

## Special \$20 Million Truck Route Skirting MIT Called 'Disastrous'

MIT announced this week that it "strongly" opposes the idea of constructing a special road for trucks through the eastern part of Cambridge on the northern edge of the campus.

The MIT Planning Office, in a report sent to the Boston Transportation Planning Review (BTPR), said that such a road would be "disastrous" to the area and would "in no way aid the truck traffic problem in Cambridge."

The BTPR produced a tentative proposal for the road in De-

cember, 1972, in order to obtain reaction from affected groups. The agency was established by Governor Francis W. Sargent to advise him on transportation policies for the metropolitan area.

The Planning Office report made these major findings:

—The future impact of the road would cause MIT research programs in the area to be restricted or terminated, would conflict with plans for public and private housing and business development and would make some student

apartments uninhabitable because of increased noise and air pollution.

—The estimated \$20 million cost of a special road could not be justified on the basis of the most recent information available, which indicated that a "small percentage" of Cambridge truck traffic is through traffic.

—Such a road, "with easy access within Cambridge," could be used "by all types of vehicles, causing the same hardships as a

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### New Day Care Center Hopes to Become a Model

A new day care center—which its sponsors believe could become a model university center—opened April 30 in Eastgate for members of the MIT community whose children need full-day, year-round care.

The center, located adjacent to the present nursery school at Eastgate, is operated by Tech-

nology Children's Center, Inc. (formerly Technology Nursery School, Inc.)

It is planned to have the center accommodate up to 20 children, with admission based on availability of space and on such considerations as the child's and the family's needs.

Ms. Frances Olson has been appointed director of

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## \$4.5 Million Industry-MIT Research Seeks Advances in Steel Casting Process

A breakthrough in the steel casting process, leading to much lower costs, is the goal of a research and development program begun several months ago by scientists at MIT and three companies.

The Advanced Research Projects Agency is giving financial support to the four-year effort, which is expected to cost \$4.5 million.

The participating companies are Abex Corporation, of Mahwah, N.J.; General Electric Research Laboratories, of Schenectady, N.Y., and Hitchiner Manufacturing Corporation, of Milford, N.H.

Radically new techniques will be investigated by the researchers as a way of developing automated processes using reusable molds. Because of the extremely high temperatures required to melt steel, essentially all steel castings today are produced in non-reusable molds, usually made of sand, that are resistant to heat.

Some typically steel-cast prod-

ucts familiar to the public are turbine blades on jet engines, component parts for automobiles and wheels for railroad freight cars.

The research at MIT, according to Professor Merton C. Flemings of the Department of Metallurgy and Materials Science, will concentrate on two areas:

—Learning to cast steel when it is at lower temperatures in the semi-solid state, using technology developed at MIT over the last several years.

—Attempting to use electromagnetic forces to contain and transport molten or semi-molten steel.

Flemings, who is chairman of the university-industry team, said that a major attraction of the program for him "was to try it as an experiment in new ways of having MIT work with industry." He added:

"In this case, we're working on an important industrial problem—a program well beyond the current

state of the art, but not significantly competitive with or overlapping current industrial activity, a program where the gamble is too great for industry to go it alone and where they are not concerned about proprietary programs."

Meetings are planned four times a year for an exchange of ideas.

"We also anticipate interaction between groups in another way," Flemings said. "We expect MIT students will be doing some of their research work in industry and we hope industrial personnel will spend time at MIT."

"It's meant to go the gamut from good basic engineering all the way to the building of a prototype machine.

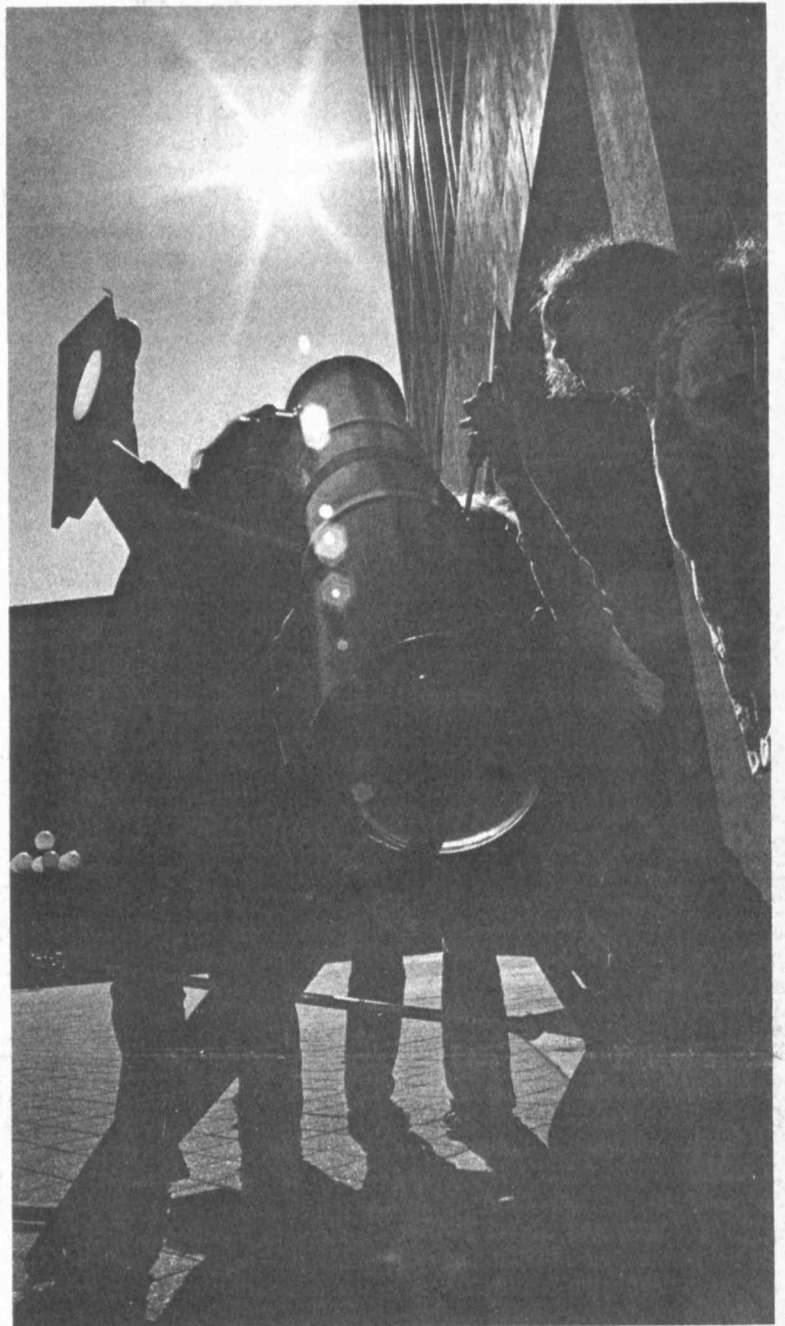
"And a major difference from past projects is that coordination of the program will be largely the responsibility of an advisory board."

Each participant in the program, he explained, has a separate research contract which must be justified on a year-to-year basis. The advisory board, which was set up to help in that process, he said, includes not only representatives from the participating facilities but also individuals from government and industry not associated with the program.

During the first 18 to 24 months, Flemings said, the four participants in the program will do independent but related studies with the objective of "coming up with innovative ideas which can be tested on a laboratory scale."

"At the end of this period," he said, "we propose to take the best of our new concepts and use them as the foundation for the construc-

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Two astronomy workshop students gaze at sunspots through a six-inch telescope set up beside the Green Building. Explaining their project to passersby are freshman Joan Kowalski and senior Judy Sonberg.

## Enrollment Period Starts For New MIT Health Plan

Enrollment is now open in the new MIT Health Plan, which is due to go into operation on July 1.

Letters and pamphlets are being mailed to all MIT personnel this week inviting them to join the plan, and a series of open meetings has been scheduled to answer questions of faculty, staff and employees about the program.

Three of the informational meetings will be held next Tuesday, Wednesday and Thursday, May 8, 9 and 10, in Room 26-100 at noon each day.

Another meeting has been scheduled in the Schell Room at the Sloan Building (E52-461) at noon on Wednesday, May 16, and a meeting also will be held at the Lincoln Laboratory at a time and place to be announced.

Reply cards have been included in the pamphlets being mailed out. Applications will be available at the open meetings, at the Benefits Office and at the Medical Department.

The application deadline is June 1 for those who will begin receiving services July 1.

Membership will be limited during the first three years of the program to 1,000 MIT personnel

and their families.

Arrangements also are being made to offer the MIT Health Plan to persons employed at the Charles Stark Draper Laboratory, Inc., which will be divested from MIT. The enrollment program at the laboratory will be undertaken as soon as agreements are reached.

Both individual and family memberships will be available in the MIT Health Plan, which is being offered in cooperation with Blue Cross and Blue Shield as an alternative to the present Blue Cross-Blue Shield coverage.

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## Structure Replaced

The staircase structure which has been a fixture in the lobby of MIT's Bldg. 7 for nearly two years was being dismantled Tuesday and is to be replaced with a different structure sometime this summer.

Michael Underhill, instructor in architecture, said new designs for the lobby are being drawn now. The staircase structure was designed by students in the Department of Architecture and others.

## Young Alumni Nominated To Corporation Membership

Six young alumni have been nominated for the five-year membership on the Corporation reserved for representatives from recent classes.

This year's candidates are:

Arlene Fingeret, SB in humanities in 1972, co-ordinator of adult education services at the Education Warehouse in Cambridge.

Lee D. Giguere, SB in humanities in 1973, editor-in-chief of The Tech and a member of the senior class executive committee.

Shirley Ann Jackson, SB in physics in 1968, expecting to receive the PhD in physics in Sep-

tember, 1973, when she will become a research associate at the National Accelerator Laboratory.

Howard J. Siegel, SB in electrical engineering and management in 1972, a graduate student at Princeton University.

Laurence Storch, SB, SM in civil engineering in 1971, a student at

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## Physics Lab An Intellectual Playground

The Physics Corridor Lab in Room 4-309 is an intellectual playroom for interested students.

The Lab includes about 20 experiments, kept purposefully simple, which are completely set up and ready for data taking. The experiments deal with introductory physics, electricity, magnetism, mechanics and atomic physics.



Michael G. Baumann, a freshman from Lancaster, Pa., studies an experiment in forced harmonic motion in the Physics Corridor Lab.

Students "talk through" the experiments, aided by tape recordings or written material. Explanation of each experiment takes 5 to 15 minutes and students are then able to extract and analyze data.

"After spending some time with an experiment," said the Lab's faculty advisor, physics Professor Marc Price, "a student has learned a new concept. The Corridor Lab offers an unusual, individual learning experience, often not available in the classroom or in large lab sessions."

The Lab was initiated four years ago by the Education Development Center and was located in a corridor. "Since then," Professor Price said, "we have expanded the idea and moved the Lab into a classroom. It's really a 'walk-in lab' now."

## Alexander Re-elected President of Union

William B. Alexander of Lincoln Group 19 has been re-elected to a two-year term as president of the Research, Development and Technical Employees' Union.

Also re-elected were Reginald C. Roderick, Jr., treasurer, and Joseph P. Fleming, secretary. Both are Draper Laboratory employees.

John N. Goddard of the campus laboratory supplies office was elected vice president.

# Enrollment Opens in New MIT Health Plan

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For the first year, 1973-1974, single persons will be charged \$1.50 more per month than their current MIT Blue Cross-Blue Shield payment, and persons with family memberships an additional \$4 per month.

MIT's contribution to the cost of each employee's membership will be the same as the contribution to the present Blue Cross-Blue Shield coverage.

Chancellor Paul E. Gray, in the

letter to MIT personnel formally announcing the establishment of the plan, said:

"The new program is the result of a planning effort which has extended over several years. We encourage you to consider joining the plan because we think it represents an important step forward in the provision of health care at reasonable costs. We believe you may find membership in the plan to be an attractive alternative to your present health care arrange-

ments."

Dr. Albert O. Seeler, director of the Medical Department, said that the MIT Health Plan is, in effect, an extension of the primary medical care services now offered to faculty, staff and employees through the Medical Department.

It provides additional services to MIT personnel and extends this augmented coverage to their families.

The comprehensive health care

services provided under the plan include periodic physical examinations, visits to the doctor, diagnostic service such as laboratory and x-ray work and hospitalization.

The plan differs from present Blue Cross coverage mainly in its pre-payment and comprehensive features.

Members will choose a personal physician from the MIT Medical Staff, and may be referred to other physicians. Except in emergencies, they will be limited to hospitals affiliated with the plan.

These are Mt. Auburn Hospital, Cambridge Hospital and the MIT Infirmary, for medical and surgical care, the Boston Hospital for Women, for maternity and obstetrical care, and other hospital facilities in special medical cases.

The plan will be operated on a limited basis for three years in order to evaluate the program in light of other health care developments which may also take place. Should more than 1,000 persons apply prior to the June 1 deadline, members will be selected on a random basis within the several categories of employment at MIT.

After the three years, a decision will be made whether to continue the plan and make it available to all MIT personnel.

Should a decision be made to discontinue the plan, participants will be able to return to the Blue Cross-Blue Shield program. If they choose, they and their dependents will be able to continue receiving care from the MIT medical staff—and thus be assured of long-term continuity of health care.

The program is available to students, but the Institute cannot contribute to the total cost for students as it does for Institute personnel. Thus, student participation would be more costly than the combination of the present mandatory student health fee, which covers medical department services and infirmary charges, and the optional additional fee for outside hospital insurance.

Further information can be obtained from the Benefits Office or from the Office of Laurence H. Bishoff, assistant director of administration for the Medical Department.

## APPLYING NEW TECHNOLOGY

# MIT-Industry Steel Research Program To Explore Casting in Semi-Solid State

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tion of a prototype ferrous casting machine."

"For two years, no innovative idea will be too far out for us to consider seriously," he added. "The ones we can make work in the laboratory are the ones we will try to incorporate in a machine if they show the way to lower the cost of ferrous casting."

"Each of the companies involved has a unique combination of experience in dealing with molten ferrous alloys, outstanding research and development labs, and reasonable proximity to each other and to MIT."

The majority of aluminum castings and zinc alloy castings are made today by a process called die-casting, in which molten metal is forced into a mold cavity and solidifies into a given shape, such as a doorknob, carburetor or automobile grille. The die is made of metal and is reusable. The process has been highly automated and is a rapid, inexpensive way of making metal parts of these alloys.



Professor Flemings

There is no comparable process for making steel castings.

The reason is that steel melts at so much higher temperatures than

the aluminum and zinc alloys—steel is poured at 2,800 degrees Fahrenheit, and aluminum at 1,250 degrees—that it attacks, warps and erodes the channels that lead to the mold cavity and erodes the mold cavity itself.

The essential aim of the research program is to develop a workable, automated process for making steel castings that will do for steel what die casting has done for aluminum and zinc.

"Some might call our joint effort a ferrous (steel) die-casting activity," Flemings said. "I hesitate to use those words only because I am convinced that the machine we develop will no more look like an aluminum die-casting or other currently used system than a 747 looks like a dirigible."

Flemings said that casting steel in its semi-solid state—one of the principal goals of the MIT research—is analogous to the forming of warm ice cream or sherbert. It is partly liquid or fluid, but can have its shape changed as easily as a moderately viscous fluid."

"One of the advantages of doing this," he said, "is that the semi-solid metal is at a lower temperature than liquid metal and gives up its heat less rapidly, thereby eroding or attacking the casting machine less readily."

The experimentation with electro-magnetic forces—the second of MIT's major contributions to the program—is an example of the radically different technology that will be examined in the overall project, Flemings said.

"Here we aim to replace some of the components of the casting machine, such as the shot chamber and plunger, with electro-magnetic forces, thereby eliminating the materials problems we now have as a result of the extremely high temperatures," Flemings said.

"It is clearly possible to lift, contain and move molten steel entirely by electro-magnetic forces without the steel coming into contact with any refracting or metal surface.

"The problem is to do this reliably and economically."

Other MIT personnel participating in the program are Assistant Professor Robert Mehrabian, who will assist Flemings in supervising the casting and solidification group at the Institute; Professor Thomas B. King, who will supervise work related to the reactivity of molten steel; Professor James R. Melcher, of the Electrical Engineering Department, who will supervise work dealing with the transport of liquid metals using electro-magnetic forces, and Dr. Henry H. Kolm of the Francis Bitter National Magnet Laboratory, who will also supervise work on electro-magnetics as applied to the movement of molten metals.

## First Donors Give \$5,000 In CSF Drive for Funds

Contributions of \$5,000 had been received by the Community Service Fund (CSF) as of Friday, April 27, according to Professor Anthony French, co-chairman of the CSF board of trustees.

"We are gratified at this early show of support," Professor French said, "and we hope those who plan to contribute will do so quickly so that the board can complete its allocations within the next two weeks."

"One point that needs to be stressed," Professor French said, "is that contributions made to CSF are tax deductible."

"The trustees have now received requests totaling nearly \$87,000," he said. "It is unlikely that the Fund will have that kind of money available this year, so the process of cutting the requested amounts has already begun."

"The difficulties this year are particularly acute," Professor French continued. "Two programs for which CSF has provided major support in the past—Urban Action and Tutoring Plus—have submitted proposals totaling more than \$44,000. The activities of both of them will be curtailed if the Fund cannot provide adequate support and other funding is not found."

Tutoring Plus is an educational enrichment program in Area Four, immediately adjacent to

MIT. It was started by MIT students in cooperation with neighborhood parents and is now run by the parents.

Under this program approximately 140 children are paired with tutors on a one-to-one basis. In addition, Tutoring Plus operates an after-school learning center in which more than 150 children participate.

Originally, nearly all tutors were MIT or Wellesley students, but the program has expanded to include tutors from other colleges in the area. A large number of the tutors, however, are still drawn from the Institute.

The Urban Action Volunteer and Resource Center is MIT's on-campus coordinating agency for volunteer services. During the past year Urban Action has developed stronger ties with the faculty and employees of the Institute and, as a result, is planning several new projects which will help meet community needs.

In addition to recruiting and placing volunteers, Urban Action runs periodic workshops in which volunteers can share their experiences and discover ways to make programs more effective. Urban Action works with other such groups at area universities and with various community agencies to provide a coordinated program.

### TECH TALK

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# Proposed Cambridge Truck Route Called 'Disastrous'

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highway inner belt which was so strongly rejected by citizens and city in 1970."

The report said that non-city streets, and especially the Massachusetts Turnpike Extension, offered a "viable alternative" for through truck traffic.

It noted that tanker trucks carrying flammable and explosive material presently are barred from traveling beneath the Prudential Center on the Turnpike Extension. But it said it believed that such "legal and administrative roadblocks" could be removed without compromising safety.

The report also suggested that better use could be made of existing city ordinances and regulations—such as those providing for trucking bans at certain hours—to alleviate the effects of truck traffic that must use Cambridge streets.

Another major recommendation was that the BTPR "conduct a thorough study of the truck

problem for all streets now affected by truck traffic."

The report said there was no basis at present "to compare truck traffic congestion in various parts of the city, nor have any studies of truck origin and destination been undertaken."

The Planning Office said the information it had compiled indicated that "many" sections of the city have problems caused by truck traffic and that shifting those problems from one area to another would not be in the interests of Cambridge as a whole.

The special-purpose road through East Cambridge had been proposed originally by a group of mid-Cambridge residents who called their organization "HALT." That proposal was subsequently opposed by the Chamber of Commerce and other citizen groups, particularly in East Cambridge.

The proposed truck route would be between the Massachusetts Turnpike Extension (near the B.U. Bridge) and Commercial Avenue in Cambridge.

In the vicinity of MIT, a road would be built on either side of the railroad tracks parallel to Vassar Street. The plan envisions several underpasses and overpasses along the route, including an underpass at Massachusetts Avenue.

O. Robert Simha, Director of Planning for MIT, said that faculty, students and student residents had joined in an unusual cooperative endeavor to gather information about traffic in the East Cambridge-MIT area in 1972.

The investigation, he said, included noise and vibration measurements, truck counts, traffic surveys and interviews with residents.

As a result of the study, he said, there was now "good data" for the first time on the impact of existing traffic on the academic and residential communities at the north end of the Institute.

Simha said the Institute had undertaken the comprehensive study because the BTPR's review process "includes broad participation by all involved communities."

A detailed investigation into the pattern of truck movements in the area also was needed, the Planning Office report said, because such information was not available, "to help develop a basis for study of all Cambridge" and to suggest alternatives for serving heavy traffic going through the city.

According to the MIT report, truck traffic even now presents serious problems to residents and researchers.

Research work is disturbed, it said, "due to electromagnetic interference (because of the electrical ignition systems of trucks), vibrations and noise." As a result, the report added, "many sensitive

experiments" are deferred until after midnight to reduce interference from the effects of truck traffic.

Responses to individual questionnaires, the report said, "indicated various levels of inconvenience ranging from uninhabitable rooms to a general increase in tension and anxiety because of noise, air pollution and vibration."

The report said that the proposed road would "compound present problems and force restrictions or termination of affected research programs."

"Grade changes in the vicinity of MIT's research facilities," the report said, "would require increased power output from truck engines which creates even more noise, more vibration and more

pollution."

Construction of the road, the report said, also would jeopardize continuity of research at the Draper Laboratories, the National Magnet Laboratory (which would lose use of its main waterline for cooling water), the Nuclear Reactor, the Hydrodynamics Laboratory, the Center for Space Research and the Electrical Engineering Building.

The report continued:

"Additional truck volume in the Westgate area will make living conditions intolerable...The effects of noise, vibrations, dirt and continuing construction will not only make living there impossible, but dangerous to the many young children who reside there..."

"In addition, the truck route will physically detach MIT from the

surrounding Cambridge community with which it has been building closer relations over the years."

The road also would be a "major cause of traffic congestion" at Kendall Square, the report said, and would be in conflict with proposals for a circumferential rapid transit line in the area.

Simha said the report on the proposed truck road had been sent to Secretary of Transportation Alan A. Altshuler, who would make recommendations to the governor on this and other controversial transportation matters.

He said he understood the governor would "reach conclusions about what the transportation system for the Commonwealth should look like" in May or June.

## Year-Round Center Open For Day Care

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both the TCC nursery school and day care programs. She brings to the programs wide experience and background in early childhood development and pre-school education.

The space was designed and renovated by Other Ways for Educational and Environmental Development of Cambridge.

The objectives, according to Ms. Margaret Sand, Child Care Coordinator for MIT, were two-fold:

To create a warm and inviting place where children will want to be, and to organize the center in such a way "that as the needs of the children might change, so might the environment."

Ms. Sand said that the design of the center "reflects the philosophy of TCC—that a child be allowed to discover himself and others in an environment that allows freedom of choice while being both supportive and radical."

Ms. Sand has coordinated all the activities involved in setting up the center—hiring staff, the design and development of space, and the recruiting and admission of children. She will continue to serve as an advisor to TCC's board of trustees for the MIT programs.

The result of this work is the child care office, the day care center and a companion Family Day Care Program for those whose children are too young for center care or who need temporary, emergency or part-time care and the child care office.

The TCC's Eastgate and Westgate nursery school programs will continue to operate on a 32-week calendar to provide nursery education for 2½ to 5 year olds, with a variety of classes available.

A limited number of spaces are available in the day care center. For information on all child care programs, call Ms. Sand at Ext. 3-1592.

Plans were coordinated with the Student Financial Aid Office, with support from the Office of the Dean for Student Affairs, the Graduate Student Council, Technology Wives Organization and the Association of MIT Alumnae.

The original proposal for the day care center was developed by Marilyn Swartz Lloyd of the MIT Planning Office.

## Academies

(Continued from page 3)

Nevin S. Scrimshaw, professor of human nutrition and head of the Department of Nutrition and Food Science and Killian Award Lecturer.

Claude E. Shannon, Donner Professor of Science in the Department of Electrical Engineering.

Ascher H. Shapiro, Ford Professor of Engineering and head of the Department of Mechanical Engineering.

John C. Sheehan, professor of organic chemistry in the Department of Chemistry.

Isadore M. Singer, Norbert Wiener Professor of Mathematics in the Department of Mathematics.

John C. Slater, Institute Professor Emeritus and Harry B. Higgins Professor of Solid State, Emeritus.

Cyril S. Smith, Institute Professor Emeritus, professor of metallurgy emeritus in the Department of Metallurgy and Materials Science, and professor emeritus of the history of science and technology in the Department of Humanities.

Carl R. Soderberg, Institute Professor Emeritus and professor emeritus of mechanical engineering in the Department of Mechanical Engineering.

Robert M. Solow, professor of economics in the Department of Economics.

Henry M. Stommel, professor of oceanography in the Department of Meteorology.

Hans-Lukas Teuber, professor of psychology and head of the Department of Psychology.

Steven Weinberg, professor of physics in the Department of Physics.

Victor F. Weisskopf, Institute Professor and head of the Department of Physics.

George W. Whitehead, professor of mathematics in the Department of Mathematics.

Jerrold R. Zacharias, Institute Professor Emeritus, professor of physics emeritus, and director of the Education Research Center.

Previously-elected members of the National Academy of Engineering who hold MIT faculty or staff appointments or are members of the Corporation include:

Leo L. Beranek, lecturer in the Department of Electrical Engineering.

Gordon S. Brown, Dugald C. Jackson Professor of Electrical Engineering, former head of the Department of Electrical Engineering, and former dean of the School of Engineering.

Jay W. Forrester, Germeshausen Professor and Professor of Management in the Sloan School of Management.

Antoine M. Gaudin, Richards Professor of Mineral Engineering Emeritus and senior lecturer in the Department of Metallurgy and Materials Science.

Robert C. Guinness, president of the Standard Oil Co. of Indiana and a life member of the MIT Corporation.

J. Herbert Hollomon, Visiting Professor of Engineering and director of the MIT Center for Policy Alternatives.

Arthur T. Ippen, Institute Professor and professor of civil engineering in the Department of Civil Engineering.

Alfred H. Keil, dean of the School of Engineering and professor of ocean engineering in the Department of Ocean Engineering.

James R. Killian, Jr., honorary chairman of the MIT Corporation, and former chairman of the Corporation and former president of the Institute.

T. William Lambe, Edmund K. Turner Professor of Civil Engineering in the Department of Civil Engineering.

Rene H. Miller, H. N. Slater Professor of Flight Transportation and head of the Department of Aeronautics and Astronautics.

Louis D. Smullin, professor and head of the Department of Electrical Engineering.

## Rep. McCormack To Be Speaker

US Rep. Mike McCormack of Washington will be the speaker at the monthly Electrical Engineering Department colloquium Thursday, May 10, at 8pm in 9-150.

McCormack serves on the House Committee on Science and Astronautics. He is chairman of the Subcommittee on Energy.

His topic will be, "Filling Some Holes on the Energy Front."

## World Meeting to Explore Single Cell Protein Foods

Scientists from throughout the world will explore the use of single cell protein (SCP) as a food source at an International Conference on SCP at MIT May 29-31.

The first international symposium devoted exclusively to the use of microorganisms such as yeast, algae, bacteria and molds as food and feed was held at MIT in 1967.

"A great deal of progress has taken place in the intervening years and the problems and prospects have become more clearly outlined," said Associate Professor Steven R. Tannenbaum of MIT's Department of Nutrition and Food Science.

The purpose of the conference, he said, will be to bring together approximately 200 experts in the SCP field from universities, industry and government.

Financial support for the conference has been provided by the Alfred P. Sloan Foundation and the Lord Rank Research Center. Also a sponsor is the Protein Advisory Group of the United Nations, which helped plan the meeting. The conference will be an official activity of the International Biological Program, which also provided a grant.

The conference will be held in Kresge Auditorium.

Members of the organizing committee, with Professor Tannenbaum, are Professor Nevin S. Scrimshaw, head of the Department of Nutrition and Food Science, Associate Professor Daniel I.C. Wang of MIT, and Dean Arthur Humphrey of the University of Pennsylvania.

## Obituaries

### C. L. Phillips, 73

Charles L. Phillips, 73, of Quincy, a retired Physical Plant employee, died suddenly on Friday, April 13.

Mr. Phillips came to MIT in 1946 and retired in 1967. He leaves his wife, Ann Folan (Russell), three step-children, Donald J. Folan of Marlboro, John F. Folan of Quincy and Mrs. Maureen A. Babcock of Hanover, and seven grandchildren.

### M. E. Berryman, 59

Meade E. Berryman, 59, of Roxbury, a member of the Baker House operations staff, died on Friday, April 13.

Mr. Berryman had been employed at MIT since 1946. He leaves his wife Gwendolyn (Williams) and a daughter, Mrs. Jacqueline Wallace of Los Angeles, California.

## Student's Death Ruled Suicide

Raoul P. Lamp, 19, an MIT sophomore from Hinsdale, Ill., majoring in mathematics, died Thursday at Massachusetts General Hospital from injuries received in a fall from an East Campus dormitory building.

Dr. Michael A. Luongo, Suffolk County medical examiner, ruled the student's death a suicide. Cambridge police said that Lamp, a Hayden resident, was found on the sidewalk outside the building and apparently had fallen from the roof.