Massachusetts Institute of **Technology** 

March 15, 1972 Volume 16 Number 36

### Donors Urgently Needed at Drive

For the first time in many years MIT is in danger of not breaking its previous record at the annual spring blood drive.

Last year's collection of 2,346 pints was one of a series of recordbreaking donations which have made the Institute campaign the largest single blood drive on the eastern seaboard. However,

Note: Lincoln's Laboaratory's annual blood drive, conducted by the Lexington Red Cross, will be held Monday and Tuesday, March 20 and 21, in Room A-166.

advance registration was way below normal this year and unless there is a surge of donors from now through Friday, March 17, the final total this year may hover around the 2,000 unit mark.

But there is hope. As of Monday night, 1,299 pints were in the bank as opposed to 1,264 at the same time last year. The discrepancy lies in the fact that fewer than 700

registered for the last four days. Because of deferrals, this number will shrink when translated into donated pints of blood.

Since preregistration is low all this week, the Red Cross is both able and happy to accept walk-ins, who can be processed without a wait. A telephone call to Ext. 7911, however, will assure the donor of an optimum appointment.

"Last Friday was our best day," said Mrs. Dorothy Reiss of the Cambridge Red Cross. "There were 339 people signed up and 312 were accepted. But even with that high number," she said, "there were seldom more than six or seven people waiting to go into the donor room. It would help a lot if these last three days were as well

Because of MIT's long history as a good blood donor, all members of the Institute community and their families can receive blood free when they need it. This lifesaving insurance, however, will last only as long as our bank account with potential donors were pre- the Red Cross remains solvent.

### Blasts on Campus Study Threat of Earthquakes

Sharp rifle-like explosions and plumes of water geysering suddenly into the air should not cause residents of the west campus to report gun battles or earthquakes to police, newspapers or TV stations during the next several

The detonations, which are scheduled to begin Tuesday, March 21, in holes drilled some 150 feet into the ground near Westgate II, a graduate student residence now under construction, are only blasting caps being set off to deter-

# Faculty

A regular meeting of the aculty will be held today (March 15) at 3:15 pm in Room 10-150.

Items on the agenda include a nomination to the Committee on Educational Policy and changes in the Rules of the Faculty concerning both the Office of Assistant Secretary of the Faculty and the Committee on the Libraries. The faculty will also hear reports on the Committee on Curricula and Four Year Trial of Freshman Pass-Fail Grading. (The Pass-Fail report appeared as an insert in the February 16 issue of Tech Talk.

All members of the MIT community are welcome. The seating areas for faculty members and others will be clearly marked.

mine shear wave velocities in Boston blue clay as part of a larger study of anti-earthquake design being conducted by the Department of Civil Engineering.

The over-all MIT study of earthquake threat as a factor in building cost is under the direction of Robert V. Whitman, professor of civil engineering, and has been funded by the National Science Foundation as a prototype for similar studies in other regions of the country. It is believed to be the first organized, systematic study of the trade-offs involved in antiquake construction in the United

"The likelihood of earthquakes in Boston is not great," Professor Whitman says, "but after all, good design protects against many unlikely things. There was a minor tremor in 1963. But if an earthquake the size of the one in Boston in 1755 were ever to be repeated it would certainly cause severe damage."

According to John T. Christian, associate professor of civil engineering, the blasting cap detonations on the MIT campus will mark the first time shear waves have been studied in the subsoil of the Boston area. Shear waves, which are associated with and travel perpendicularly to the compression waves caused by earthquakes and other shocks, are an important indicator of the rigidity of the soil through which they move.

"The over-all purpose of the study is to apply the considerable advances in seismic theory of the

past decade to the practical (Continued on page 6)



With donating completed, this young woman is about to be taken to the canteen for refreshments.

### Faculty Promotions Announced for '72

announced the promotion of the following members of the faculty, to be effective July 1.

School of Architecture and Planning:

Edward B. Allen, Nicholas P. Negroponte and Edward Pincus to associate professors in the Department of Architecture.

Richard C. Larson to associate professor in the Department of Urban Studies and Planning.

School of Engineering:

Jean F. Louis to professor and Shaoul Ezekiel to associate professor in the Department of Aeronautics and Astronautics.

Adel F. Sarofim to professor and

Chancellor Paul E. Gray has Jack B. Howard to associate professor in the Department of Chemical Engineering.

> Marvin L. Manheim and Fred Moavenzadeh to professor; David C. Major and David H. Marks to associate professor in the Department of Civil Engineering.

> William T. Peake to professor and Jonathan Allen, William L. Henke, Roger G. Mark and Albert Meyer to associate professor in the Department of Electrical Engineering.

> Padmakar P. Lele and Robert E. Stickney to professor; Richard F. Salant to associate professor in the Department of Mechanical

(Continued on page 6)

### Students Design, Build Toy Vehicles for the Great Mousetrap Car Race

They're off and creeping in the Great Mousetrap Car Race.

Fifty-five students in an engineering design course at the Institute have all designed and built toy vehicles powered by the energy of a cocked mousetrap spring. The students are conducting trial heats to determine the two best mousetrap racers to enter a \$1,000 national competition, called LeMouse 5000, at the 1972 Design Engineering Show in Chicago next May.

The 20 survivors of the elimination heats--four from each of five sections of the 55-student course--will meet in the MIT finals noon Friday, March 17, in DuPont Gymnasium, where a 13-foot wide course has been laid out. Distance, not speed, is the aim of the race, and contestants will be judged in two categories: performance, or overall maximum distance, and economy, or maximum distance per unit of vehicle cost. Winners in each category will compete in Chicago with hundreds of other mousetrap racers from across the nation for either the \$500 Performance Prize or the \$500 Economy-Run Prize.

LeMouse 5000 is sponsored by Machine Design magazine. According to race officials, some 750 entries have been received to date, although only two other organizations, a university and a toy company on the west coast, are running elimination trials to select final entries. As far as the officials know, MIT is the only school using the mousetrap car race as an undergraduate course project.

Igor Paul, associate professor of mechanical engineering at MIT, said the stringent design limitations for the mousetrap car race were what recommended it as a means to test student ingenuity. According to the rules the vehicles must be made only of masonite, string, glue, and wire and be powered by the spring from one Victor Four-Way Mousetrap,

although the trap itself may be used for construction as well.

"For the past few years the students in the Engineering Synthesis and Design course have been involved in projects to stimulate their creative talents," Professor Paul said. "Last year, for example, the students had to

design and construct vehicles which had to roll five feet on an inclined plane in exactly three minutes. This year we thought the mousetrap car race offered an even better challenge.

The principal engineering problem the students must solve, (Continued on page 6)



Brian Bosy, left, and Luis I. Cabezon, Jr., about to release their mousetrap-driven vehicle in a trial heat.

-Photo by Margo Foote

## Capturing Corpuscles

When the bloodmobile comes to the door, we can look it straight in the eye and remark with pride, "We gave at the office."

We had never, for reasons now obscure, given blood before and so it was with no little trepidation that we turned up at the Sala de Puerto Rico in the Student Center last week. We were ambivalent, and that was the fact. On the one hand, we had never viewed bleeding as anything to write home about. On the other, we nursed vague apprehensions that our blood might not be what the doctor was ordering these days.

In accord with the saying of a friend of ours ("If it's worth doing, it's worth doing now"), we found ourself in line with other early birds at 9:45 on the drive's first day. We handed our appointment slip to a girl at the desk, and she shuffled through an alphabetized index of papers. "We've lost you," she cried with a smile. We suggested she try looking under W. "Oh, here you are," she said. "Just mis-filed. Take this slip to the

We did so and handed it to a cheerful and ample woman, whose nameplate announced that she was Dorothy Reiss of the Cambridge Red Cross. "First time donor?" Mrs. Reiss asked us heartily. Without a quaver, we replied in the affirmative, and Mrs. Reiss marked our paper to that effect. "I always put that on nice and big," she told us, "so the nurses on down the line can know if anyone seems a little nervous. You go right on to typing now." We didn't know what type our blood was and were looking forward to finding out, but Kanicki returned to inspect our when we turned around we saw that the typing was of the secretarial, not the sanguineous, had written. "Successful bleeder,"

As we waited in line, we surveyed the prospect before us. The room had been divided into general areas of activity. Just ahead of us, past the typing tables, a group of people sat on chairs, thermometers clamped firmly in their mouths. Around the sides of the room at the end were tables, at which nurses conferred quietly with individual donors seated beside them. The center of the room put us in mind of a banquet room before the feast. All was in readiness, equipment gleamed, and nurses stood about in groups of two and three waiting for their guests to arrive. The tables on which the latter would be served were narrow dark green cots, set to something between 1,000 and up in groups of three. A quick count 1,500 pints a day, that most of what showed us that there were 24 altogether.

directed to temperatures. "Three tainers to the hospital where it is minutes," said a girl handing us a kept under refrigeration, and that thermometer. We sat down and blood will keep, when refrigerated, popped it in our mouth, sneaking a look from time to time. As we suitcase-like affair set on folding waited, a young man with a standup sign bustled by. The sign read "Please take a number", and he set it up near one of the tables, departed, and returned right away with another sign that read "Number being served." Our three pointing to it. "It's called a minutes were up. We handed the suitcase." She stooped, retrieved thermometer back to the girl. She our gift, and plumped the little read "98.6." "Right on," we agreed.

We then took a number, rolled up both sleeves on request, and almost immediately sat down at one of the tables to be greeted with a barrage of questions. Among the things the nurse wanted to know were if we had been in a malarious area within the past three years (we hadn't), or had any tattoos (no ma'am), or contemplated any

dangerous activity such as skydiving (not on your life). The nurse deftly took a drop of blood from our left ear. "We get a more concentrated drop from the ear than from the finger," she told us when we asked her about this. "And we've found, too, that we don't get stuff like hand-lotion mixed in with the blood." She put our drop into a vial filled with a colorless liquid. It was, we learned, a test of specific gravity used to check for anemia. "It's supposed to sink, "the nurse informed us, and we watched anxiously until it did. "Male and female blood has different specific gravity," she went on. "Men are 14.5, women 12.5. You can go along now and they'll usher you into the donor area. You're very normal.'

Feeling healthy but not overly interesting, we moved along, and finding no one to usher us, picked out an empty cot at random and stretched out. Our nurse was busy with another customer. She was blonde and pretty and her name, she told us as she started swabbing our right arm with cold liquid, was Dottie Kanicki. "Kanicki, like the football player," she said. We mumbled apologetically that we had never heard of him. "He played out west somewhere," Miss Kanicki said. "But I think now he's a Jet." She swabbed us a second time, and then inserted the needle with a practiced thrust. We scarcely felt it. "I'll just move your arm here on the table, so it won't go to sleep while you're donating," she said and turned to a colleague across the way.

After a few minutes, Miss progress and made a note on our chart. We wanted to know what she she informed us. She went on to say that after a while one got practiced at telling whether a donor would manage to finish giving a full pint. We asked somewhat facetiously what happened if one's heart simply went on pumping the stuff out. "Heavens," said Miss Kanicki quite seriously, "that can't happen. Each of the blood bags is suspended from a little scale and when it contains one pint by weight, the scale tips us and closes the tube so no more blood can be

Miss Kanicki told us that the MIT blood drive was one of the most successful in the entire New England area, that the need for blood in Massachusetts alone runs is given here will be used as whole blood rather than as plasma, that Our typing completed we were the blood is taken in chilled confor 21 days. There was a complex legs at the head of each bay of three cots, out of which, we saw, the nurses took their equipment, and we asked Miss Kanicki what this apparatus was called. "You mean the suitcase?" she asked, plastic bag of our own clear red blood down on the cot next to us. It felt warm against our arm. -

> Bandaged and freed, we stepped to the last area and hadn't gotten two steps before our left arm was seized kindly but firmly by an MIT Matron. She escorted us to a table, offered us coffee, tea, or gingerale, and noted down on a paper napkin the time we could leave. Feeling cherished, we sat at peace mun

ching sugar wafers and sipping coffee and regarding our neighbors with the friendliest of eyes. Another donor was led to the seat next to ours: "Hey, there," a friend at another table called out to him, "I didn't think they'd take Irish blood at a first-rate place like this." Our neighbor winked at

We kept waiting for symptoms. When none appeared after about 15 minutes, we thanked our Matron and departed. On our way out Mrs. Reiss asked us how we felt. "Fine," we said. "Come see us again," she said. We told her we'd be back in eight weeks.

### Hillel, BSU to Present Lecture on Hakim Case

On Thursday, March 16, at 7:30pm in the Mezzanine Lounge of the Student Center, MIT Hillel in conjunction with the MIT Black Student Union will present a lecture discussion entitled "Legal Theory vs. Legal Practice: The Malik Hakim Case." The presentation is open to the public free of charge.

The meeting will feature speakers William Homans, defense attorney for Hakim, and Wallace Sherwood, director of the Roxbury Defenders Project. Hakim, director of the Malcolm X Foundation in Roxbury, was accused of parole violation on a murder charge in

undergraduate student body for

Reeves will be the second black

to serve as president of the MIT

undergraduate student body. The

first, Gregory C. Chisholm, of New

York City, served during the

winter of 1970. The Institute has

3,500 undergraduates of whom 125

Elected as vice president on the

the coming year.

### Foundation Cites Mann for Research

Missouri and faced extradition.

In spite of wide community sup-

port and allegedly insufficient

evidence on the part of the Mis-

souri authorities, Massachusetts

Governor Francis Sargent signed

the extradition papers. Before

Hakim could be arraigned, how-

ever, he vanished and is still at

An MIT professor has played a major role in the start of a new project sponsored by the American Foundation for the Blind to commercialize sensory aids for blind people.

In announcing the new project, the Sensory Aids Analysis and Development Program, foundation president John S. Crowley credited Professor Robert W. Mann, of the Department of Mechanical Engineering, with "inspiring the foundation-adopted project."

Mr. Crowley said Dr. Mann had sent two memoranda to the foundation which pointed out the existence of a variety of sensory aids for the visually handicapped presently unused because of the lack of commercial manufacturers.

Dr. Mann suggested the formation of a program to help commercial firms in producing sensory aids for the blind.

Louis H. Goldish, formerly a research assistant of Professor Mann's and an experienced mechanical engineer and market consultant, has been appointed director of the program.

Professor Mann has been interested for many years in the development of devices to aid the blind and other types of handicapped people. He played a major part in the design of the Boston arm, a new type of prosthetic device for amputees, and has served as the chairman of the steering committee for the MIT Center for Sensory Evaluation and Development.

### Undergraduates Elect Reeves as President

Curtis Reeves, 20, of Atlanta, Georgia, a junior in management, has been elected president of the



New UAP Curtis Reeves.

same ticket with Reeves was Steven R. Taylor, 20, a junior in electrical engineering from Flint,

Reeves has been active in student government, serving as vice president of his class as a freshman and president of his class during his sophomore year. A

National Merit Scholar, he hopes to

go into marketing or finance after graduation.

are black

### Graduate Student Council Seeking Representatives

William M. Mack, Jr., president of the Graduate Student Council (GSC), has announced that nominations are being accepted for Council representatives from each of the Institute's 24 academic departments. At the present time, the term of office is one year, beginning in April.

"We're looking for people who want to show some interest in the graduate student collective at MIT--people with a few hours to spare each month and the ability to withstand frustration," Bill says. "Any regular graduate student is eligible for nomination. A candidate must submit the signatures of either three percent of the graduate students in his department or five individual signatures, whichever is greater."

Nominations will be accepted until 5pm on Wednesday, March 29. Election ballots will be mailed to all graduate students by Friday, March 31, and must be returned to the Council no later than 5pm on Friday, April 14. Each department will vote preferentially for its own representatives, and winners will be notified by Monday, April 17.

"During the past year," Bill notes, "the Council has been concerned primarily with graduate student housing, medical and dental facilities at the Institute. And we were successful in changing the graduate thesis archive requirement."

The GSC will meet tonight (March 15) to discuss proposals for a Council-operated travel bureau, staggered elections, and two-year terms for representatives. The meeting will include a talk with

Ron Searles, head of the Northgate Tenants' Union. The meeting will be held in the Muddy Charles Pub (Room 110 in Walker Memorial) at 7pm. All interested persons are invited to attend.

Nomination petitions and general information about the Council elections are available in the GSC office, Room 50-110, or from Laura Hawkins, secretary to the GSC, on Ext. 2195. The office is open from 10am to 6pm Monday through Friday.

### Channel 5, Channel 7: Who Knows?

Even MIT was caught up in the uncertainty surrounding the switch of Channel 5 to ABC and Channel 7 to CBS--if it happens this weekend.

The CBS Camera Three show at 11am Sunday, March 19, features "The Computer Generation," much of which was filmed in the MIT Architecture Department with Stan Vanderbeek, formerly a Fellow at the Center for Advanced Visual Studies.

Now the confusion. WHDH-TV. now Channel 5 and the local CBS outlet, does not carry Camera Three. But with the switch scheduled for 3am March 19, WNAC, Channel 7, may become the CBS outlet and may carry the show. No one knows for sure. A Channel 7 spokesman said WNAC is sending out program announcements bearing "tentative" stickers.

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

## Potpourri of Musical Events

### Orchestra to Premiere 'Symphony'

The world premiere of Symphony, composed by Debussy, will be performed by the MIT Symphony Orchestra on Saturday, March 18, in Kresge at 8pm.

The concert, sponsored by the MIT music faculty, and will be conducted by Robert Freeman. Ravel's Tzigane, Bruckner's Seventh Symphony and Mozart's Sinfonia Concertante for Viola and Violin, featuring violinst Yuval Waldman and violist Eleftherios Eleftherakis, will also be performed.

Debussy wrote his onemovement symphony in 1880 when he was 18 years old, but left it unorchestrated in a piano score for four hands. That score, discovered in Russia during the 1930s, has been orchestrated by Mark DeVoto, professor of music at the University of New Hampshire. The orchestration is dedicated to composer Walter Piston.

Robert Freeman, associate professor of music, is a music historian and pianist. He is conducting the Orchestra this year while David Epstein, the regular conductor, is on sabbatical in Europe and Israel. A graduate of Harvard College, Professor Freeman received his Ph.D from Princeton University. He is chairman of the New England Chapter of the American Musicological Society.

Tickets for the concert are \$1 and may be purchased at the door. Free tickets are available for MIT students in the lobby of Building 10.

### **PLATO** Lectures Scheduled

Professor Donald L. Bitzer of the University of Illinois will present two lectures at MIT Thursday, March 16, on PLATO, a promising computer-based instructional system presently being installed at UI-Urbana with 4,000 terminals located at colleges professional schools scattered

throughout Illinois.

Both lectures will be in Room 10-250. The first, starting at 2pm, will cover general capabilities. The second, starting at 4pm, will cover technical background. The program is sponsored by the Education Research Center for people in the Boston area, particularly those at MIT, who are interested in computer-based teaching and in the use of telephone networks for teaching from central locations.

PLATO will be used to teach a variety of already-prepared subjects ranging from math and physics to nursing science. At MIT, Professor Bitzer will demonstrate a student terminal that includes keyboard, plasma display panel, microfiche projector and a random access audio player.

A key to PLATO is an existing communications system that can drive multiple remote terminals over long distances with one TVlike signal, thus taking advantage of long distance rates for video signals via the telephone system.



Madam Kim So-Hee performing with, left to right, Madam Sung Keumyun, Mr. Kim Yoon-duk and Mr. Chi Yung-hee.

### a Capo Players Give Chamber Music Concert

A concert of contemporary music by the Da Capo Chamber Players will be presented tonight (March 15) at 8:30pm in Kresge.

The concert, which is free to the public, is part of the 1971-72 Chamber Music. Series sponsored by the music faculty.

The concert will be the Da Capo Chamber Players' first appearance in the Boston area. Included in the program will be works by two Boston composers. Arthur Berger and John Harbison, who is a member of the MIT music faculty and conductor of the Cantata Singers. Compositions by

Charles Wuorinen and Joan Tower, the group's pianist, will also be performed, as well as two works for instruments and electronic sound by Mario Davidovsky. Some of the contemporary pieces will be performed twice, following the Da Capo Chamber Players' belief that a listener benefits from two hearings of new pieces.

The Da Capo Chamber Players have performed at a number of universities including New York University, Princeton Columbia, and at the WNYC American Music Festival and the Greenwich House Series of Contemporary Music.

### Volunteer Help Needed for Kinesthetic Gallery

The Center for Advanced Visual Studies is seeking volunteers to help in the design and construction of a kinesthetic gallery for the

All members of the MIT community, particularly those with engineering knowledge, are welcome to participate in the project.

The gallery, which is to be located in the Wadsforth Athenaeam in Hartford, will combine several different types of kinesthetic displays, including thermal, tactile, acoustic and olfactory.

"Many art galleries have special displays in which blind people are allowed to touch conventional sculptures," explained Professor Gyorgy Kepes, director of the Center. "We don't intend to replicate their efforts. We hope to instead to create an entirely new type of display, one that is completely non-visual and which will provide the blind with an esthetic experience which is uniquely their own."

Among the displays planned for the gallery, Professor Kepes said, are columns and pillars with numerous thermal "patches" at varying temperatures, surfaces covered with materials of widely differing textures, and floors structured to emit musical tones as they are walked on. Another display would release a range of fragrances as it was touched in different places. Some displays might combine two or more sense stimuli. All of the displays will require audience participation in the form of movement through the

hence the term kinesthetic.

"Our problem," Professor Kepes said, "is that most of us here at the Center are artists and musicians, not engineers, and these displays need sound engineering in both the design and construction phases. For example, our acoustic floor must be built so that an imperceptible depression will trigger a musical tone, and our thermal surfaces should use material with the correct heat conducting properties.

"In addition, we are working under a very tight time schedule. The gallery will be built in May, and it must operate with no maintenance for six months.

"We need many volunteers to do a good job. The purpose of the Center is to allow artists and engineers to collaborate in creating new art forms. This project is a perfect opportunity for MIT students, faculty and employees to become involved."

#### Luria to Present Brandeis Lecture

Dr. Salvador Luria, Institute Professor and Nobel Prize winner, will present a lecture on "Scientists and the Use of Science" at Brandeis University on Tuesday March 21.

Presented as part of the Helmsley Lecture Series entitled "Beyond Freedom and Dignity--Man Examines His Society," Dr. Luria will begin his talk at 8:30pm in Schwartz Hall on the Brandeis

Admisssion is \$1.75.

### Kim So-Hee Introduces Korean P'Ansori to MIT

Opera singer Kim So-Hee, who has been called Korea's "intangible national treasure," will perform selections from several p'ansori, traditional Korean operas, in Kresge on Friday, March 17, starting at 8:30 pm.

The concert, presented jointly by the MIT music faculty and the Asia Society, will also include traditional court chamber music and Sanjo improvisational music performed by three Korean musicians.

Mme. So-Hee is known in Korea for her outstanding contribution in preserving an important and vanishing segment of Korea's cultural heritage--the p'ansori. The p'ansori is a dramatic epic poem, which is both narrated and sung and may be many hours long. It is the task of one performer alone to sing an entire p'ansori or a smaller part of it.

Mr. Kim Yoon-duk, Mme. Sung Keum-yun and Mr. Chi Yung-hee, the three performers who will appear with Mme. So-Hee, are leading Korean musicians. They are masters on nine traditional Korean instruments, which include two different types of zither (kayageum and kumoonga), a seven stringed bowed instrument (ahjaeng), a dulcimer (yang geum), a two stringed fiddle (haegum), a vertical flute (tanso), an oboe (p'iri), an hour-glass shaped drum (changgo), and a barrel drum (puk). The musicians will play traditional instrumental works and accompany Mme. So-Hee in traditional Korean folk

Tickets for the concert are \$3 for the reserved section, \$2 for general admission and \$1 for students with IDs. Tickets may be purchased at the Music Office, Room 14N-233B, and reservations may be made at Ext. 2444. A limited supply of tickets will also be available at the

Mrs. Jackson and Wilter L. Milne, Assistant to the Chairman of the Corporation, stand before her house prior to the move.

### Housing Program Relocates House in Cambridgeport

New exterior, new view, new address--but the same old house for Mrs. Henrietta Jackson of Hamilton Street in Cambridgeport. She recently participated in a rather unusual moving operation-a small but significant element of the Institute's Housing Program in Cambridge in which construction is underway on three separate apartment complexes for the

Back in 1969 when the Institute first proposed a plan to help ease the housing crisis in Cambridge, Mrs. Jackson lived at 121 Hamilton and we are firmly set on our new Street. Initially, the thought of site," Mrs. Jackson writes, "I am moving an entire house from one site to another seemed too farfetched to be possible. But that's just what happened.

As plans for the housing program developed, it became obvious that some juggling of land space would not only be necessary but advantageous at the Hamilton Street site. If Mrs. Jackson's house stayed at its original location, she would have faced a concrete wall of the new apartment complex--not a very pleasant view.

Mrs. Jackson had spent a lot of time and money renovating the interior of her home, so the idea of moving out was eliminated. But the thought of a tall building looming over her property was undesirable too. So, after much deliberation with MIT officials and architects, Mrs. Jackson agreed to let the Institute move her house to 145 Hamilton Street, a site on the other side of the housing project.

It was a large task and frustrating at times, but finally the house was rolled to a new foundation, aluminum siding was added, and the yard was landscaped. And Mrs. Jackson's view will improve considerably when the apartment complex is finished--she'll look out on a small park with tall trees and flower gardens.

"Now that the dust has settled more than satisfied and fully aware that the exchange will prove of great benefit to me. The entire street is going through a phase of facelifting which I feel is a direct result of the involvement with MIT. As of this date, two more houses are being covered with aluminum siding and there is a general upsurge in maintenance and improvement among the

#### Squares on TV

The Tech Squares, a square dance club at the Institute, will appear on Catch 44, a WGBX-TV evening show, on Thursday, March 16 at 9pm.



#### March 15 through March 24

#### **Events of Special Interest**

Institute Blood Drive

Red Cross Bloodmobile will conduct nine-day drive in Sala de Puerto Rico through Friday, March 17. Appointments made from 9:45am to 3:30pm. For information and registration forms, consult department solicitors or call X7911.

New Ideas in Nutrition

Profs. Steven R. Tannenbaum and Richard J. Wurtman, nutrition. Technology Matrons Seminar. Wednesday, March 15, 11:30am, Rm 10-105.

Legal Theory vs. Legal Practice: The Malik Hakim Case\*

William Homans and Wallace Sherwood, legal counselors for Malik Hakim. Lecture sponsored by Black Student Union and MIT Hillel. Thursday, March 16, 7:30pm, Student Center Mezzanine Lounge.

Objectivity in the Sciences and in the Humanities\*

Prof. Alvin C. Kibel, humanities. Technology and Culture Seminar. Tuesday, March 21, 5:15pm, Rm 9-150. Buffet dinner, 6:30pm, Student Center Mezzanine Lounge. Respondents and discussion, 7-9pm, Rm 9-150.

Economic Development and World Peace\*

Prof. Everett Hagen, economics and political science. Lecture Series on World Peace. Thursday, March 23, 8pm, Little Theatre.

#### Seminars and Lectures

#### Wednesday, March 15

A Dynamic Spectral Filter for Audio Noise Reduction\* Fred Ives, electrical engineering. CIPG Seminar. 12n-1pm, Rm

Microorganisms and Dental Disease

Dr. Johannes van Houte, Forsyth Dental Center. Oral Science Seminar. 3-5pm, Rm E18-301.

Gas Cooled Fast Breeder Reactors\*†

Dr. James A. Larrimore, Gulf General Atomic. Nuclear Engineering Seminar. 3:30pm, Rm NW12-222. Coffee, 3pm.

Seventeenth Century Shipbuilding\*

William A. Baker, curator of the Hart Nautical Museum. History of Technology Seminar. 4pm, Rm 14E-304.

Insurance and the Earthquake Hazard\*

Dr. Don Friedman, research group, Travelers Insurance Company. Civil Engineering Structures Division Seminar. 4pm, Rm 1-350. Coffee, 3:30pm.

Some Applications of Holography to Applied Mechanics Robert Aprahamian, Laser Applications Seminar. 4pm, Rm 35-225.

The Practice of Medicine in Rural Areas

Dr. George J. Robertson, medical director of Bingham Associates Fund, assisant dean of continuing education at Tufts School of Medicine. Pre-Medical Society Seminar. 8pm, Student Center Mezzanine Lounge.

#### Thursday, March 16

Ann Peterson, director of Katherine Gibbs Secretarial School, will address the subcommittee for bi-weekly and administrative staff. 12n, Rm 10-105.

Women's Forum

for lab technicians, technical assistants, programmers, librarians and others. 12n-1pm, Rm 37-187 (off Vassar

The PLATO Computer-Based Instructional System, with Demonstration\*

Prof. Donald L. Bitzer, Dept of Electrical Engineering, University of Illinois. ERC Colloquium. 2pm, Rm 10-250.

How It's Done in the PLATO System\*

Prof. Donald L. Bitzer, Dept of Electrical Engineering, University of Illinois. ERC Colloquium, 4pm, Rm 10-250.

Multiple Comparisons: Some New Gap Guides and a Modification of the Newman-Keuls Procedure\*

Prof. Roy E. Welsch, Sloan School of Management. Operations Research Center Seminar. 4pm, Rm 24-307. Refreshments following in Rm 24-219.

Management Problems in Air Transportation\* George A. Spater, president and chairman of the board, American

Airlines. Flight Transportation Seminar. 4pm, Rm 35-225. Coffee, 3:30pm, Rm 33-412.

Impulse-Generated Acoustic Transients\*

M. C. Junger, senior visiting lecturer, ocean engineering. Interdepartmental Acoustics Seminar. 4pm, Rm 5-134. Coffee, 3:30pm, Rm Quantitative Physics: of Atoms, Mountains and Stars

Prof. Victor Weisskopf, Institute Professor and head of the Dept of Physics. Physics Colloquium. 4:30pm, Rm 26-100, Tea, 4pm, Rm

**Nevel Olefin Oxidation Chemistry** 

Dr. Christopher Foote, Karl Pfister Visiting Professor, Dept of Chemistry. 5pm, Rm 4-270.

#### Friday, March 17

Hydrogen Deuterium Exchange and Thermal Desorption on Poly-

K. McNulty, graduate student, chemical engineering. 2pm, Rm

Mass Transfer and Shear Stress Measurements in a Model of the Human Iliac Bifurcation and their Relation to Theories of Atherogenesis\*

R. Freedman, graduate student, chemical engineering. 3pm, Rm

Constant-Velocity Couplings-A General Theory and Some New

Kenneth H. Hunt, dean, Faculty of Engineering, Monash University. Mechaincal Engineering Seminar. 3pm, Rm 3-270. Coffee, 4pm, Rm

Kramers-Kronig Relations and Sum Rules\*

Prof. Ryogo Kubo, State University of New York at Stonybrook. Center for Materials Science and Engineering Colloquium. 4pm, Rm 9-150. Coffee, 3:30pm.

Transport of RF Energy to Lower Hybrid Resonance

Prof. R. R. Parker, electrical engineering. Plasma Dynamics Seminar. 4pm, Rm 26-214.

#### Monday, March 20

Women's Forum

Panel of graduate students will discuss "The Role of MIT Women Graduate Students in the Departments." 12n, Rm 10-105.

Nuclear Engineering Doctoral Seminars\*

C. Kim, Phonon Widths and Shifts of an Impure GaP Lattice; M. Kazimi, On the Fragmentation of Hot Molten Materials in Coolants; T. Rieck, The Engineering Feasibility and Fuel Cost Analysis of Variable Nuclear Fueling Intervals. 3-5pm, Rm NW12-222.

A Hundred-Thousand Body Problem-Numerical Simulation of

Dr. F. Hohl, Astrophysics Section, NASA Langley Research Center. Applied Mathematics Colloquium. 4pm, Rm 2-390.

Umit Unluata, civil engineering. Water Resources and Hydrodynamics Seminar. 4-5pm, Rm 48-316. Coffee, 3:30pm, Rm

Roles and Viewpoints in the Field of Medicine\*\*

Dr. Carola B. Eisenberg on "Psychiatrist and Women Physicians" and Dr. Donald E. Butterfield on "The Surgeon." Pre-Medical Society Seminar. 7:30pm, Sala de Puerto Rico. All pre-meds urged

#### Tuesday, March 21

Minority Employment in the Boston Public Schools\*

Rollins Griffith, assistant superintendent of schools (Area III) and former principal of Martin Luther King Junior High School; Richard G. Brown, coordinator, minority recruitment. Placement Seminar. 12n, Rm 10-105.

Ratemaking and the West Coast of South America\*

Prof. J. W. Devanney, III, ocean engineering. Ocean Engineering Seminar. 3pm, Rm 3-270.

Airports as Parts of the Various Systems to which They Belong Jacques V. Block, deputy executive director, Aeroport de Paris, France. Flight Transportation Seminar. 3pm, Rm 9-150.

A New Quiet Propulsor for Various Types of Vehicles\*

George Rosen, chief of Propulsion R&D, Hamilton Standard, United Aircraft Corp. Aero and Astro Seminar. 4pm, Rm 35-225. Coffee, 3:30pm, Rm 33-206.

The Fundamental Role of Moist Porcesses in the General Circulation of the Atmosphere

Prof. William M. Gray, Dept of Atmospheric Science, Colorado State University. Meteorology Seminar. 4pm, Rm 54-100. Tea, 3:30pm, Rm 54-923.

Microwave Observations of Molecular Spectral Lines in Galactic

Phillip Myers, physics. Astrophysics Seminar. 4:15pm, Rm 37-252. Coffee, 4pm.

Commemoration of the Sharpeville Massacre-The Politics of Black Resistance in South Africa and Namibia\*

Rev. Gladstone Mxolisi Ntlabati. Political Science Lecture Series on "Black African Liberation Movements in Southern Africa." 7pm,

#### Wednesday, March 22

Recent Experiments on the Optical, Thermal and Electrical Properties of Olivine and Spinel at Pressures from 1 Bar to 300 KB Dr. Peter M. Bell, Geophysical Laboratory. Earth and Planetary Sciences Special Seminar (Course 12.42). 10am, Rm 54-811.

Image Processing of Ultra Sound Pictures\*

Mark Hubelbank, graduate student, electrical engineering. CIPG Seminar. 12n-1pm, Rm 20B-224.

The Relationship Between Stress Differences, Igneous Processes and Gibbs-Hamb Thermodynamics in the Earth's Mantle Peter M. Bell, Geophysical Laboratory. Earth and Planetary Sciences Colloquium. 4pm, Rm 54-100.

Structural Design with Minimum Expected Cost

Dr. S-T Mau, Aeroelastic and Structural Research Laboratory Seminar Series on Structural Safety Theory. 4-5pm, Rm 1-353 Coffee, 3:30pm.

Dissent in Russia with Special Reference to Soviet Jews\*

Prof. Zev Katz, Center for International Studies, Russian Research Table To Center at Harvard University, and faculty member at Hebrew University. Hillel Seminar. 8pm, Rm 10-105.

#### Thursday, March 23

The Information Processing System at Chemical Abstracts Service-Basic Concepts and Development Status\* Ronald L. Wigington, director, R&D, Chemical Abstracts Service

Project Intrex Seminar. 3:30pm, Rm 37-252. Coffee, 3pm. The Art of Experiment

Prof. Samuel Devons, Columbia University. Physics Colloquium 4:30pm, Rm 26-100. Tea, 4pm, Rm 26-110.

#### Friday, March 24

Chemical Engineering Graduate Seminars

J. Pohl, Partial Equilibrium Effects in Nitric Oxide Production in Combustion Systems, 2pm; R. Bratzler, The Transport Properties of Arterial Tissues as It Relates to the Genesis Atherosclerosis, 3pm.

#### Student Meetings

Planning meeting for Kaleidoscope (May 12). Thursday, March 16, 8pm, Student Center Rm 400. Faculty and staff especially encouraged to attend.

Student Information Processing Board Meeting Every Monday, 7:30pm, Rm 39-200.

Every Saturday, 11am, Student Center Rm 457.

Thursday Staff Meeting\*\* Every Thursday, 8pm, 2nd floor, Walker.

Technique Staff Meeting

ERGO Staff Meeting

Every Sunday, 6pm, Student Center Rm 443.

#### MIT Club Notes

Zero Population Growth

Election meeting. Wednesday, March 15, 5:15pm, Student Center Rm 002.

MIT Students for Lindsay\*\*

Meetings. Thursdays, March 16, 23 and 30, 5pm, Student Center West Lounge.

Haute Saone Priory of DeMolay

Business meeting and investiture. Sunday, March 19: 2pm for members and advisors; 2:30pm for all candidates. Rm 10-105. Open to members of any priory, all deMolays wishing to join, any master

Trip Overland to Nepal\*

Outing Club slide show. Monday, March 20, 5:45pm, Student Center Rm 407.

White Water Club\*\*

Pool Session. Tuesday, March 21, 8-10pm, Alumni Pool.

Alpha Phi Omega\*\*

Meeting. Wednesday, March 22, 7:30pm, Student Center Rm 407.

Scuba Club Pool Session

Wednesday, March 22, 8pm, Alumni Pool.

Iranian Students\*

Celebration of Iranian New Year. Friday, March 24, 7pm, Sala de Puerto Rico. Admission to entertainment, free.

Baker House SPAZ Jogging Club\*\* Daily, 10:45pm, Baker 2nd Floor West.

Hobby Shop\*\*

Open weekdays, 10am-4:30pm, duPont Gym basement. Fee: students, \$6/term or \$10/year; community, \$15/year. Call X4343.

MIT/DL Duplicate Bridge Club\*\*

Every Sunday, 2:30pm, Walker Blue Rm. Every Tuesday, 6pm, Lobdell.

Every Monday, 8-11:15pm, Student Center Rm 491.

Tiddlywinks Association\*

Soaring Association\*\*

First and third Mondays every month. 7:30pm, Student Center Rm

Judo Club\*\*

Every Monday, Wednesday, Friday, 5pm; every Saturday, 1pm. duPont Gym Exercise Rm. Beginners welcome.

Every Monday, Thursday, 5pm, Student Center Rm 473.

Fencing Club\*\*

Every Tuesday, 6-9pm, duPont Fencing Rm.

Every Tuesday, Wednesday, Thursday, 5-6:30pm, Kresge. New members, especially tenors, welcome. Call Cyril Draffin, 247-8691.

Classical Guitar Society\*\*

Classical guitar classes, group or private. Every Tuesday and Thursday, 5-8pm, Rms 1-132, 1-134, 1-136. Anyone interested in lessons call Vo-Ta Han, 661-0297.

Page 4, Tech Talk, March 15, 1972

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CBL Bridge Membe Chess C Every

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ractice. Every Tuesday and Thursday, beginning March 14, 30pm, Rockwell.

rban Vehicle Design Competition olunteer meetings. Every Wednesday, 3pm, Rm E40-250.

able Tennis Club\*\*\*

ractice session, every Wednesday, 7:30-10:30pm, T-Club Lounge,

ociety of Sigma Xi\*\* nformal coffee hour. Every Thursday, 4-5pm, Student Center Rm

vice. Student Homophile League\*

eeting and mixer meets Thursdays this month, 7:30pm, Mission hurch, 33 Bowdoin St, Boston. For gay help (anonymous) at MIT, all the student gay tutor, 492-7871 anytime.

cience Fiction Society\* very Friday, 5pm, Rm 1-236.

CBL Duplicate Bridge\*† ridge Club. Every Saturday, 1:30pm, Student Center Rm 473. lembers, free; non-members, 75 cents.

Thess Club\*\*

every Saturday and Sunday, 1:30-5:30pm, Student Center Rm 491.

#### **Social Events**

nternational Students Party

riday, March 17, 8pm, International Students Lounge, 2nd floor alker. Free admission.

luddy Charles Pub\*\*

oin your friends at the Muddy Charles Pub, 110 Walker, daily 0:30am-7:30pm. Call X2158.

riday Afternoon Club\*\*

fusic, conversation and all the cold draft Budweiser you can drink. eaturing folk singer Rich Holloway. Every Friday, 5:30pm, shdown basement Games Rm. Admission: men, \$1, women 50 ents. Must be over 21.

#### Movies

he Fifth Horseman Is Fear\*

lillel Student Jewish Appeal. Wednesday, March 15, 7pm and 30pm, Rm 10-250. Tickets, \$1, available is SJA Booth, Bldg 10

nderwater Movies of Marine Visual Behavior\* cuba Club lecture and film with Alan Adolph of Retina Founda-

on. Wednesday, March 15, 8pm, Rm 20E-017.

luid Mechanics Film. Thursday, March 16, and Monday, March 20, 5pm, Rm 3-270.

a Chinoise

Humanities Film Series. Friday, March 17, 6pm, Rm 26-100. Free dmission.

he Organization\*\*

SC. Friday, March 17, 7pm and 10pm, Rm 26-100. Tickets, 50

R. Baskin\*\*

SC. Saturday, March 18, 7pm and 9:30pm, Rm 26-100. Tickets,

sne Kaha Tha\*

ANGAM. Sunday, March 19, 3:30pm, Rm 26-100. Tickets: \$1.50 embers; \$2 non-members.

SC. Sunday, March 19, 8pm, Rm 10-250. Tickets 50 cents.

he Birth of a Nation\*

ilm Society D. W. Griffith Series. Monday, March 20, 8pm, Rm 0-250. Tickets \$1.

alley Town

lumanities Film Series. Wednesday, March 22, 10am, Rm 4N-0615.

Rise of Louis XIV

lumanities Film Series. Wednesday, March 22, 7pm, Rm 14N-0615.

ssassination Bureau\*\*

6C. Friday, March 24, 7pm and 9:30pm, Rm 10-250. Tickets 50 ents.

#### Music

a Capo Chamber Players\*

hamber Music Series. Featuring works by Arthur Berger, John larbison, Charles Wuorinen, Joan Tower and Mario Davidovsky. Wednesday, March 15, 8:30pm, Kresge. Free admission.

hursday Noonhour Concert\*

Richard Butler, baritone, and John Cook, harpsichord. Thursday, March 16, 12n, Chapel.

raditional Korean opera featuring Kim So-Hee, Korea's leading opera star. Sponsored by music faculty and Asia Society. Friday, March 17, 8:30pm, Kresge.

MIT Symphony Orchestra Spring Concert\*

conducted by Robert Freeman, program will include world remiere of Debussy's Symphony, Mozart's Sinfonia Concertante or violin and viola, Ravel's Tzigane, and The Bruckner Seventh Symphony. Saturday, March 18, 8pm, Kresge. Free tickets available in Bldg 10 Lobby, or at the door for \$1.

The Return of the Cholent Singers\*

MIT Hillel Student Jewish Appeal benefit concert. Sunday, March 19, 8pm, Student Center Mezzanine Lounge. Tickets: \$2 donation, available Bldg 10 lobby.

Thursday Noonhour Concert\*

Vo-Ta Han, classical guitarist. Thursday, March 23, 12n, Chapel.

#### Theater and Shows

Evening of One-Act Plays\*

Dramashop presents Witness by Terrence McNally and Gallows Humor by Jack Richardson. Friday and Saturday, March 17-18, 8:30pm, Little Theatre. Free admission. Critique and coffee hour following performances.

#### Dance

Folk Dance Club\*

International folk dancing. Every Sunday, 7:30-11pm, Sala de Puerto Rico (exceptions to be posted).

Modern Dance Technique Class\*\*

Elementary/Intermediate. Every Monday, Wednesday, Friday, 5:15pm. Every Sunday, 1pm. McCormick Gym.

Tech Squares\*

Every Tuesday, 8-11pm, Rm 10-105. Call dorm X0888 or 492-5453.

Fold Dance Club\*

Folk dancing. Every Tuesday, 7:30-11pm, Student Center Rm 407.

Folk Dance Club\*

Israeli folk dancing. Every Thursday, 7:30-10pm, duPont Gym T-Club Lounge.

#### **Exhibitions**

Court House, City Hall\*

Photographs by Bill Clift displayed in Creative Photography Gallery through March 31.

Sol LeWitt\*

Wall drawings and 3 sculptures displayed in Hayden Gallery through March 28.

Photographs by Eadweard Muybridge\*

Displayed in the Hayden Corridor Gallery through March.

French Undersea Research\*

Hart Nautical Museum, Bldg 5, first floor.

The Art of Rigging and Buoy System for Air-Sea Studies\* Hart Nautical Museum, Bldg 5, 1st floor.

Main Corridor Exhibitions\*

Presented by students and departments. Bldgs 7, 3, 4, 8.

#### Religious Services and Activities

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

Roman Catholic Mass\*

Every Sunday, 9:15am, 12:15pm, 5:15pm, Chapel.

Christian Worship Service\*

Every Sunday, 11am, Chapel.

Christian Discussion Group\*

Bible study and discussion of Christianity today. Every Sunday, 9:30-11am, McCormick Seminar Rm A. Call Ron Gamble, X6712 or

Hillel Religious Services\*

Monday-Friday, 8am, Rm 7-102; Fridays, 7:30pm, Chapel; Saturdays, 9:30am, Chapel.

Tech Catholic Community Bible Study Program\*

Weekly series of informal Bible discussions. Every Monday, 7:30pm, Student Center Rm 441.

Christian Science Organization\*

Meeting includes testimony of healings. Every Tuesday, 7:15pm,

Latter Day Saints Student Association\*\*

Religious seminars. Every Tuesday, 8am, Student Center Rm 473.

Christian Bible Discussion Groups\*

Every Wednesday, 12:30pm, Rm 4-343; every Thursday, 12:30pm, Rm 20B-222. Call Prof. Schimmel, X6739, or Ralph Burgess,

Tech Catholic Community Discussion Series\*

Informal discussions with Father Stanley MacNevin on issues of current religious interest. Wednesdays, 7pm, McCormick Green Rm.

Christians for Dinner\*

United Christian Fellowship. Every Thursday, 6-7pm, Walker Dining Hall (under sign of the fish)

Praying, Singing, Sharing Meeting\*

United Christian Fellowship. Every Thursday, 7-8pm, East Campus Lounge.

Islamic Society Prayers\*

Every Friday, 1pm, Kresge Rehearsal Rm B.

Vedanta Services<sup>3</sup>

Every Friday, 5:15pm, Chapel; discussion hour, 6pm, Ashdown Dining Hall.

Free Draft Counselling\* Hillel, 312 Memorial Drive, X2982. Call or visit 10am-5pm.

\*Open to the Public

\*\*Open to the MIT Community Only

\*\*\*Open to Members Only †Freshmen encouraged to attend

Send notices for March 22 through March 31 to the Calendar Editor, Room 5-111, Ext. 3279, by noon Friday, March 17.



# Most Wanted

The Committee on Memorabilia is actively seeking items from the past to add to its collection. The focus of the search right now is portraits which are known to exist but have disappeared recently. Two of these portraits are shown above.

Harry W. Tyler (left), a member of the class of 1884, was on the mathematics faculty from 1884 until his retirement in 1930. He also served as secretary of the faculty from 1889 to 1906. The portrait was painted by Isaac B. Hazleton.

Alfred E. Burton (right), was dean of students from 1902 until 1922. It is he for whom Burton House is named. His portrait, painted by Mary B. Hazeltine, hung in Burton House until its renovation two years ago, when the picture vanished. If you have any information

regarding the whereabouts of either of these pictures, please call Walt Taylor, curator of memorabilia, Ext. 440, or Warren Seamans in humanities, Ext. 4444.



### Faculty **Members** Promoted

(Continued from page 1)

Engineering.

Roy Kaplow, Robert M. Rose and August F. Witt to professor; Keith H. Johnson and David J. Sellmyer to associate professor in the Department of Metallurgy and Materials Science.

Alaa E. Mansour to associate professor in the Department of Ocean Engineering.

School of Humanities and Social

Robert W. Crandall to associate professor in the Department of Economics.

Albert R. Gurney, Jr., and Theodore Wood, Jr. to professor; John L. Buttrick and John Harbison to associate professor in the Department of Humanities.

Nazli Choucri Field to associate professor in the Department of Political Science.

Emilio Bizzi, Alan Hein and Whitman A. Richards to professor in the Department of Psychology.

School of Science:

David Baltimore and Ethan R. Signer to professor in the Department of Biology.

Roger G. Burns to professor and John S. Lewis to associate professor in the Department of Earth and Planetary Sciences.

Richard M. Dudley and Harold M. Stark to professor in the Department of Mathematics.

Robert C. Beardsley to associate professor in the Department of Meteorology.

Hale Bradt to professor; R. Cosman and Roman W. Jackiw

to associate professor in the Department of Physics.

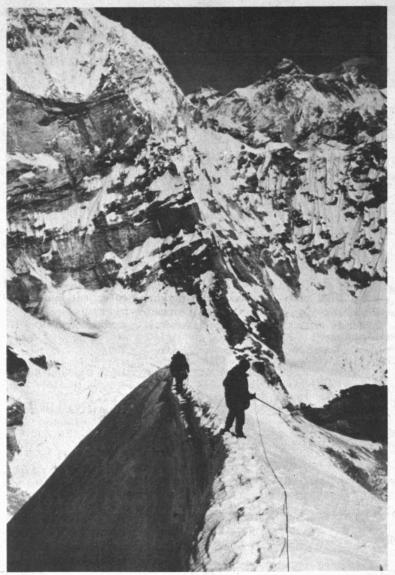
Sloan School of Management: George F. Farris, William A. Martin, D. Quinn Mills and Myron Scholes to associate professor of management.

### Mousetrap Cars Being Trial Tested

(Continued from page 1)

Professor Paul pointed out, is how to design a step-down transmission that will change the high force and low displacement of the mousetrap spring to a low-force; highdisplacement system that will apply the energy in the spring over the longest possible time. "This allows a good deal of latitude," he said, "and the students have produced a number of ingenious designs. Some have followed an alternative strategy, making their vehicles fairly heavy applying the spring energy in a short burst and relying on inertia to carry the car as far as it can go. One student has even put a propeller on his car, to see if some added thrust can be gained."

The vehicles range from a few inches to several feet in length, sport a myriad assortment of handmade masonite gears and pulleys, and have anything from two to eight wheels. Most students have taken the spring off the mousetrap and mounted it separately on their vehicles, while a few use the entire mousetrap. One of these is so far the favorite and in a trial last week managed to go an official distance of 145 feet. Most of the mousetrap vehicles in the MIT trials average between 30 and 50 feet.



The climbers in Nepal.

### Rolph Spends Term Scaling Peak in Nepal

The wish to get away from the classroom is one that overtakes almost every college student sooner or later, sometimes with very educational results.

Such was the case with Don Rolph, a senior in mechanical engineering, who, after a hectic month of planning, found himself on a flight to Thessalonica, Greece, late last September.

Representing the MIT Outing Club, he and a friend from the Boston area were about to embark on a three month trek over eastern Europe and Asia. In Greece they met three other American students and started for Turkey.

"The route across the Middle East is old and fabled," Don says. "For centuries it was used as a caravan path between Europe and Asia. Now it's as heavily travelled as ever."

Driving a Volkswagen microbus, the group paused briefly in Istanbul, then took a ferry across the Black Sea to Iran, where they attempted to climb the 19,000 foot Mount Damavand. "The climb was not particularly difficult," Don explains, "but we weren't used to the arid climate and couldn't carry enough water to make it to the

From Iran the group made its leisurely way across Afganistan toward India. Visa problems forced three of the travellers to fly while the others drove across the Khyber Pass into India. The trip across India was hurried since the group was several days behind schedule.

"Our entrance into Nepal was fantastic," Don says. "We drove out of the jungles of India and over a pass, and there before us was the Katmandu Valley, with the Greater Himalayas forming a white backdrop."

In Katmandu the adventure continued. The group hired a head sherpa and porters, and spent 20 days climbing higher and higher as they approached Mount Everest, scaling a 20,000 foot

mountain on the way. After a brief stay at Thyang Boche for the Buddhist festival of Mani Rimdu. the tired explorers headed for

Was the trip worth it? "We're already planning to go back," Don says, "this time for a longer stay."

Don will give a slide show "Overland to Nepal" featuring the highlights of the trip next Monday, March 20, at 5:45pm in Room 407 of the Student Center. The show is sponsored by the Outing Club, and is open to the public free of charge.

### Alumnae Sponsor Women's Night

Women students will have the opportunity to meet MIT alumnae tomorrow (March 16) at the annual 'Women Students' Night" sponsored by the Association of MIT Alumnae

President Jerome B. Wiesner will address the gathering of alumnae and women students-juniors, seniors and graduate students. Held at the Faculty Club, the meeting will begin at 5;45pm with a social hour, followed by dinner at 6:30pm.

eligible. The entries are judged by an

Last year, more than 100 works

Rules for this year's contest are

### Explosions on Campus Are Earthquake Study

(Continued from page 1) problem of designing tall buildings," Professor Christian says. "Clearly the condition of the subsoil is important to the design of earthquake resistant foundations. We chose the site near Westgate because we know there is a plentiful amount of Boston blue clay beneath it, and this type of subsoil is abundant throughout the Boston

The MIT subsoil study will be based on data from blasts made by Weston Geophysical Research, Inc., of Weston, a firm with extensive experience in geophysical engineering applications and earthquake effects. In a series of tests over the next two or three weeks, Weston engineers will place blasting caps, of the sort used to set off dynamite, deep in the holes that have been bored at the site during the past month. Sensing devices will be placed in other holes to record the arrival times of shear waves generated by the blasts. Since the water table is close to the

surface, the blasts plumes of water into the air, but these will not affect the results. Shear waves travel more slowly than the compression waves also created by the blasts, and so sophisticated instruments are needed to distinguish them from the receding effects of the compression waves.

Earthquake threat as a problem in building design has recently become a matter of some debate in the Boston area because of the new building code adopted last July, contained seismic which specifications taken from the Uniform Building Code, a model code drafted by construction experts around the country. The Code specifies four zones, on a scale of zero to three, depending on the likelihood and probable severity of earthquakes in a given region. Boston's new code is designed for zone 2, although at least one recent suggestion has proposed that Boston be rated zone 3, the same level as San Francisco.

### Humanities Issues Call for Boit, King Contest

The Humanities Department is seeking entries for the 1971-72 undergraduate Prizes for Writing competition.

The competition is divided into three categories. The Ellen King Prize for Freshman Writing is for short works by freshmen only, and carries cash awards of \$100 for first place and \$50 for second. The Robert A. Boit Writing Prizes are for short works by any MIT student. Prizes include \$125 for first place; two \$75 second prizes; two \$45 third prizes; and two \$30 fourth prizes. The Robert A. Boit Maunuscript Prize is awarded for works of substantial length, completed or in progress, by any MIT student, and carries a cash prize of \$200.

Students may enter more than one of the categories, but must submit separate entries for each. Papers written for course work are

editor from a publishing house and members of the humanities faculty. The judging procedure will take about one month, after which a luncheon will be held for the winners and judges.

were entered in the competition, and David Rothenberg, who won the manuscript prize, has since received encouragement from publishers.

available in the humanities head-

quarters, Room 14N-409. The deadline for entering is Thursday,

### **Obituaries** Percy Lund

Percy H. Lund, 73, former supervisor of the Graphic Arts Illustration Service, died on March 6 in

Mr. Lund came to the Institute in 1942 and worked at the Radiation Laboratory until 1946 as an illustrator. He formed and then supervised the GA Illustration Service until his retirement in 1962. He worked part-time for the Division of Sponsored Research until 1967. Mr. Lund did the original three-dimensional drawing of the Institute which is still used as a map of the campus.

He leaves a daughter, Miss Barbara Lund of Newton, and a son, Edward of California.

### Roland Seger

Ronald D. Seger, 73, a former employee in the Department of Metallurgy and Materials Science, died on March 9 in Quincy City Hospital after a long illness.

Mr. Seger came to the Institute in 1947 and worked in the metallurgy machine shop as an instrument maker until his retirement in 1968. He was very active in the Masons, both in Quincy and the Grand Lodge of Massachusetts.

He leaves his wife, Margaret McMurtrie, and a daughter, Mrs. Aureo N. Ferrari of Barre, Ver-

#### William Theriault

William J. Theriault, 77, a former staff member of Lincoln Laboratory, died on March 3 in Cambridge.

Mr. Theriault joined the Lincoln staff in 1951, the year the lab was founded. As leader of the Construction Engineering Group, he was responsible for the engineering design and construction of many major facilities at Lincoln experimental field sites.

He leaves his wife, Constance B., a son, Gerald A., and two grandsons, William C. and Paul G.

### Molasses Tragedy Recount Cited by Scientific American

An article by an MIT undergraduate on the great 1919 molasses accident in Boston's North End that appeared in a recent issue of the student journal, technical Engineering News, came in for reporting in prestigious Scientific American this week.

Author of the TEN article two months ago was John Lange, III, a junior in naval architecture from Houston, Texas.

Editors of Scientific American found the article sufficiently interesting to devote a full column to it in the "Science and the Citizen"

section of their March issue.

The incident recalled by Lange occurred January 15, 1919, when a 2.5 million gallon steel tank containing raw molasses broke, releasing a flood of molasses. Eleven persons died, 60 were injured and property damage was wide spread. Lange's article analyzed the episode from an engineering standpoint.

Lange wrote the article originally in first term 1970 as a project for a subject, "Birth and Care of a City," taught by Professor D.P. Adams mechanical engineering.

## Good, Pistol Team Dominate IEEE Medal of Honor New England Championships

Tech's accurate pistol team made news again this weekend at the MIT range. The Tech shooters fired their way to the National Regional (New England) Conventional and International Target Championship with All American John Good of Rochester, New York taking two first places out of three classification fired.

The New England section of the National Collegiate Pistol Championships, held at MIT, was one of the six other sectionals fired throughout the country. This past weekend, MIT led the field with a 1106 conventional and a 1080 standard score. MIT's top gun, John Good took the individual spotlight again scoring 864x900 (90 shots) on the conventional target, 282x300 (30 shots) with the standard pistol and 267x300 (30 shots) with the free pistol on the international target. Good's aggregate on the international target was 550x600 which could qualify him as the nation's best collegiate shooter, an award that he already won in

making all the headlines on the collegiate scene, the man who built

ago in the monthly olympic training tryouts held at MIT. McLennan's mark smashed the 277x300 set by Frank Olin of California in 1971. And also com-While MIT's pistol team has been peted against and beat, five time national champion, Don Hamilton of Kingston, and outdoor civilian title holder, Ray Tourigny of the Tech pistol program to national The .177 caliber precision air

pistol was introduced in the 1968 Olympics at Mexico City and has been growing in popularity throughout the US. McLennan and MIT introduced this weapon indoors for the first time in 1971. McLennan's recent record is not

prominence has been making a few

of his own too. Tom McLennan, of

Woburn, has not lost any of his old

Coach of MIT pistol since 1965,

McLennan fired national open and

civilian record 284x300 with a

precision air pistol, three weeks

his first claim to fame. Before joining MIT, he served 22 years in the Air Force and was one of its top pistol competitors.

When McLennan came to MIT the engineer rifle and pistol team was a small program with limited facilities. As coach and range master he has developed the pistol and rifle program so that over 15,000 members of the community can use the MIT shooting facility. Now MIT boasts the largest physical education shooting program in the country.

MIT has had six All Americans, including the reigning intercollegiate king, John Good. MIT's collegiate picture is bright. A foursome of freshman, Karl Seeler of Newton, Richard McCarthy of Springfield, Palachai Meesook of Bangkok, Thailand and Shannon Hill of Clarksville, Tennessee combined to fire a national junior record of 1677 in international slow

Merrick Leler of Highland Park, Illinois registered a 292x300 conventional for a new MIT record and then countered with a national collegiate timed fire mark, a perfect

Hillel Holds

Folk Concert

The MIT Hillel Student Jewish

Appeal is sponsoring a benefit

concert of Israeli folk music on

Sunday, March 19. The per-

formance will be held in the

Mezzanine Lounge of the Student

The concert will feature the

Cholent Singers, a group of

students who specialize in Jewish

and Israeli folksongs. They are:

Howard Safren, '74, Willie Frenkel,

'74, Bill Stohl, '73, Paul Mandel,

'74, and Boston University student

Bruce Moscoquitz. The program

will also include a performance of

Admission to the concert is a \$2

donation and tickets are available

in the lobby of Building 10.

Proceeds from the concert will be

sent to the Israel Emergency Fund

Appeal is also sponsoring a movie,

"The Fifth Horseman Is Fear."

which will be shown tonight

(March 15) in Room 10-250 at 7 pm

The public is invited to both the

and 9:30 pm. Tickets are \$1.

concert and the movie.

or the Combined Jewish Fund. The MIT Hillel Student Jewish

Israeli dances.

Center beginning at 8 pm.



Silvio Vitale, left, receiving the Master Sword from varsity fencing coach

### Vitale Awarded Master Sword by N.E. Group

Silvio Vitale, considered the dean of New England fencing coaches, was presented the first annual "Master Sword" award for contribution to New England fencing. The award was presented to "The Maestro" at the recent New England Intercollegiate Fencing Championships, won by MIT, at Worcester. Vitale, who

coached Tech fencers for 20 seasons that included six New England Team Titles, was a cofounder of the New England Intercollegiate Fencing Conference. Now an Assistant Professor of Physical Education, Vitale is also the Director of Woman's Athletics

### Miller Appointed Lecturer in Electrical Engineering

Charles E. Miller has been appointed Lecturer in the Electrical Engineering Department for the Spring term, 1972. He is a specialist in the design and use of stroboscopic lighting equipment. For years he has contributed to the design of stroboscopic instruments and accessories for the General Radio Company in West Concord,

Mr. Miller will work with Professor Harold Edgerton in the Stroboscopic Light Laboratory and will be in charge when Dr. Edgerton leaves in late April for an archaelogical expedition in

Although the Strobe Lab is in the Electrical Engineering Department, many students from all over the Institute participate in the experimental work since strobes are found useful almost everywhere.

Mr. Miller has written numerous papers concerning the many uses of stroboscopic light in making engineering observations and measurements.

### Hillel to Offer Passover Meals

four days of Passover. Lunches will be served April 3 through April 6, and dinners April 2 through April 5. The meals will be served in the kosher kitchen located in the base-

Reservations for the Passover meals must be made before March 22. For more information and reservations, call the Hillel office, Ext.2982 or 2987, 312 Memorial

MIT Hillel will serve Passover lunches and dinners during the last ment of Walker Memorial.

# Forrester to Receive

MIT's Professor Jay W. Forrester will receive the Medal of Honor of the Institute of Electrical and Electronics Engineers at the IEEE's annual banquet in New York, March 22.

The Medal of Honor is one of IEEE's highest awards and includes a gold medal, a bronze replica, a certificate and \$5,000. The banquet is a highlight of the annual IEEE convention.

Dr. Forrester will be honored for his invention and application of the magnetic-core, random-access computer memory employing coincident current selection, It is the basis for virtually all memories in digital computers.

Professor Forrester invented coincident current core memory in the late 1940s and early 1950s. He later switched from electrical engineering to computer applications and modeling in management and is world famed for his pioneering work in systems dynamics and his books, Industrial Dynamics, Urban Dynamics and World Dynamics.

The Medal of Honor was established in 1917. John Bardeen



Professor Forrester.

was given the award a year ago for his work on the transistor. Other earlier winners have included Dr. Charles H. Townes in 1967, Dr. Claude Shannon in 1966, Dr. Ernst Guillemin in 1961 and Dr. Julius A. Stratton in 1957. Guglielmo Marconi was presented the medal

### State Residents Reminded to Register for Primary

Cambridge Election Commission has issued a reminder for all Massachusetts residents to register for the Pre-Presidential Primary, which will be held on Tuesday, April 25.

Saturday, March 25, is the deadline for registering. Only those persons who have resided in Massachusetts for a minimum of

Professors Gordon H. Pettengill

six months are eligible to register and they must have proof of residence (utility bill, rent receipt or lease, or notarized statement from the landlord).

A list of registration locations and hours in Cambridge is posted in the Information Center, Room 7-111. The Cambridge Election Commission at 362 Green Street (876-9828) can also provide information for registrants.

### Who's New in the News

and Irwin I. Shapiro, both of earth and planetary sciences, have been selected by the National Aeronautics and Administration to help plan a series of NASA missions to Venus using the Pioneer class spacecraft which is scheduled to begin in late 1976. . . Metallurgy and materials professor John F. Elliott and Professor Emeritus John Chipman were recently honored by the American Institute of Mining, Metallurgical, and Petroleum and the American Society for Metals engineers. Professor Elliott received the Albert Easton White Distinguished Teacher Award, and an award has been established in honor of Professor Chipman. . .Professor Robert V. Whitman, head of the soil mechanics and structural engineering divisions of Department of Engineering, was recently elected to membership in the Earthquake Engineering Research Institute. Mrs. Judy Francis Rosenblith. professor of psychology at Wheaton College, and wife of Provost Walter A. Rosenblith, has been appointed as the first recipient of the A. Howard Meneely Professorship Wheaton. . . Luis A. Ferre, '24, Governor of Puerto Rico, has received the 31st Herbert Hoover Award honoring an engineer for distinguished public service. . .Professor Morris A. Adelman of economics has been named by John Nassikas, chairman of the Federal Power Commission, to serve on the national gas survey

supply technical advisory task

force for natural gas.

### Companies to Interview

Representatives from the following companies will be available for interviews in the Placement Bureau during the next

Wednesday, March 15: Norden Division of United Aircraft; Southern California Edison Company; Tech HiFi Stereo Component Systems Corporations; U. S. Naval Ship Research & Development Center; The Futures Group.

Thursday, March 16: Commonwealth Edison Company; Tech HiFi Stereo Component Systems Corporation.

Friday, March 17: John Hancock Mutual Life Insurance Company; Applied Urbanetics, Inc.

Monday, March 20: Atlantic Richfield Company, North American Producing Division; National CSS; Organization for Argentina.

Wednesday, March 22: Bethlehem Steel Corporation.

Students interested in talking with representatives from these companies should visit the Placement Bureau in Room E19-455 to sign up for an appointment.

#### Retirement Dinner Planned

The All Institute retirement dinner will be held on June 6 this year. By announcing this date early, the Office of Personnel Relations hopes to avoid individual parties which will conflict with the dinner.



#### For Sale, Etc.

New guitars: 2classical, \$55 ea; 1 classical, \$35; 12-strings, \$65 and up. Bruce, X2552.

Boy's winter coat, nrly new, 16, \$15. Beth, X3686.

Avon cosmetics for men, women, children, X4381.

Stereo tapes, 8-trk, \$2 ea or wl swap for used cassettes, rock to mood music. X7025.

Magnavox port stereo, \$25; Polaroid B&W cam, \$5; Estrada guitar w/case, \$30. Julie, X156 Draper 7.

New Zenith 12" B&W TV w/wal trim, UHF-VHF, outdoor antenna, was \$110, now \$75. Jean Tam, X2961.

Gibson Les Paul custom, less than yr old, \$350 or wl consider trade for gd acoustic guitar amp or stereo comps. Kay, X6206.

Masterwork stereo, exc cond, \$50; 4000BTU air cond, used 2 mos, \$75; 3x6' rug, \$5; 2 bar stools, \$7. X5046.

Old AM radio, exc sound, \$10. Randy, Dorm 8565

Koflach ski boots, 81/2, 205 Fisher superglass skis and bndgs, 51" ski poles, all \$120. Don or Andy, X2540

Zenith port TV 12", UHF antenna, yr old, \$50. Call 864-0779.

Kneissl 210cm Wh Star skis, used 7 times, \$125. Kevin, X2073.

Barbell, 60-lb set, plastic cover, concrete filled, \$15. Jim, Dorm X0285.

Sunbeam mod ST200 22" snow blower w/100' cord, used 1 yr, orig \$169, best offer. X6606.

Pr AR-4X spkrs, exc cond, walnut fin.

Call 484-4125 evgs.

Panasonic car stereo + AM-FM adaptors, \$60, \$50 for adaptors; Vivitar 100mm lens adapts to many SLRs, \$60. Dorm X8419.

Zenith port stereo, \$35; 2 basket chrs, \$15 ea; 3-drw blue bureau, \$15; Emerson port TV w/no VHF, \$25; hrd cover "Vantage Point," \$5; must sell, wl bargain. Caron, X1872.

Lg swing set, 4 yrs old, \$10; boy's 20" bike w/train whs, new, \$18; 2 tbls; ottoman; student lamp; glass paneled door w/screen, storm door. Gundersen,

Stereo sys, mo old: Scott rcvr 50w/RMS, Dual 1218 trntbl, Shure M91E cart, 2 Dynaco A25 spkrs, list \$570, asking \$380, negotiable. Al, X580 Draper 7 or Dorm 9157.

House plants: ivy, shrub, strawberry, impatiens, spider, swedish ivy, etc, healthy. Jane, X1871.

Hammond mod M3 organ hookup to

exc 122 spkr. X7611 Linc.

Br new Ceramano stoneware dinner set, 45 pc, nvr used, was \$70, now \$50. Mati, X1869

Crushed green velour spring coat, 14, nrly new, orig \$45, asking \$25. Mary, X7422 Linc.

Estey elec organ, 2 key brds, all tab, bench includ, asking \$185. Mary, X3423.

Carlyle, 3.3 acre lot, high pasture land, some trees, quiet street. X7708 Linc.

B&W Zenith TV, 23", \$65. Ashok,

X6907.

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 extension. Only Institute extensions may be listed. Members of the community who have no extensions may submit ads with outside telephone numbers by coming in person to the Tech Talk office, Room 5-111 and presenting Institute identification. Ads may be telephoned to Ext. 3270 or mailed to Room 5-105. The deadline is noon

Two section sofa, exc cond, \$20. X7051.

Stereo phono, self-contained unit, 4 speakers, new needle, gd cond, \$30. Ron Bohn, X6610.

Mod hangover brass DR chandelier w/star-shaped scones, best offer. Joe Tavine, X461 Linc.

Blue rug, 7x12, very gd cond, \$40. Dietrich, X6747.

Free: TV, gd only for parts; Blondertongue UHF adaptor, \$10. Tom,

Blue rug, 9x12, \$7; bulletin brd, 2x3, \$2. Tim, X9664 dorm.

Woman's 81/2 Converse tennis snkers, used 1 hr, \$7. Cliff, X5465 Linc.

Lafayette AC-33 4 spd changer, w/ cartridge & base, \$10; 14x13x24" hifi spkr, \$20. Dave, X112 Linc.

Boy's fig skates, 6, worn twice, \$6; Polaroid Swinger, v gd cond, \$5; silver certificate, 1935, v gd cond, \$4. Deana,

Gentle flare dbl-knit 100% polyester pants, 38-31, new (\$23), asking \$15. Neil, X2109.

Playboys, '64-'70, gd cond, 50 cents or less; stereo recrds, v gd cond, \$2.50 or less, mostly rock. Ed, X8429 dorm.

Russian SLR camera, Zenit Model E, w/meter & case, 58mm f/2 lens, selftimer, interchange lens mount, used twice, \$60 new, asking \$40. Don, X7333 or 7398.

Ekco & Eterna stainless flatware for 8, 50 pcs, br new, nvr used, \$10. Jennifer Kelley, X6106.

Baby carriage, crib/matt & match youth headbrd. X5210.

Merchant bonded ww retread G78-15 tires, nvr used, orig \$32, asking \$25. X2766.

Aquariums, 10 & 15 gal on dbl std, dynaflo filter, reflector, htr, other access, all exc, \$35. Carole, X261 Draper 7.

Avon motorcycle innertube, 3.25-3.50x18, \$3; new BMW rear springs, \$5. Jim, X6232.

Dbl bed & frame, \$65 or best; 22" console TV, \$75 or best; 6-drw dresser w/mirror, \$35; arm chrs, \$10 & \$15, moving must sell. X5793.

GE port solid st stereo, gd cond, \$25 or best offer. Andy, X4656.

Man's ice skates, 9, \$10. Mark, X0395

Schock lined swim pool, 18' diam, all

access, \$325. Larry, X6186.

Bike Toter for car; RAC car amp meter; telescopic lenses, 4mm orthoscopic, 28mm Kellner, richest field; TV antenna; all cheap. Charlie, X7174.

Tosca (Opera Co of Boston), 2 tickets, 7th row balc, April 5, \$14 ea. Don, X441 Draper.

Fireplace wood. Pete, X7284 Linc.

Dbl bed, Castro convert, lg baby crib, playpen, all cheap. X1812 or 7237.

#### Vehicles

'63 Sunbeam Alpine hrdtp convert, extra parts & tires, nds paint, \$300.

'63 Chevy Impala, V-8, 2-dr, R & H, \$75 or best. Fred, X1720.

'64 VW, rebuilt eng, new tires, bad first gear, runs well, best offer. Jacob, X4519.

'64 VW, no dents, new fr end, br & ring job, 64K, \$450. Call 581-1348.

'65 Corvair, rebuilt eng, \$450 or best. Nick, X6920.

'65 VW bug. Herb, X2368.

'65 Buick Electra convert, fl pwr, 37K orig mi, exc cond. X243 Draper 7.

'65 VW bug, perf cond, snows. Piero, X5768 or 5788.

'66 Porsche 912, nds body work, best offer over \$1400. Virginia, X7717

'69 Saab 99, wh, AMR, exc cond, \$1600, X6047.

'69 AMX, 343 4-brl, perform grp, 4-spd, 40K, gd cond, \$1800. Ray,

'69 Austin America, auto, front whl drive, AM/FM, 2 new trs, \$1000 or best. X6289.

'69 Triumph GT6+, exc cond, new radials & batt, quick sale at \$1600, firm. Call 332-8128.

'70 American Ambass DPL, 2-dr hrdtp, auto, air cond, p st, radio. Stu, X4479.

#### Housing

Arl, spacious 5 rm apt w/garage, 10 min walk to Arl Ctr, \$185 + heat & utils, married cpl only. X430 Linc.

Back Bay, furn studio apt, Beacon St nr Dartmouth, top flr, view, sun, quiet, elev, pking extra, \$175 inclu util, avail 4/15. S. Allen, X6914.

Camb, nr Cent Sq, 1-BR apt, comp furn, avail now, short or long rental negotiable. Call 354-6991 evgs.

Camb sublet w/opt, nice studio w/tile B, great loc, avail now. Kathy, X6968.

Camb, 1000 Mass ave, 2-BR apt for MIT-affiliated people, sublet 5 mos, \$200/mo. Antonio, X5069.

Concord, wdd 2 acres, 4 BR colonial, 21/2 B, LR w/frpl, lg family rm, panel den, eat-in K, walk-out basemnt w/frpl, screened porch, nr school, swim, tennis, fishing, many extras, asking in 60s but wl accept reas offer. X5331.

East fens, 1 BR apt, \$100, no lease, avail mid-April. Warren, X7114.

Eastgate, sum sublet, \$169/mo. Jonathan, X2351.

Lake Winnipesaukee chalet, priv pool, beach sports, sauna, etc, \$125/wk. X6415.

Lex, Five Fields area, 1-story contemp, 3 BR, study, 2 B, lg LR, fam rm, K, 1/2 acre, membership in comm assoc w/ pool, low \$60s. X691 Linc.

Lex, 6 yr-old all elec cape house, 3 BR, DR. 11/2 B, master Br walnut pan, gar, dish wash, disp, low taxes, avail May or June, \$29.5K by owner. X5862 Linc.

Lincoln, contemp chalet framhse, 5-BR, 2B, unfurn, 1 2/3 acres, gdn, 2-car gar, fl bsmt, w/dish, stove, frzr, \$400/mo, lease. Mary Biren, X3979.

Martha's Vineyard, June rental, sm Alice, X4897.

Nwtn, house, comp furn, avail 4/1-8/31, 5 BR, D, LR, study, 3 B, mod K. Mike, X6431.

Som, sublet now to 8/31, LR, BR, dressrm, K & B, w-w carpet, dish & disp, air cond, pking, new bldg, \$150 + utils. X4954.

Waltham, 2-BR apt, avail 4/30, \$150 incl water & elec, newly painted, spacious pantry, lg dry bsmt, yd, pking, children & pets allowed, nr trans, shopping. X2728.

#### Animals

Alaskan Malamute puppies, purebred, born 1/11, \$100. Peter, X584 Draper.

Free: 2 m, 2 f, grey tiger striped kittens, 7 wks old. Taz, X4724.

Free gerbils: 2 male, 3 female, X1488. Positions Available

Hampsters, 1 mother & 4 children, free. X6711 or X6709.

Beaut free kittens. Dr. Tessman, X2917 lv message.

#### Lost and Found

Lost: gold & amethyst post earring bet West Gar, Coop & Bldg 7, Wed am, 3/8, sentimental & intrinsic value, reward. Madelyn, X2012.

Found: lady's wh gold ring in Westgate pking lot. X5272.

Found: MIT class ring, '72, first name Patrick, in Harv Sq. Call 876-2165.

#### Wanted

Camping equip for 4, incl stove, tent, air matts, sleep bags, etc + addl tent for 2. Eike, X5710 or 6540.

Waterbed heater. Heather, X3207.

Elec refrig w/top or side frzr. Francis or Susan, X6253.

Fem rmmate to share lg Brk apt nr Cool Crnr, own rm. Joanne, X5836.

Old coins & stamps, cash paid. Dave, X8206 dorm.

Garage to rent in Arl area, should have electricity. Larry Stelmack, X6096.

Ride from Walpole St section of Westwood to Linc Lab during first 3 wks of July. X165 Linc.

F rmmate for lg rm in apt between Harv & Ctl Sqs, avail 4/1. Vivian, X7051.

Rmmte for Brkline apt w/3 others, own room, nr T, \$80 + 2 mos security. Susan, X7958 lv message.

Baby stroller. Gerhard, X1637.

F rmmate for 4 BR Brkline townhs, own rm, nr T, \$90, avail 4/1. Marilyn,

Outbrd motor, Evinrude or Johnson, 4 hp, long shaft; wood dinghy or pram, 6-8'. Bill Blatchley, X4576.

F teacher, 23, seeks F rmmate for beaut, safe Cam apt, own rm, \$130. Roberta, X4405.

Oil pan filler block, part No. 533950 for '63 half-ton Studebaker mail truck. Tom, X5692.

Fem student to babysit 2-5:30pm & 1 or 2 evgs in exch for free rm & board. Carol, X5804.

Daily - ride, 8-4:30, Belmont-BU, starting 4/3. X3966.

Daily ride to Brocton (Campello), 8-4:30, pool or psgr. X4031. Ride to New York City morning of

3/30. Richard Hester, X0219 dorm. Wooden desk, any kind. Don Cook,

Daily rider, Burl-Woburn to Camb, 8-4:30, lv Burl 7am, lv Camb 4:45pm. Aubrey, X2255.

Mini TV, pic immaterial, sound portion important. Wilson, X5121.

Used aquarium, 15-20 gal, nd not be watertight. Don Foisy, X4475.

Person to repair "66 Sunbeam, ring gear broken, wl debate price, urgent. Byves, X4233.

#### Miscellaneous

Will do typing. Susan, X1786.

Wood floors sanded & refin professionally. Denny, X2430.

Mature woman will babysit in your home 2 evgs/wk for children or elderly persons. Kathy, X5831.

M Siamese cat avail for stud. Arlene,

The Office of Personnel Relations is seeking individuals from within the Institute to fill the following openings:

Senior Technician (El'c): Extensive microwave background required. This position is with our facility in

Middleton.

Technician B (El'c): Will perform electrical tests and inspection on subassemblies, must have good working knowledge of electronic test equipment.

Ext. 4268

Secretary IV: Position provides good opportunity for secretary to work for committee chairman and other senior faculty. Responsible, experienced person with initiative needed to handle a variety of administrative duties and editorial work. Technical typing.

Secretary IV: For professor in Urban Affairs. Accuracy, attention to detail necessary to arrange busy calendar. Writing ability to assist in answering correspondence and occasional editing of speeches. Excellent typing and shorthand required.

Ext. 4251

Staff Openings: Two administrative staff positions are now open in the Analytical Studies Group which is a part of the Office of the President and Chancellor and reports to Vice President C. B. Simonides. Both positions are replacements for staff members who were appointed elsewhere in the

Position 1 - Staff Associate, includes participation in the activities of the Group which provides staff support to the senior officers and to the Academic Council in the conduct of studies of academic and administrative programs, plans, and organization. Systems analysis and computational background and skills would be especially helpful.

Position 2 - Staff Associate, would participate in all aspects of the administration of the President's Fund for Community Affairs. Responsibilities include staff work and agenda of the Fund's steering committee and drafting of a major report on MIT's community affairs programs.

Candidates for both positions should have an educational background equivalent to graduate study, and/or working experience in such areas as management, program planning, analysis and evaluation. Superior communication and writing skills are essential in both positions. Both positions offer very useful career preparation for senior responsibilty in universities and

other complex organizations. Mr. Higham, Ext. 4278

Coordinator, Facilities Data: Responsibility for administration and supervision in such areas as: liaison with other Institute staff: special projects: part-time student involvement in the collection, coding, keypunching, and inputting of facilities and utilization data into MIT's existing information system; and assistance in promoting the use of MIT's space inventory system for other Institutional, Hospital, and Governmental applications. A general knowledge of information retrieval systems and experience in the marketing of same is a prerequisite. In addition, the individual should possess the capability to manage various projects and supervise a subordinate work

Mr. Higham, Ext. 4278