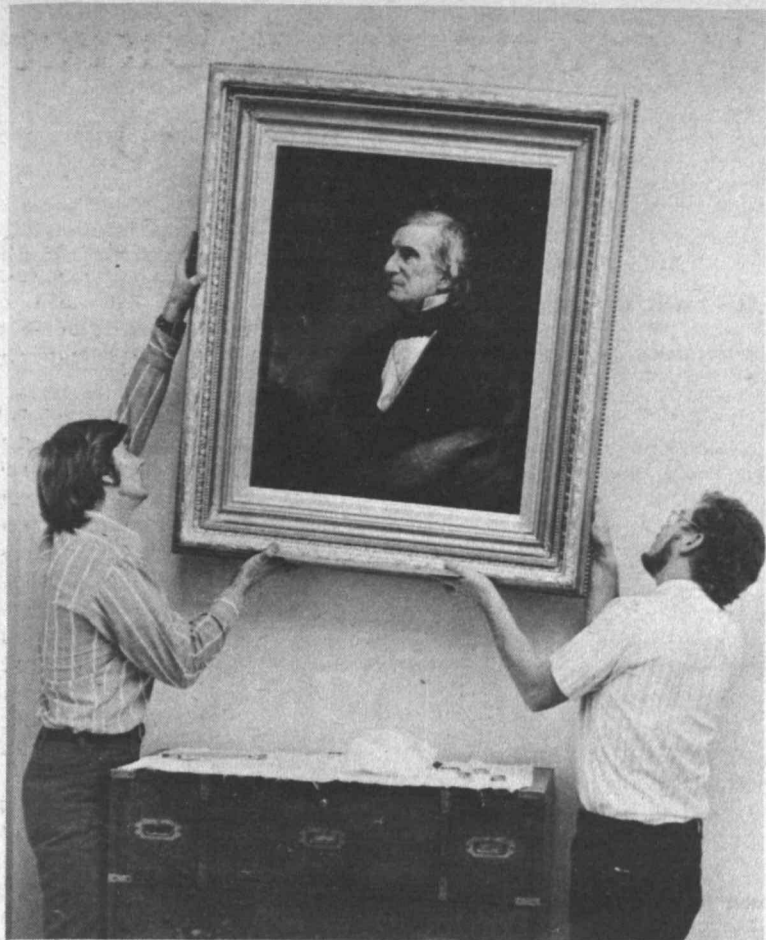
(Continued from page 1)

Papers will be presented on extruded light alloy structures, composite materials, fiberglass reinforcement and special epoxies.

Later that day, from 10:50am to 2:30pm, a session chaired by Harry N. Perl of Lawrence Radiation Laboratory, Livermore, California, will cover self-launching sailplanes.

A major session of the Symposium will be on aerodynamics and design, Saturday, October 21, from 8:30am to 5:00 pm. It will be chaired by Andrew J. Smith, Southfield, Michigan, former world champion soaring pilot. The session will include papers on the application of computers to sailplane design, the search for greater speeds in cross-country flight, airfoil design and wind tunnel measurement of sailplanes.

There is a Symposium registration fee of \$5.00 for students, and \$20.00 for non-students.



Walt Taylor, left, and Warren D. Seamans, curators of MIT's historical collections remove the Rogers portrait from the Chairman's office for shipment to Washington.

—Photo by Margo Foote

## National Exhibit Will Include MIT Founder

The portrait of MIT founder William Barton Rogers, which normally hangs in the office of the Chairman of the Corporation Howard W. Johnson, has left the Institute temporarily to become

part of an exhibition at the National Portrait Gallery in Washington, D.C.

The portrait will be included in an exhibition on the Lazzaroni, a select group, comprised mostly of scientists, which dominated the American scientific scene in the mid-nineteenth century, according to Marvin S. Sadik, director of the National Portrait Gallery. Although Dr. Rogers was not a member of the Lazzaroni, the exhibit will include several persons who figured prominently in relation to the Lazzaroni.

In addition to the portrait, several of Dr. Rogers' letters and a picture of the original Rogers Building in Back Bay will be sent to Washington.

The exhibit will open December 26, at the time the annual meeting of the American Association for the Advancement of Science will be held in Washington. The show will continue through May 7, 1973.

## Flu Vaccine Available

With flu season coming up, the Medical Department is prepared to give inoculations for the types of influenza which have been prevalent in previous years.

"We recommend immunizations for members of the community who are over 50 or who have chronic diseases," Dr. Albert O. Seeler, director of the Medical Department, said. "However, persons who have reactions to eggs or egg products should not be given the vaccine."

Two injections are suggested for people who have not previously been immunized, Dr. Seeler said. There is a one-dollar charge for each injection.

## Two Cited for Teaching

Two professors in the Department of Nutrition and Food Science were honored this week by their students for "excellence in teaching."

Robert B. Wilson, of Peabody, associate professor of nutritional animal pathology and Daniel I. C. Wang, of Watertown, associate professor of biochemical engineering, received awards at a departmental convocation Monday. The awards were started in 1969 by students who wanted to recognize outstanding teachers in the department's two main areas: food science and technology and nutritional biochemistry.

This year's awards carried no cash prize.

According to Thad Nowak, a graduate student in the department from Cambridge, the criteria for the awards is mainly subjective and most of the students participating in the choice were graduate students.

## MBUF, UBA Open Campaign

The 1972 Massachusetts Bay United Fund (MBUF)-United Black Appeal (UBA) campaign at MIT will be held from October 25 through November 22, Professor Samuel A. Goldblith told chief solicitors at kick-off dinners held in Ashdown House on Monday and Tuesday evenings.

During the next few days, campaign materials will be distributed to solicitors throughout the community so that the drive may begin promptly on schedule. It is particularly important that the drive be completed as quickly as possible because of bookkeeping procedures which must be carried out by the United Fund before contributions can be allocated.

Professor Goldblith noted that although the total contributions from the Institute have been rising over the past few years, the number of people who contribute has been falling. "We must reverse this trend," he said, "so



Left to right: Will Spencer and Thomas Moran of the UBA, Samuel A. Goldblith of MIT and Cecil Cozier of MBUF, John A. Carley of MIT, Lisa Simmons of UBA at one of two kick-off dinners.

—Photo by Margo Foote

that we can increase both the total and the number of people giving in order to improve the quality of life for all of our communities."

Two years ago the Institute added the UBA to the traditional United Fund Drive and will do so again this year. Members of the community who wish to support

the needs of the inner city will have the opportunity to make direct contributions or donate through payroll deductions—as is also customary with the United Fund.

The UBA has openly expressed its appreciation of MIT's support in the past and depends on our

continued patronage. Following last year's campaign, in which 1,032 members of the MIT community donated \$20,837, the UBA saluted the Institute for being the only large organization to offer systematic support and for contributing more than all the other corporation combined.







## New Coaches Named in Athletic Department

Four new coaches have been appointed in the MIT Athletic Department, as announced by Ross H. Smith, director of athletics.

They are: Zsolt Szilagyi, varsity water polo; Derek K. Harps, assistant varsity basketball; Stewart E. Smith, assistant varsity gymnastics; and Dana G. Pond, assistant varsity swimming and women's swimming.

Mr. Szilagyi, 36, a native of Szeged, Hungary, has played club water polo for six years. He is a 1962 graduate of the University of Oklahoma and is now studying at the Massachusetts College of Optometry. He succeeds Charles E. Batterman who will continue as varsity swim coach.

Mr. Harps, 22, a native of Washington, D.C., is a 1972 graduate of Boston University where he played varsity basketball for two seasons and coached the freshman team for one. He is now working for the First National Bank of Boston. Mr. Harps replaces David Jansson who was commissioned into the US Navy during the summer.

Mr. Smith, 25, is a native of New York City and a 1969 graduate of Southern Illinois University. He captained the 1969 Salukis gymnasts and competed against the Bulgarian national team in 1970. He is now an instructor at the

### Baseball

MIT's baseball coach Fran O'Brien had to do without the pitching and hitting of graduate star Al Dopfel, but nevertheless the Tech nine posted a 6-2-1 fall record.

Their six victories included two wins over perennial Greater Boston League contender Boston College. The most encouraging aspect of the fall baseball season, however, was the new names on the top of the statistical list.

Freshman Mike Royal from Ayer led the Tech pitchers with a 2-0 win-lost record and a 1.26 ERA. Top hitter was junior Kevin Rowland of Woodland Hills, California, with a .429 batting average, while senior captain Rick Charpie of Weston supplied the power with two homers and seven RBIs.

The four week fall baseball season gave Coach O'Brien an indication that his MIT nine could be a winner in the spring. O'Brien sheds his baseball flannels for whistle and play book this week as he starts his first season as Tech's head basketball coach.

### Soccer

Tech's soccer team was edged 3-2 in overtime by top ranked Middlebury College last Saturday.

Ahead 2-1 with 11 minutes remaining in the game, the Tech booters were outplaying the undefeated Panthers, ranked sixth in New England. Freshman Shin Yoshida of Ibaraki, Japan, had scored his fourth and fifth goals of the new season in the first half, and Tech's behind backs, senior captain Eric Barklis of Fort Worth, Texas, and junior Mark Abkowitz of Lexington, had contained Middlebury for three quarters of the game.

Middlebury tied the game with 11 minutes to go and then held MIT's rush to run out the regulation time. Middlebury won the game in the first overtime period with a hard shot from right wing.

Now 2-3, the Techmen open the Greater Boston League competition against Brandeis University today at 3:30pm on Briggs Field.

Academy of Gymnastics and Perceptual Motor Training in Wellesley.

Mr. Pond, 33, is a native of Portland, Maine, and a 1962 graduate of Syracuse University. He was a member of the Syracuse soccer and swimming teams. He is now working for Allyn and Bacon Publishers, Inc. of Boston.

### Tennis

Last weekend Tech junior Bill Young of Austin, Texas, breezed through the annual Brandeis Invitational Tennis Tournament, winning his third straight singles title.

Bill didn't lose a set while beating five opponents. In the first two rounds, he only lost one game. In the final he faced last season's New England collegiate singles runner-up Dave Miller of Brown University. Bill topped his Brown opponent 6-3, 6-3, to continue his dominance in the Brandeis Invitational.

The previous week in the Eastern Collegiate Conference Fall Championships at Princeton, Bill defeated Harvard's John Ingard, a former top ranked New England junior, 6-4, 6-3, for the ECAC's consolation singles title.

### Tennis Center Open Nights

From now through October 30, the Carr Indoor Tennis Center will be open evenings from 7 to 11pm, according to Ross H. Smith, director of athletics.

Players will be charged \$6 per court hour for this pre-season indoor play. Reservations may be made between 12 noon and 2pm or after 7pm at Ext. 3-1451.

Smith also said that the Indoor Tennis Season will officially open on Sunday, October 31 and run through Saturday, March 31. Application for the season plan playing time may be made at the office of the Department of Athletics, Room W32-109.

For information through Friday, October 29, call Mrs. Ruth Steller, Ext. 3-4498. For information on or after October 31, see Henry Motroni at the Tennis Center or call Ext. 3-1451.

## New Nick Dean Photo Silkscreens Displayed

An exhibition of new photo-silkscreens by Nick Dean, head of the photography department at the School of Fine and Applied Arts in Portland, Maine since 1968, are now on display at the Creative Photography Gallery in duPont Gymnasium.

Mr. Dean, previously a documentary photographer, turned to photo-silkscreens just a few years ago. "This change was in accord with his growth in creative work. He wants the sense of control of color and form that serigraphy can bring to camerawork," explained Minor White, MIT professor of photography.

Mr. Dean studied photography under Ansel Adams and Minor White, after attending Dartmouth and Harvard Colleges. From 1956-66, he was a technical specialist at the Polaroid Research Labs in Cambridge, and



A potential customer looks over the new line of natural foods at the Coop.

—Photo by Margo Foote

## Natural Foods Corner Opens at Tech Coop

The Tech Coop recently opened a new department called the Natural Foods Corner.

Located between the camera and record departments, the Natural Foods Corner offers a wide variety of products ranging from natural spring water to organic peanut butter. The main supplier of these natural foods is Erewhon Trading Company.

Tech Coop Manager Alan Powell says, "We felt that there was sufficient demand among young people to start the Natural Foods Corner. The Harvard Square store opened a similar department and received favorable response, so we decided to offer the same products at the Tech Coop."

Natural foods enthusiasts will find many popular products at the Coop—whole wheat and rye flour, organic honey, mung beans, whole wheat berries, wheat pilaf, granola, whole wheat spaghetti and

macaroni, sesame butter, tamari, and rolled oats.

If the new department is well received at MIT, the Coop plans to expand the line of products to include natural foods snacks like candy, crackers and nuts. A turn-style also will be installed to make the Natural Foods Corner more easily accessible.

## Auto Hobby Shop May Re-Open during IAP

The Auto Hobby Shop may spring to life again during this January's Independent Activities Period—if the students behind the effort can find a suitable space in time.

"This is an educational experiment as well as a service to the community," explains Lewis Erwin, one of the students who organized the shop. Erwin is a graduate student in mechanical engineering from Etna Green, Indiana.

The Auto Hobby Shop has provided a garage for members of the MIT and Wellesley community to work on their cars for the past two Independent Activities Periods. The people behind the project hope to eventually expand to a permanent operation if the space and money can be found.

"The shop is a practical laboratory for people to learn to work with real systems," Erwin says. "There is a great deal of motivation to learn when it is your own car you're working on. It is an educational experience involving both the mind and hand," he continued.

During IAP last January, Professor Ernest Cravalho of mechanical engineering taught a short course in auto mechanics to a group of interested students. The shop served as a classroom for the course in addition to bringing together people interested in working on cars.

In the two weeks the Auto Hobby Shop was open last year, 111

## CAVS Fellow Synchronizes Bell Concert

Beginning last Sunday, October 15, and ending yesterday, Boston and Cambridge residents attended a unique three day concert of bell ringing entitled "Resounding Space," which was organized by Lowry Burgess, a fellow at the Center for Advanced Visual Studies (CAVS) and a teacher at the Massachusetts College of Art.

The concert was composed of synchronized bell ringing from 14 different church and university steeples in the metropolitan area. It was sponsored by the Massachusetts College of Art as part of its centennial celebrations.

Aiding Burgess in writing the tollers' scores and synchronizing the bells were CAVS colleagues composer Paul Earls and Maryanne Amacher, and Lyle Davidson who recently joined the MIT music faculty. Ivan Tcherepnine of Harvard University and Joyce Mekeel of Boston University also worked on the project.

The artist has commented on *Resounding Space*: "Our effort is to coordinate the large and powerful instrument which is the cities' bells in three works or rings of about an hour in duration. Each ring will have its own special character and emotional color. The ringing of the bells is coordinated from a set score. We hope to focus attention upon the existing potential of the cities' bells and the breathtaking quality of the sounds they make in combination. We want to draw attention to the aural quality of the city and the distinctive experience of place which its bells create."

people brought their cars to the shop. Eight engines were rebuilt, six valve jobs and four brake jobs were done, six clutches were replaced and a number of tune ups and oil changes were made.

"The demand is there," says Erwin, "we just need to find a building."

## Blood Drive Needs Aides

Volunteers are needed to assist the Red Cross during the annual Fall Blood Drive which will be held at MIT from Monday, November 6, through Friday, November 10 in the Sala de Puerto Rico.

Women from the MIT community are needed for the following services: typing, temperature and pulse taking, escorting donors to the donor room and serving snacks in the canteen. Volunteers may sign up for morning sessions from 9:30am to 1pm or for afternoon sessions from 1pm to 5pm.

This year the Blood Drive is being sponsored by the Technology Community Association, Alpha Phi Omega, and the Interfraternity Council, with support from the Arnold Air Society.

Anyone interested in volunteering for the Blood Drive should call Mrs. Louis Smullin at 924-3340 between 4-7pm from Tuesday, October 24, through Thursday, October 26.

# Matrons Plant Sale Is Very Successful Event

The Technology Matrons sold more than 500 plants at their annual plant sale held last Thursday on the Student Center steps.



—Photo by Marc PoKempner

Despite impending rain, crowds of people flocked to the sale to browse through the Matrons' inviting display of greenery. Most of the plants—including coleus, ivy, cacti, geraniums, begonias, spider plants, impatiens, parsley and basil—were priced between 25 cents and \$2, but a few described as "real challenges" were sold for 15 cents.

The sale began at 9:15 in the morning and was nearly sold out by 11. Throughout the day people were seen carrying their lush green purchases back to their offices and dormitories. Some had just one or two plants, but others were hidden behind large boxloads of greenery.

Mrs. George Petievich, organizer of the sale, said, "We had more plants this year than ever before and are quite pleased with the response shown by the community."

The money collected from the sale will go into the Matrons' general fund which is used to support many of their activities throughout the year.



At left, a young woman examines two young plants; above, Mrs. Arthur Ippen helps another customer with a much bushier specimen.

—Photo by Margo Foote

# Orchestra to Rehearse Mahler Work

The MIT Symphony Orchestra will present an open reading and rehearsal of Mahler's Symphony Number 4, on October 26, at 7:30pm in Kresge.

During the rehearsal, the 90 musicians in the Orchestra, soloist Carole Bogarde and conductor David Epstein, associate professor of humanities, will read and perform the symphony for the first time, providing the audience with an opportunity to witness the behind-the-scenes activities of a working session.

Discussing the rehearsal, Dean Kross, a senior from Ellenville, New York and the orchestra's president, said: "the caliber of the orchestra is so high this year that the players felt a need for a performance before the scheduled opening concert on December 2."

"Based on that idea, I thought of a reading and rehearsal since it is my feeling that the most interesting and exciting events happen in working sessions," Professor Epstein added.

The rehearsal is scheduled to last from 7:30 until 10pm. Visitors will be welcomed to drop into the informal session for as long as they like.

## New UROP Listings

For more detailed information on UROP opportunities listed, MIT undergraduates should call or visit the Undergraduate Research Opportunities Program Office, 20C-231, x3-5049 or x3-4849. Undergraduates are also urged to check with the UROP bulletin board in the main corridor of the Institute.

Important. UROP is still receiving and funding undergraduate research requests.

### EDUCATION DEVELOPMENT CORPORATION

Newton

EDC would like to work with a student and a faculty co-supervisor in the preparation of a research report on the EDC curriculum reform projects sponsored by the National Science Foundation over the last 15-16 years. This would begin with a look at the PSSC (Physical Science Study Curriculum) program, the incorporation of ESI (EDC's former initials), and proceed to the science/math/social science projects now underway.

### LINCOLN LABORATORY

Lexington

Lincoln Laboratory is a center for research and development in advanced electronics, with programs in space communications, seismic discrimination and detection of earthquakes and underground nuclear explosions, computer systems, solid state physics, digital signal processing, radar systems and optics. Representative areas of research are: computer aided analysis of complex structures; properties and applications of lasers; computer graphics; application of radar techniques to problems of air traffic control; real-time data processing; and problems in quantum electronics and solid state physics. Students should call Dr. Joseph Mindel, LIN A-163, Lincoln Ext. 225, about projects in these and other areas. Note: There is a shuttle bus between the MIT campus and Lincoln Laboratory.

### CAMBRIDGE CHAMBER OF COMMERCE

Cambridge

The Chamber is seeking undergraduates interested in undertaking projects in a number of areas. (1) Occupational Education, this would include work in the areas of automotive, health care, early childhood education, and distributive education as well as developing proposals on curriculum. (2) Economic Development - compilation of statistical data with some primary research; analysis of Cambridge resources. (3) Municipal Finances - assist in research and proposal development to support productivity programs, austerity programs as well as budget analysis and recommendations. (4) Youth Employment Project - seeks a bilingual (Spanish-speaking) person to counsel young people seeking jobs through a youth employment program; developing jobs for people confronted with language barriers. (5) Cleaner Cambridge - assist in development on an on-going city-wide organization and programs aimed at improving attitudes and at cleaning the city in all aspects, from litter to air pollution. (6) Business Security - research security problems of businesses in Cambridge and research programs and proposals of

other cities in an effort to overcome security problems. Check the UROP bulletin board for other opportunities.

### RAYTHEON SERVICE COMPANY

Burlington

On a demonstration project grant from the Federal Environmental Protection Agency (EPA), Raytheon and the City of Lowell are developing a recycling plant for solid waste obtained from a regional incinerator. When completed, the plant will separate aluminum, zinc, copper, various glasses, ferrous metals and film materials for reuse through screening, grinding, crushing, magnetic separation, density separation, and flotation procedures. The funds Lowell receives from selling the recovered materials will help offset the cost of the plant. Suggested background for undergraduates (and faculty co-supervisors) include courses I, II, III, X, and XV, but all may inquire.

## Placement Interviews

Representatives of the following companies and institutions are scheduled to interview students on campus. Those who wish to be interviewed may sign up in person at the Placement Office, Room E19-455, Monday through Friday, from 9am to 4pm.

Wednesday, October 18: Sandia Laboratories.

Thursday, October 26: TRW Systems Group.

Friday, October 27: TRW Systems Group.

Monday, October 30: GTE Sylvania Incorporated; Imperial Chemical Industries Limited; Los Alamos Scientific Laboratory; the Magnavox Company.

Tuesday, October 31: Ghost Dance Incorporated; Los Alamos Scientific Laboratory; Hewlett-Packard Company; Newport News Shipbuilding and Dry Dock Company; University of North Carolina Graduate School of Business Administration.

The Career Planning and Placement Office is compiling a computer listing of students who will be finishing at MIT this academic year and who are interested in working in industry or government. The listing will be made available to companies and government agencies who are in the market for MIT graduates.

Students will be grouped by area of interest and academic background. A student interested in more than one area will appear under as many headings as are required to do him justice.

The format will allow for women and minority students to be listed separately as well as under the area headings that match their interests. It was a recommendation of last year's faculty-student committee on the role of women students at MIT that rosters of MIT's women candidates be made available to interested employers.

The Career Planning and Placement Office would like to publish the listing by November 1. Forms for students wishing to be included may be obtained from the Placement Office, Room E19-455, Ext. 3-4733, or from the Information Center, Room 7-111. Completed forms should be returned to the Placement Office by Friday, October 20.

### CAREER SEMINAR: "A TECHNICAL DEGREE AS AN ENTREE TO MANAGEMENT"

Dr. Peter Cannon, Manager of Strategy Planning, Automation Business Division, General Electric Company, Wednesday, October 25, 1972, 4:00pm, Room 37-187. Cider and doughnuts will be served.

## Student Employment

On Campus: animal caretaker in Nutrition; Research Assistant in Electronic Systems Lab; Experimental Assistant in Heat Transfer Lab.

Off Campus: research assistant and clerk-interviewers in Children's Hospital Medical Center; ski repairman in juvenile delinquency prevention agency; technician familiar with magnetic tape systems; geology tutors for two high school students; readers for a blind student.

Off Campus Work-Study Positions (open only to students receiving financial aid from MIT): child care assistants at Technology Nursery School; tutors at Tutoring Plus of Cambridge; elderly aid at Cambridge Civic Unity Committee; photography assistant, research associate technician, computer science technician, office assistant at Massachusetts General Hospital; Cambridge Chamber of Commerce has positions in the following areas—economic development, municipal finances, study research, proposal writing, youth employment, occupational education, Cleaner Cambridge, business security and research for publications.

For details on these and other available jobs and how to apply, see Kathi Mahoney, Student Employment Office, Room 5-119.

## Other Opportunities

### FEDERAL CAREER DAYS

The US Civil Service Commission is sponsoring Federal Career Days at three area universities. Representatives of many federal agencies will be on hand to discuss job opportunities and application procedures. MIT students, undergraduates and graduates, are invited to attend. Sessions will be held from 9:30am to 3:30pm at the following locations: Suffolk University, Donahue Building, Thursday, October 26; Boston University, the Link, Tuesday, November 28; Boston College, McElroy Commons, Wednesday, December 13.

### GENERAL SERVICES ADMINISTRATION

Students interested in interviewing General Services Administration when they are on campus February 8, 1973 should take the Federal Service Entrance Examination, preferably in October or November. Having a certified test score at the time of interview will be to the student's advantage.