Massachusetts Institute of Technology

TECH TALK

January 28, 1976
Volume 20
Number 24

Matsushita Professorship Established

A $1 million gift from the Matsushita Electric Industrial Co., Ltd. in Osaka, Japan, has made possible the establishment of the Matsushita Professorship of Electrical Engineering in Medicine at MIT.

Mr. Masaharu Matsushita, President of Matsushita Electric Industrial Co., Ltd. and Howard W. Johnson, Chairman of the MIT Corporation, jointly announced the establishment of the chair.

The Professorship will be concerned with a wide range of engineering activities (including mechanical engineering and a number of interdisciplinary fields), ranging from the applications of computers in the design of medical instrumentation to the construction of equipment. Matsushita Electric Industrial Co. is an international leader in electrical equipment manufacture, known under the brand names of Panasonic and Quasar in the US and Canada, National in most of the world and Technics worldwide. One of the Company's major interests is medical technology and instrumentation.

Mr. Matsushita said: "The establishment of this Professorship is of great importance to Japan, and to relations between Japan and the United States. We believe that this new effort will strongly advance the application of electrical engineering and its associated technology to the solution of a wide range of medical problems common to both of our countries."

Mr. Johnson said that the Matsushita Professorship "is the first of its kind at MIT. We are deeply committed to a greater economically sound and wiser use of technology to achieve urgently needed advances in health and medicine. The new Matsushita Professorship of Electrical Engineering in Medicine will be of the greatest importance to our broad overall program of health-related research and engineering, and will greatly assist in creating a special awareness of this field which involves several disciplines in rapid progress. The Professorship will aim at bringing about international collaboration on urgent problems of common concern between two countries that are leading in the application of advanced technology to human welfare.

Medicine, and medicine and engineering, are important to career goals at MIT. Approximately 10 percent of MIT's graduates in recent years have gone to medical school and a substantial number of additional students in the School of Engineering direct themselves towards careers in bio-medical engineering.

MATSUSHITA PROFESSORSHIP ESTABLISHED AT MIT—Akira Harada (right), president of the Matsushita Electric Corp. of America, Secaucus, N.J., whose parent company, Matsushita Electric Industrial Co., Ltd., Osaka, Japan, Wednesday (Jan. 28) announced a $1 million gift to MIT, and Howard W. Johnson (left), chairman of the MIT Corporation, examine an antique abacus that was used by the late Haryosh Mori when he was an MIT student a hundred years ago. Mr. Mori was the first Japanese to graduate from MIT, receiving his degree in 1877. Following graduation, Mr. Mori gave the abacus to MIT as a memento. In the century since Mr. Mori was a student, scores of Japanese have attended MIT.

Chemical Engineering Dedication Planned

The dedication and naming of the new $14.6 million chemical engineering facility at MIT will conclude a major March 4-5 convocation, *The Future of Chemical Engineering*, at which prominent industry, government and university figures will speak.

J. Kenneth Jamieson, former chairman and a director of Exxon Corp., will be the principal speaker at the dedication luncheon in duPont Gymnasium. The presiding officer will be Howard W. Johnson, chairman of the MIT Corporation.

The building will be named for an anonymous donor whose identity will be revealed at the convocation proceeding the dedication.

Scheduled to participate in the convocation, arranged by MIT's Department of Chemical Engineering, are the chairman and the chief executive officer of Texaco, Inc.; the administrator of the US Energy Research and Development Administration; the president of the American Institute of Chemical Engineers; a commissioner of the US Nuclear Regulatory Commission, and the president-elect of the American Chemical Society.

The history of chemical engineering as an academic discipline began at MIT in 1888 when the first course ever given anywhere in the subject was presented. Degrees in the new specialty were awarded first in 1891 at MIT. MIT's Department of Chemical Engineering is the oldest in the United States.

The convocation chairman is John C. Haas, chairman of Rohm and

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Harling to Direct Renovated Reactor

Dr. Otto K. Harling, staff scientist at Battelle Northwest Laboratory, Richland, Washington, has been appointed director of the newly renovated nuclear reactor facility at MIT, effective April 1.

Dr. Harling is a distinguished authority in the general research use of nuclear reactors and especially in the use of neutron beams drawn from such reactors for a wide variety of scientific research.

Dr. Thomas F. Jones, M.I.T. vice president for research, and Dr. Norman C. Rasmussen, head of the MIT Department of Nuclear Engineering, said Dr. Harling will bring to the Institute a strong background of vigorous leadership to forge an expanded program of scientific research made possible by the recent renovation of the reactor.

The reactor, at 138 Albany Street, Cambridge, was built in 1958, and was the first research reactor in the northeast part of the US. For 17 years, the reactor was operated as a part of the MIT Department of Nuclear Engineering, both as an important tool in nuclear power reactor teaching and research and as a source of intense neutron beams and fields used in a broad range of scientific research endeavors.

An 18-month $650,000 program of renovation and redesign was com-

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Candidates to Speak at MIT

At least three candidates for the Democratic presidential nomination will make compaign speeches at MIT during February.

Robert L. Willmore, a junior in economics and lecture director of MIT's student-operated Lecture Series Committee, said LSC extended invitations to all Democratic and Republican nominees to include MIT on their campaign schedules prior to the March 2 Massachusetts primary election.

So far, he said, three Democrats have accepted. Rep. Morris Udall of Arizona will speak at 8pm Wednesday, Feb. 4, in the Sala de Puerto Rico at the Stratton Student Center. Pennsylvania Governor Milton Shapp will speak at 8pm Feb. 17 in Room 9-150. Sargent Shriver will speak at 4pm Feb. 27 in Room 26-100.

Willmore said other candidates are still deciding where they will campaign prior to the primary and LSC is hopeful some or all will include stops at MIT.

Kresge Auditorium was host to hundreds of fascinated children last week. For the object of their fascination, see page 6.

MIT to Play Major Role in Upcoming AAAS Meeting

At least 45 members of the MIT community will be speakers, panelists or symposium arrangers at the American Association for the Advancement of Science's bicentennial meeting to be held at the Sheraton-Boston Hotel and the Hynes Auditorium, February 18-24, 1976.

MIT people will be among the more than 1,500 participants in some 180 symposia organized around the general theme "Science and Our Expectations: Bicentennial and Beyond." Symposia will explore research advances in the physical, biological and social sciences; progress being made in dealing with the problems of health, food, habitation, and energy; social and ethical implications of the use of science and technology, and perspectives on science from history and from other cultures.

Howard W. Johnson, chairman of the MIT Corporation, will co-chair the meeting with Gerhard D. Bleicken, chairman of the board of the John Hancock Mutual Life Insurance Company.

At present, MIT participants are responsible for organizing seven symposia, participating in more than 20 panel discussions and presenting at least 20 papers at the meeting. (This list of participants may be incomplete and those listed are still subject to change.)

MIT President Jerome B. Wiesner is the organizer of the Feb. 20 discussion "Science Policy and Social Development." He will talk on "Science Policy and the Political Process."

Other symposium organizers from MIT include:

Ned Block, assistant professor of philosophy, organizing and participating in the panel "Race, Genetics and Intelligence (Feb. 21).

William Gruber, lecturer in management, organizing a session on "Research-Based Science Policy (Feb. 22).

Jonathan King, associate professor of biology, organizing and participating in the symposium "Research for the People," (Feb. 21).

Allen Silverstone, postdoctoral fellow at the MIT Center for Cancer Research, organizing and participating in "Priorities in Cancer Research: Occupational and Environmental Carcinogenesis," (Feb. 20).

Judith Wechsler, associate professor of architecture, organizing "Science as Drama," (Feb. 21).

Irving London, professor of biology and director of the Harvard-MIT Program in Health Science and Technology, arranging and presiding over a panel discussion, "The Future of Health Care."

Speakers participating in "The Future of Health Care" discussion include Walter Rosenblith, provost and Institute Professor at MIT, who will speak on "The Promise and Constraints of Technology," David E. Rogers, president of the Robert Wood Johnson Foundation and Donald S. Frederickson, director of the National Institutes of Health.

Gyorgy Kepes, director emeritus for the Center for Advanced Visual Studies at MIT, speaking on "Art of a New Scale," will present one of 10 public lectures. He will also participate in the symposium "Art, Science and Technology in Shaping the Environment of the Future."

Two Institute Professors, Salvador Luria, director of the Center for Cancer Research, and Philip Morrison, professor of physics, will speak at the Symposium "The Frontiers of the Natural Sciences" (Feb. 22). In the Frontiers of Science portion of the meeting, Dr. Luira will give a talk "Toward a Molecular Ontology and Philology: A Reductionist Creed" and Dr. Morrison will speak on astronomy. Dr. Morrison will also participate in three other sessions: on Feb. 18 he will be on a panel discussing "Limits to the Universe: Is It Open or Closed?," on Feb. 20 he will join a discussion on "A Search for Extraterrestrial Intelligence" and on Feb. 21 he will be a respondent in the discussion "Science as Drama."

Other MIT faculty speaking in the Frontiers of Science segment include: Klaus Biemann, professor of

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Expert Urges Guideways For Urban Transit Problems

A city planning expert says the key to solving the urban transportation problem is the development of high-capacity, automated, dual-mode guideways in which the same vehicle or passenger 'pod' can travel over automated guideways and traditional roads. The system would take computer-guided private vehicles as well as mass-transit vehicles.

Daniel Brand, undersecretary of the Massachusetts Executive Office of Transportation and Construction, writing in the January issue of *Technology Review*, the national journal of science and technology published at MIT, says such a system is the only logical way to improve significantly urban transportation, giving both door-to-door service enjoyed by today's travelers using private cars, and excellent mass transit.

The system would take up less room than conventional superhighways and would free the city of the massive traffic jams caused by today's overcrowded freeways.

The central technological problem to be solved before such a system could be implemented, he said, is the development of a reliable automated guideway that will permit vehicles to travel at speeds of up to 60 miles an hour with only a fraction of a second time-spacing between vehicles. Experiments in other countries indicate this problem is solvable.

Setting such performance specifications, Brand said, is a sensible response to the transportation problem and is an approach favored over "some 'easy technological fixes' that have been suggested."

"Such fixes may not meet demand for urban transportation, return their financial and social investment, or even be sound technology," Brand said.

He warned that the wrong action by government can make the problem worse.

"The government's response to pressures is to reduce the use of motor vehicles, but in ways that may work against the cities' traditional function of reducing the need for travel.

"The same government which, until recently, aided growth in private car travel, now, under the Clean Air Amendments of 1970, wants to reduce passenger-car mileage in some urban areas substantially by 1977. They assume that public transit and car-pooling will take the place of drive-alone auto travel in these areas, leaving the economic activity at either end of the trip unaffected.

"Unfortunately, travel behavior is more complex . . . For some important types of trips, our preliminary evidence indicates travelers are far more likely to choose another destination than another mode of travel, when entry into certain areas of cities is restricted or made more expensive.

"Thus proposals to reduce the 95 percent of urban travel now served by private cars may cause serious distortions and diseconomies which only compound the original problem."

Brand is on leave from Harvard University where he is associate professor of city and regional planning. His duties with the state involve public transportation improvements and state responses on transportation programs to conserve energy, improve air quality and provide transportation for the elderly and handicapped.

A 1958 graduate of MIT in civil engineering, Brand has taught at MIT and has been a partner in the transportation consulting firm of Peat, Marwick, Mitchell and Co. He was a member of a task force advising former Governor Francis Sargent which contributed to the decision to abandon plans for freeway construction in the Boston area in favor of mass transit.

INSTITUTE NOTICES

Announcements

Registration for Physical Education classes will be held on Tuesday, February 3, 1976, the day after Registration Day. There is no longer an advantage in arriving early for Physical Education registration. In order to decrease the crowding and long lines in the Armory, students, especially freshmen, are encouraged to arrive at the Armory from 9am to 11am, timed roughly according to their first (yes, first) names.

To pick up Class Cards, a student must present the signed yellow copy of her/his Registration Form obtained in advance from her/his advisor, and must turn in a completed Address Card. Freshmen will receive a pre-printed Address Card immediately upon entering the Armory; upperclass and graduate students should get one from their advisors.

March Exam Period—Petitions for postponed finals and advanced standing examinations must be returned to Schedules Office, E19-338, by Fri, Feb 6.

IAP Grade Reports—Grade reports for IAP will be mailed to term addresses on Fri, Feb 6.

February IPC Courses—More About Multics: Feb 2, 5, 10, 12; Intermediate FORTRAN: Feb 2, 4, 6; Introduction to PL/I for FORTRAN Programmers: Feb 2-23; Introduction to APL: Feb 3, 5, 10, 12, 17; Introduction to JCL: Feb 17, 19, 24, 26. Preregistration required. Details and registration: Lynne Penney, Rm 39-427, x3-6320.

Official Notice: Transcripts—Transcripts with first term grades included will be available the week of Jan 26.

Undergraduate Seminars—There are still a number of openings for spring term. Upperclass students are eligible. Students should pre-register in Undergraduate Seminar Office Rm 7-105, x3-3621. More info available there.

Discount Tickets—Tickets for Wed, Jan 28 BSO open rehearsal available at TCA, Stu Ctr Rm 450, x3-4885.

All Foreign Students—Please pick up Alien Address Report Cards for yourself and your family during Jan in Foreign Studies Office, Rm 3-107.

Westgate Nursery School—Immediate openings in 2, 3 & 5 day programs, 9am-12n weekdays, for MIT children ages 2½-4½. Information: Fran Olsen, x3-5907.

Wellesley-MIT Exchange—Spring term course descriptions, schedules & registration information available in Exchange Office, Rm 7-108.

New UROP Listings

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

The Center for Short Lived Phenomena Cambridge, Ma.

CSLP is an international clearinghouse for information on transient natural and man-made events. Projects are available researching oil spills, endangered species, and marine environmental problems and pollution. Work study funding available.

Cambridge Thermionics Cambridge, Ma.

"Cambion" is an electronics firm manufacturing digital equipment and electronic devices. A project is available for a student interested in computer modeling. The objective for the model is to find an optimal array of a large number of small magnets for industrial applications. Pay available.

Orshansky Transmission Corporation Belmont, Ma.

A student interested in mechanical systems with a knowledge of FORTRAN is invited to participate in a study of automobile transmission design and its effect on auto performance and fuel economy. Work will be done on a digital simulation model to simplify an existing program. Pay available.

Project MAC

The CSR Division of Project MAC is offering the following projects: 1) planning and development of measurement tools for Multics system, 2) application of these tools and analysis of measurement results. The students will learn to understand the mechanism of a complex time-sharing system and the problems of evaluating and maintaining performance of such systems. Programming experience and some knowledge of the basic principles and concepts of a time-sharing system is required. Experience in system programming is especially valuable. Contact Professor Liba Svobodova, Rm. NE 43-535, x3-3489.

Electronics Systems Laboratory

There are a number of research topics open to undergraduates in the air traffic control area. For example: 1) Simulation studies of ground-derived severe weather superimposed on ATSD-terminal procedures development. 2) Simulation studies of airport surface navigation and conflict avoidance runway management. 3) Simulation studies of independent operations on closely-spaced parallel runways and alternatives. 4) Development and simulation evaluation of a metering and spacing algorithm to derandomize traffic (4D Scheduler). 5) Preliminary design of data link capable of supporting ATSD from ground data or air-to-air exchanges. Contact Mark Connelly, Rm. 35-214, x3-3620.

Department of Nutrition and Food Science

The International Nutrition Planning Program is creating reference standards and testing hypotheses concerning anthropometric measurements in children ages 0-5 years, in collaboration with pediatricians in the Boston/Cambridge area. Student participation will consist of writing and using packaged computer programs to establish reference norms and to test hypotheses, as well as some measuring of infants in pediatricians' offices. This project will provide good experience for pre-med students. Some knowledge of computer programming and of statistics is required. Originality in conceptualizing and testing hypotheses will be encouraged and duly credited in publication or research results. Contact Marian Zeitlin, x3-3134 or x3-3131, Rm. 20A-208 or Rm. 20A-222.

Boston Veterans Administration Hospital Boston, Ma.

Aphasia is characterized by a non-functioning of the association areas of the brain which interferes with the understanding of written and spoken language and with the transmission of thoughts to the organs of speech. A group of researchers is developing a form of therapy called VIC (Visual Communication), which depends on a visually mediated system of symbols, each denoting a minimum meaningful unit, which can be combined in a series of cards to convey an idea.

Cambridge Collaborative Cambridge, Ma.

Cambridge Collaborative is studying new applications of continuum mechanics to the measurements of pulmonary function in infants and adults. The aim is to develop new non-invasive measures of pulmonary function which will yield information that has been inaccessible for undergraduates to study fluid flow and propagation in the upper airways, respiratory mechanics, and physiology, mechanical design of devices to couple external instrumentation to the airways of adults and infants, data acquisition and processing systems, and development of a clinical protocol for data acquisition from infants.

Summer Research Openings

Information and applications for summer science research programs at Yale University and the Argonne National Laboratory in Illinois is available at the UROP office.

MIT Club Notes

MIT Ballroom Dance Club*—Workshops Sun, 2-5pm, Sala. Info: 536-1300, Doug King or Carl Sharon.

MIT Bridge Club—IAP meetings, Jan 9-31: Tues & Thurs, 7pm, Stu Ctr Rm 407.

MIT/DL Bridge Club**—Duplicate bridge Tues, 5:30pm, Stu Ctr Rm 473.

MIT Goju Karate Club**—Mon, Wed & Fri, 7-9pm, Stu Ctr Rm 407. Info: 536-1830.

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

MITHRAS—A magazine of & about poetry, fiction, art, etc, is looking for new staff members from MIT community. Anyone interested should contact Jim Adams, x5-7269 Dorm, or Guy Nordenson, x5-8349 Dorm or 494-8974.

MIT Juggling Club**—All interested people invited to attend meetings Sun, 12n-2pm, Walker Gym.

MIT Shim Gum Do Club—Instruction by 10th degree black in zen swordsmanship, karate and stick fighting techniques. Beginners always welcome. Mon-Fri, 5-7pm, Stu Ctr 4th fl or Sala. Jeff, x3-5934.

Shotokan Karate Club**—Rigorous training for intercollegiate competition & self-defense, given by 6th degree black belt. Mon & Wed, 8pm, Fri. 6pm, duPont T Club lge.

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

MIT Tae Kwon Do Club**—Meetings daily during IAP, 12n-2pm, Stu Ctr West Lge.

Religious Activities

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

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

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

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

Hillel*—Traditional services Fri, 4:30pm, Kosher Kitchen & Sat, 9am, Chapel.

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

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

The Society of Friends (Quakers)—Luncheon Fri, 12n, bsmnt of 312 Memorial Dr. For those interested in the Society of Friends and possible formation of worship group on campus.

Fruits of Meditation: Vedanta Society*—By Swami Sarvagatananda. Fri, Jan 30, 5:15pm, Chapel.

CABLE TV SCHEDULE

January 28 through January 30

MIT's Cable Television System will offer reduced programming starting in February while results of its experimental programming during IAP are evaluated.

Informational, instructional and cultural programs are expected to be shown on both channels, schedules for which will be shown on Channel 8. In addition, Channel 8 will show weather and notices of importance frequently during daytime hours.

Channel 10 plans to broadcast Thursday, Friday and Saturday this week. The schedule for these programs will be shown on Channel 8.

Channel 8

Wednesday, January 28, 1976

- 9:00am Electrokinetics—Lecture 1: The Four Effects and the Zeta Potential—Professor J.Th.G. Overbeek
- 10:00am Stochastic Estimation—Lecture 14: Suboptimal Nonlinear Filtering Algorithms (2)—Professor Michael Athans
- 11:00am Introduction to Experimentation—Lecture 14: The Technical Report (2)—Professor Ernest Rabinowicz
- 12:00 noon Personnel Program with Jim Culliton
- 1:30pm Installation of Oldenburg's Colossal Ashtray. Music by Paul Earls
- 3:00pm Engineering in the '70s—Biomedical Engineering—Professor Robert Mann
- 4:00pm MIT, The Institution—1975 IAP Seminar—Part 3 MIT, Descriptive Indices
- 5:00pm Personnel Program (Repeat)

Thursday, January 29, 1976

- 9:00am MITV—Tasty Trash: News Parody, Commons Food, and Freshman Shower Night
- 10:00am Stochastic Estimation—Lecture 15: Numerical Example—Estimation of Position, Velocity, and Ballistic Parameter for a Vertical Re-entering Body—Professor Michael Athans
- 11:00am Recursion—Professor Joseph Stoy
- 12:00 noon MITV—Tasty Trash (Repeat)
- 1:00pm The Working Group—Lori Miola
- 1:30pm Music and Computer Generated Laser Projections—Paul Earls, CAVS
- 2:30pm Energy Symposium—Congressman Mike McCormick
- 4:00pm Humanitas: Renaissance Ideas of Human Nature—Myron Gilmore, Harvard University

Friday, January 30, 1976

- 10:00am Stochastic Estimation—Lecture 16: Computer Subroutines—Professor Nils Sandell
- 11:00am Delphi—Professor Michael Dertouzos
- 12:00noon Women's Program with Niti Salloway
- 1:00pm NOVA—The Search for Life (Courtesy WGBH)
- 2:00pm Historical Collections Seminar—Part 5: The Suffrage Movement and MIT—Florence Luscomb
- 3:30pm Cambridge Forum
- 5:00pm Women's Program (Repeat)

Minority Films On Engineering

Two films—"A Piece of the Action" (28 minutes) and "Nothing But Common Sense" (26 minutes)—aimed at encouraging minority students to pursue engineering careers have been acquired by MIT and are available for free loan.

Clarence G. Williams, special assistant to the president and chancellor for minority affairs, said members of the MIT community who wish to borrow the films may reserve them by calling his office, Ext. 3-5446.

"A Piece of the Action" features the actor, Ben Vereen and employs contemporary idiom in making its appeal. "Nothing But Common Sense" features Dean Percy Pierre of Howard University and Newark, N.J., Mayor Kenneth Gibson.

Echoes

50 Years Ago

Dr. Charles G. Abbot, '94, Director of the Astrophysical Observatory of the Smithsonian Institution, arrived in Africa to serve as head of a National Geographic Society expedition to set up a station to measure the heat of the sun's rays as part of a new method for long-range weather forecasting.

William T. Sedgwick, Head of the Department of Biology and pioneer in Public Health, died January 25.

40 Years Ago

Olympic Fencing tryouts were held at Walker Memorial Gymnasium. A new electrical device was used to judge touches in epee matches.

J. Warren Horton of the Institute's Department of Electrical Engineering recently designed and built an instrument for measuring quantitatively the manner in which living tissue conducts an electric current.

25 Years Ago

Professor Charles Stark Draper '26, deputy head of the Department of Aeronautical Engineering, was awarded the Exceptional Service Award by the United States Air Force for his contributions to the field of aircraft and missiles.

Eric Hodgins '22, former editor of *Technology Review* and an editor of *Fortune*, was appointed by President Truman as a member of the five-man Materials Policy Commission.

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

TECH TALK
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WINNERS AND JUDGES from the Humanities Library's IAP Book Collecting Contest pose in the library's Map Room after the final judging on Tuesday, Jan. 20. They are (left to right) Greg Paris, graduate student in biology, cited for honorable mention for his collection "Books about, and by, the Inklings (at Oxford)," Jay Lucker, director of Libraries at MIT and a judge for the contest, Theodore Kuklinski, a graduate student in electrical engineering, second prize winner for his collection on kites, David Herwaldt, a junior in architecture, third prize winner for his collection on photography, Henle James, a graduate student in mathematics, first prize winner for his collection "American View of the Philippines," and Dr. Harold Hanham, dean of the School of Humanities and Social Sciences and contest judge. Not included was Guy Nordenson, a junior in humanities and science, who was cited for honorable mention for his collection, "The Ezra Pound Era: Early 20th Century English Poetry." First prize was $50 and a $25 credit at the MIT Press, second prize was $25 and a $25 credit at the MIT Press and third prize was a $25 credit at the Harvard Coop. A total of 19 collections were entered by 17 contestants. Winners were selected for collections which showed coherence and a sense of purpose, without concern for the size of the collection.

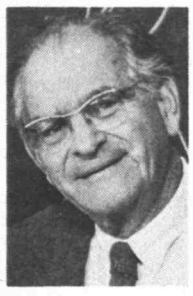
American Academy Elects Weisskopf

Dr. Victor F. Weisskopf, Institute Professor Emeritus at MIT, and one of the world's leading theoretical physicists, has been elected president of the American Academy of Arts and Sciences.

He succeeds Dr. Harvey Brooks, Benjamin Peirce Professor of Technology and Public Policy at Harvard University.

The American Academy of Arts and Sciences, founded in 1780 by John Adams, is both an honorary society and a major center for the study of important public and scholarly issues which are inter-institutional and interdisciplinary in character. It has made significant contributions to many critical issues, among them nuclear arms control, race and ethnic relations, the environment, and the goals and functions of higher education.

Dr. Weisskopf came to the United States in 1937 to join the faculty of the University of Rochester, where he served as instructor from 1937 to 1939 and assistant professor from 1939 to 1945. In 1943, he joined the Manhattan Project at Los Alamos, N.M., where he worked on the atom bomb project. Two years later he was appointed associate professor of physics at MIT and was granted a leave of absence to complete his work at Los Alamos. In 1946 he came to the Institute as a full professor, and later was in charge of the theory group in MIT's Laboratory for Nuclear Science.



He was director-general from 1960 to 1965 of the European Center for Nuclear Research (CERN) in Geneva, Switzerland, where he was able to give practical effect to his strong belief in international cooperation in science. From 1967 to 1973 he was head of the Department of Physics at MIT, where he has been a major force in the development of physics research—both through the many students he has taught and through the research group which he built up to become the present Center for Theoretical Physics.

After 28 years at the Institute, Dr. Weisskopf formally retired from MIT on July 1, 1974, but he has remained active at MIT as Senior Lecturer in the Department of Physics. In October, 1974, a large number of the world's leading scientists, including six Nobel laureates, gathered at MIT for a two-day symposium convened specifically in celebration of Dr. Weisskopf and his contributions to science and society.

Wheatley, Blake Assume New Alumni Posts

Nancy Wheatley, recently named New England Regional Director of the MIT Alumni Association, and Robert D. Blake, Special Assistant in the Office of the Secretary of the Institute, have been appointed to new positions in the Alumni Association, effective February 1.

Ms. Wheatley, formerly Assistant Dean for Student Affairs, will assume the job of Director of Conferences and Special Programs, and assistant to the executive vice president of the Alumni Association.

Mr. Blake, who has worked with Vincent P. Fulmer, Secretary of the Institute, since 1970, will assume Ms. Wheatley's current position as New England Regional Director.

There are four other regional directors responsible for alumni relations in the United States: Ronald S. Stone in the West; Joseph Edwards, Southeast; Daniel J. Fingerman, Midwest; Steven P. Denker, New York region.

James A. Champy, executive vice president of the Alumni Association, who announced the appointments, said both Ms. Wheatley and Mr. Blake would be directly concerned with strengthening alumni involvement in all areas, including MIT's ongoing $225 million Leadership Campaign.

Ms. Wheatley, an MIT alumna (SB '71), will provide staff support for such activities as Alumni Association regional conferences, fund raising for the Independent Residence Development Fund (which has traditionally loaned money to MIT's fraternities), a newly appointed committee designed to involve more alumni in MIT, and a variety of other Association activities.

Her responsibilities in the Office of the Dean for Student Affairs, where she worked from 1972-75, included planning for the Undergraduate Seminar Program, the Freshman Advisory Council, Residence/Orientation Week, both undergraduate and graduate housing programs, the Faculty and Graduate Resident Program and the personal counselling of students.

Mr. Blake, an alumnus of Dartmouth College (AB '65) and a candidate for the MBA degree at Boston College, has most recently been responsible for administration of MIT's 28 Corporation Visiting Committees and the 18-member Corporation Joint Advisory Committee (CJAC), of which he was executive secretary.

His responsibilities in the New England region, which comprises 17,000 MIT alumni, will involve class and course groups as well as clubs and other alumni relations matters.

Part of his job as special assistant in the Office of the Secretary of the Institute has been providing staff support to MIT's 88-member Corporation.

A lieutenant commander in the Naval Reserve, he now is aide to the Commander of Boston's Naval Reserve Command. He was executive officer of a reserve minesweeper and destroyer, and during his active duty completed service aboard two destroyer-type ships in the Pacific from 1965-67. He holds the Vietnam Service Medal and National Defense Service Medal.

A native of Newton, Mass., he now resides in Boston. His new office will be located in Bldg. E19-439 (Tel. ext. 3-4045).

Ms. Wheatley, a resident of Andover, Mass., with her husband, David Brown (MIT '69), can be reached at Ext. 3-4040, in Rm. 7-206.

Ms. Wheatley

Mr. Blake

Chalfen to Head Radioactivity Center

Dr. Melvin H. Chalfen, staff member of the MIT Medical Department and director of MIT's Radioactivity Center, has been appointed assistant medical director at MIT, in charge of the Environmental Medical Service.

He will succeed Dr. Franklin D. Aldrich who has recently resigned to become medical director of the Climax Molybdenum Company.

Dr. Chalfen, who received the AB degree from Harvard College in 1950 and the MD degree from Tufts University Medical School of Medicine in 1954, joined the MIT Medical Department in 1966. He is also currently serving as an instructor in medicine at the Harvard Medical School, an assistant physician in the Mount Auburn Hospital's Department of Internal Medicine and a councilor for the Middlesex South District branch of the Massachusetts Medical Society.

Dr. Chalfen will continue to see patients by appointment in the Medical Department.

Culture and Commerce Have Common Bonds

What attracts people is good for both culture and commerce.

That's the concept of a seminar being held this week in Boston that brings together about 25 nationally known developers, retailers, cultural leaders, planners and government officials.

Under the seminar title, "Town Square Revisited," they are meeting in the St. Botolph Club to discuss the potential benefits of mixing cultural and entertainment facilities and programs with commercial ventures, giving particular attention to shopping malls.

The working seminar from Jan. 27-29 is sponsored by the MIT School of Architecture and Planning, assisted by grants from the National Endowment for the Arts, the Council for the Arts at MIT, the Rouse Company, and the Ford Foundation. Chairman for the seminar will be James W. Rouse of the Rouse Company, the developer of Columbia, Md.

Participants will include Ralph Burgard, arts consultant, of Scarsdale, N.Y.; James H. Coker, a Dallas, Texas, developer; Alan C. Green, of the Educational Facilities Laboratories, New York City; Frank Logue, mayor of New Haven, Conn.; Professor Donlyn Lyndon, of the MIT Department of Architecture; Professor Michael O'Hare of the MIT Department of Urban Studies and Planning; William H. Whyte, consultant, American Conservation Association, New York City; and Edith Wyle, director of the Craft and Folk Art Museum, Los Angeles; Harron Ellenson, director, Boston 200; Katharine Kane, deputy mayor, City of Boston; G.A. McLellan, president, Business Committee for the Arts, New York City; and Michael Newton, president, Associated Councils of the Arts, New York City.

"Projects to revitalize central cities, older suburban communities and rural towns have revealed the complexities of creating new environments that consistently attract a significant segment of the local population," the conference organizers said.

"Sophisticated developers, city officials and Chambers of Commerce are beginning to recognize that a series of office towers—creating a 9-to-5 culture—will not suffice. Suburban mall developers realize that retail stores alone will not necessarily retain the market, and similarly, cultural leaders are aware that conventional arts centers fail to attract large enough audiences to sustain programs and cope with costs.

"It is becoming apparent that varying mixes—using old and new buildings—of retail stores, hotels, cultural and educational facilities, restaurants, office buildings, and housing are necessary to attract people consistently."

"Town Square Revisited" is, according to the organizers, the first step in a larger effort "to demonstrate how cultural facilities and programs, mixed wisely with commercial enterprise, can benefit developers, local governments and cultural leaders as they grapple with a vision of the good life in an urban society."

Allegre Visits Earth & Planetary

Dr. Claude Jean Allegre has been appointed Crosby Visiting Professor, part-time, in the Department of Earth and Planetary Sciences for six months, effective November, 1975.

Dr. Allegre, on leave from his position as professor in the Department of Earth and Planetary Sciences at the University of Paris, received the undergraduate Master's and PhD degrees from the University of Paris in 1960, 1961 and 1967, respectively.

He received his appointment as full professor at the University of Paris in 1971 after serving as a teaching assistant, assistant professor and associate professor at the university. In France, he is a member of the French National Committee of Scientific Research (Astronomy and Geophysics Section), the Planetary Sciences Board, the Geodynamics Committee (chairman since 1975), and a member of the Directory Committee at the Institute of Astronomy and Geophysics.

Dr. Allegre is working in the fields of geochemistry and cosmochemistry.

'Nessie' Sighting Is Seminar Topic

Two principals in the effort to photograph a large acquatic animal in Scotland's Loch Ness will present a seminar on the subject at 5pm Friday (Jan. 30) in Room 10-250.

Robert H. Rines, Boston patent attorney and a lecturer in patent law in the MIT Department of Electrical Engineering and Computer Science, and Charles Wykoff, president of Applied Photosciences, Inc., Needham, will discuss photographic expeditions to the lake made in 1972 and 1975. Also taking part in the symposium will be Institute Professor Emeritus Harold E. Edgerton who supplied some of the stroboscopic photography equipment used at the lake.

Humanitas Series To Resume

Sir Isaiah Berlin, Fellow of All Souls College, Oxford University, and president of the British Academy of Arts and Sciences, will speak on "Romantic Ideas and the Revolution in European Consciousness" at the next Humanitas lecture, Thursday, Feb. 5, 4pm in Rm. 9-150.

Subsequent Humanitas lectures in February will be on Feb. 12 with Erich Heller, Avalon Professor in the Humanities, Northwestern University, speaking on "Images of the Human in European Literature: Nineteenth and Twentieth Century" and on Feb. 26 with Jerome Y. Lettvin, professor of electrical and bioengineering in the MIT Department of Electrical Engineering and Computer Science, and professor of communications physiology in the MIT Department of Biology, speaking on "Goethe: Poetic and Scientific Sensibility." These lectures will also be at 4pm in Rm. 9-150.

Members of the MIT community and their guests are invited to attend the lectures.

Hayakawa Joins Physics Faculty

Professor Satio Hayakawa, on leave from Nagoya University in Japan, has been appointed a visiting professor of physics at MIT, effective January 16.

Prior to his appointment to the faculty at Nagoya in 1959 he was a DSR Fellow in the MIT physics department for a period of three months. On another occasion, he visited MIT as a member of the Foreign Student Program in the summer of 1950.

He served as Dean of the Faculty of Science at Nagoya from 1971-72 and again from 1974-75. During his four and one-half month stay at MIT he will conduct research in the field of X-ray astronomy in conjunction with observations being made by the SAS3 satellite.

Movie Prices Rise

Inflation has caught up with another venerable institution—the LSC movies.

Effective Sunday, Feb. 1, the Lecture Series Committee will raise the price of admission to films from 50¢ to 75¢.

This is the first change in price since 1963, according to a notice from Michael Dornbrook, chairman of LSC. He said the price increase results from a dramatic rise in the costs of the movies, which has not been offset by record high attendances during the past year.

He also noted that the number of guest lecturers brought to the campus in recent years has decreased significantly because of skyrocketing lecture fees. By charging higher admission to movies, he said, LSC hopes to be able to increase the number of lectures it sponsors.

THE INSTITUTE CALENDAR

January 28 through February 8

Events of Special Interest

Why Do We Believe in Atoms? – Rainer Weiss, physics. Physics for Everyone (289). 12n, Wed, Jan 28, Rm 6-120.

Alcoholic Cirrhosis – Charles S. Davidson, MD, visiting professor of medicine, director of Clinical Research Center; **How the Body Utilizes Dietary Proteins – Hamish N. Munro,** physiological chemistry. Research in Nutrition & Food Science Seminar (260). Thurs, Jan 29, 12n, Rm 16-134. "Lay People" encouraged to attend.

Writing Program Open House – Registration Day, Mon, Feb 2, 9am-5pm, Rm 14E-310. Drop by for refreshments, interesting people, answers to your questions.

Seminars and Lectures

Wednesday, January 28

Sound Propogation in Urban Spaces – Paul R. Donavan, G. Mechanical Engineering Doctoral Thesis Presentation. 10am, Rm 3-343.

Collective Bargaining Environment – D. Quinn Mills, industrial relations. Sloan School of Management Seminar (324b). 10 am, Rm E52-542.

Capitalism and Freedom – Miles Morgan, political science and philosophy. Philosophy Seminar (272). 2pm, Rm 2-131.

Advanced Concepts in Thermal Area Air Traffic Control – Robert W. Simpson, aero/astro. Highlights in Aeronautics & Astronautics Seminar (4). 2pm, Rm 33-206.

Performance Evaluation of a Multiprocessor in Real Time Environment* – Jaynarayan Lala, G. Aero/Astro Doctoral Seminar. 2pm, Rm 37-476.

Elementary Iceboat Performance – Robert Halfman, aero/astro, visiting associate dean for student affairs, ESG chairman. ESG Wednesday Seminar (138). 3pm, 24-612.

Can Radio Astronomy Help Detect Breast Cancer? – Alan Barrett, physics. Lectures on Physics (285). 3:30pm, Rm 6-120.

Career Planning – An Insiders View – Jay Curley,** recruiting firm of Bernard Haldane. Season Sloans Dinner Meeting. 5:30pm, Fac Club Rm 4.

Ancient Jerusalem in Light of the Latest Excavation* – Igal Shilo, Harvard University; Archeology Institute, Hebrew University, Jerusalem. Israeli American Forum, with slides. 8:30pm, Stu Ctr West Lge.

Thursday, January 29

Wavenumber Filtering by Mechanical Structures – Nathan Martin, G. Mechanical Engineering Doctoral Thesis Presentation. 2:30pm, Rm 3-133.

Applications of Operation Research in Business and Industry – Newton Garber, RCA, David Sarnoff Research Center. Operations Research Center Seminar Series (185). 2:30pm, Rm 24-121.

Scandanavia-The Different Europe! – Gunnel Wrede, executive secretary. Scandanavian Seminar sponsored by Foreign Study Office. Spend junior year abroad in Denmark, Noarway or Sweden. 3pm, Rm 10-280.

An Industrial Career* – Guiliana Tesoro, mechanical engineering, visiting. AWS & WISE Seminar. 8pm, Rm 3-310.

Friday, January 30

Sonar, Especially Side-Scan Sonar: Discussion and Demonstration* – Robert Henderson, EG&G, Inc. Strobe Lab Seminar. 12n, Rm 4-402.

Affirmative Action and Open Discussion on the Future of Minorities on Campus – Patricia A. Garrison,** assistant EOP officer. Being a Minority Employee or Student at MIT Seminar (361b). 12n, Rm 4-231. Minorities encouraged to attend.

The Economics of Academic Journals* – Antony Smailes, International Publishing Corporation of London, England (the world's largest publishing house). Systems Dynamics Seminar. 3:30pm, Rm E52-461.

Photography of Life in Loch Ness* – Robert Rines, electrical engineering; **Charles Wyckoff,** Applied Photosciences, Inc, Needham. Strobe Lab Seminar. 5pm Rm 10-250.

Tuesday, February 3

Recognition at the Cell Surface – Dr. Urs Rutishauser, Rockefeller University. Biology Colloquium. 4:30pm, Rm 6-120. Coffee 4pm, Bldg 56, 5th fl vestibule.

Thursday, February 5

Romantic Ideas and the Revolution in European Consciousness – Sir Isaiah Berlin,** Fellow of All Souls College, Oxford; president, British Academy of Arts and Sciences. Humanitas: An Evolving Perspective Seminar on Technology and Culture. 4pm, Rm 9-150.

Friday, February 6

Career Development for Students and Employees – Adam and Maureen Yogodka,** co-directors, personnel development; **Robert K. Weatherall,** director, career planning & placement. Being a Minority Employee and Student at MIT (361b). 12n, Rm 4-231. Minorities encouraged to attend.

Mathematical Modeling of Photochemical Air Pollution – John H. Seinfeld, chairman of chemical engineering, California Institute of Technology. Chemical Engineering Seminar. 2pm, Rm 10-105.

Community Meetings

Boston Bicentennial for Foreigners (92) – Sponsored by Wives Discussion Group & Medical Department. Wed, Jan 28: **Where is Boston:** multimedia presentation on contemporary Boston. Bus leaves Ashdown 1:15pm, sign up Rm 11-203. Fee: $1.

All Campus Christian Worship Service – Mon, Feb 2, 7:30pm, Stu Ctr Mezzanine Lge. Christian interdenominational gathering sponsored by United Christian Fellowship to praise Jesus and meet each other at the start of the new term. Speakers, music, refreshments, fellowship. All are welcome.

Women and Minorities Open House – Sponsored by Department of Ocean Engineering. Organized by Wesley Harris, ocean engineering, aero/astro; Judith Kildow, ocean policy; & Norman Jones, ocean engineering. Thurs, Feb 5, 3pm, Rm 5-314. Refreshments.

MIT Women's Forum – Meetings Mon, 12n, Rm 10-105 (Tues in case of holiday.) **Mon, Feb 2** – Showing of videotaped skits made at at MIT on sexism, April Salary Review. Discussion of future skits.

The Wives Discussion Group – Led by Myra Rodrigues, social worker; Charlotte Schwartz, sociologist; & Carol Hulsizer. Wed, 2:15pm, Stu Ctr West Lge. Babysitting Stu Ctr Rm 473.

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

Social Events

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

Movies

The Earth's Changing Surface; Aerial Photo Interpretations of Hydrologic Resources; Earthquake!; Nuclear Propulsion in Space; Radio Astronomy Explorer – Earth & Planetary Sciences Film Theatre (62). Wed, Jan 28, 2pm, Rm 1-190.

Journey to the Center of the Earth – LSC. Wed, Jan 28, 7 & 10pm, Rm 26-100. Admission $.50, ID required.

The Russians are Coming, the Russians are Coming – LSC. Fri, Jan 30, 7 & 10pm, Rm 26-100. Admission $.50, ID required.

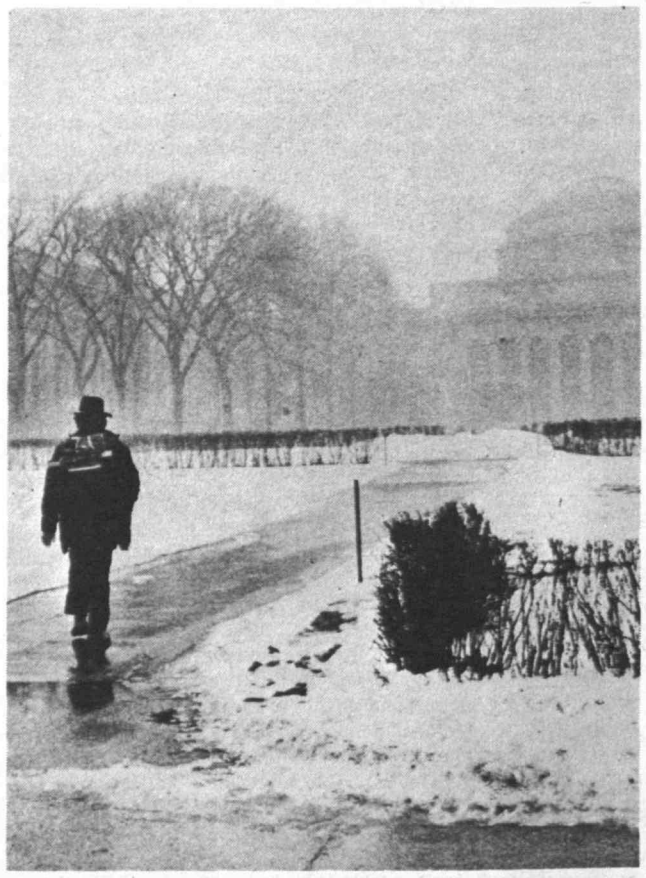
The Second Manned Mission - A Scientific Harvest – Skylab Movie Series (10). Thurs, Jan 29, 12n, Rm 35-225.

Bhuvan Shome (Mrinal Sen)* – Sangam. Indian movie with English subtitles. Sun, Feb 1, 2:30pm, Rm 26-100. Admission $.50 with ID. Info: x5-7469 Dorm. Indian refreshments for sale.

Pre-Registration Day Movie – LSC. Title to be announced. Sun, Feb 1, 6:30, 8:30 & 10:30pm, Rm 26-100. Admission $.75, MIT or Wellesley ID required.

Monty Python and the Holy Grail – LSC. Fri, Feb 6, 7 & 9:30pm, Kresge. Admission $.75, ID required.

January Thaw—At Last



MIT appeared to be fading fast Monday as the belated January thaw finally arrived in Cambridge.

Saturday Night and Sunday Morning* – MIT Film Society. Fri, Feb 6, 7:30 & 9:35pm, Rm 6-120. Admission $1.

Films on New China: Seven Chinese Festivals; This Land, This People* – MIT Chinese Students Club. Sat, Feb 7, 2pm Rm 10-250. Free.

French Connection II – LSC. Sat, Feb 7, 7 & 10pm, Kresge. Admission $.75, ID required.

Mahal (Kamal Amrohi)* – Sangam. Indian movie with English subtitles. Sun, Feb 8, 2:30pm, Rm 26-100. Admission $.50 with ID. Indian refreshments. Info: x5-7469 Dorm.

Gunga Din – LSC. Sun, Feb 8, 6:30 & 9pm, Rm 26-100. Admission $.75, ID required.

Lobby 7 Events

Ken Quat Trio* – Medieval and Renaissance consort. Wed, Feb 4, 12n, Bldg 7 Lobby. Free.

Music

Piano Recital* – William Wolfram, Laureate of 1975 Chopin Festival, will play works by Chopin and Liszt. Sponsored by LSC. Wed, Jan 28, 8pm, Kresge. Free.

Renaissance Vocal Music Concert* – Culmination of IAP 122. Program includes works by Josquin des Pres, Guillaume Costeley and van Berchem. Thurs, Jan 29, 5:15pm, music library.

PDQ Bach Concert* – Sponsored by LSC. Mon, Feb 2, 8pm, Kresge. All seats reserved; concert sold out.

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

Theater and Shows

The Alchemist* – MIT Dramashop production. Fri & Sat, Feb 6-7 and Thurs-Sat, Feb 12-14, 8pm, Kresge Little Theatre. Admission $2.50.

Beginning Waltz Workshop* – MIT Ballroom Dance Club. Sun, Feb 8, 2-5pm, Sala. All are welcome. Info: Sharon, x5-8667 Dorm.

Hatha Yoga* – Mon, Feb 2 & 9: Intermediate 5:45pm, beginners 7:05pm; Tues, Feb 3 & 10: beginner-intermediate 5:45pm; Fri, Feb 6 & 13: over 40, 10:30am; all Rm 10-340. Ilene Turchinetz, 862-2613.

Moshiko: Yemenite Dance Workshop* – MIT Hillel presents one of the finest Israeli choreographers Sun, Feb 1, 10am & 2pm, Sala. Admission $2, $1.50 Hillel members.

MIT Folk Dance Club – International: Sun, 7:30-11pm, Sala. **Balkan:** Tues, 7:30-11pm, Stu Ctr 491. **Informal:** Fri, 12n-1:30pm, Bldg 7 Lobby. **Israeli:** Thurs, 7:30-11pm, Sala.

Exhibitions

Claes Oldenburg Exhibition – Sponsored by Committee on the Visual Arts and Institute for Contemporary Art. Thru Wed, Feb 25, Hayden Gallery. Hours: 10am-4pm daily, 6-9pm Tues. Opening reception Fri, Jan 16, 8-11pm.

Amenoff Exhibition* – Drawings and paintings on paper, by Gregory Amenoff. Thru Wed, Feb 25, Hayden Corridor Gallery.

Photographs of the Ozarks* – Works by Roger Minick. Tues, Feb 3 – Fri, Feb 27, 10am-10pm, Creative Photography Gallery.

Oil Paintings by Marsha Blakemore* – Faculty Club Exhibit. During Feb, Faculty Club.

MIT Historical Collections* – Permanent exhibition Mon-Fri, 9am-5pm, Bldg N52, 2nd floor. **Bicentennial Exhibits:** Katharine Dexter McCormick, '04; Vannevar Bush '16; and Karl Taylor Compton, in Bldg 4 corridor.

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

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

Athletics

Home Schedule* – Wednesday, January 28 – V Hockey. Nichols (host), 7pm, rink. **JV/F Hockey.** Thayer Academy, 3pm, rink. **V Indoor Track.** Colby, 7pm, Rockwell Cage. **V Wrestling.** GBCAA, 5:30 & 7pm, duPont Wrestling Rm. **Thursday, January 29 – JV/F Basketball.** BB&N, 4pm, Rockwell Cage. **Friday & Saturday, January 30 & 31 – V Wrestling.** Brown, NY Maritime, Central Conn, Fri 11am & 2:30pm, Sat 1:30pm, duPont Wrestling Rm. **Saturday, January 31 – JV/F, V Basketball.** Coast Guard, 6:15 & 8:15pm, Rockwell Cage. **V Fencing.** Brown Lehman, 1pm, duPont Fencing Rm. **W Fencing.** Brown, Providence, 1pm, duPont Fencing Rm. **JV/F Hockey.** Emerson (host), 2pm, ice rink. **V Indoor Track.** Bowdoin, 1pm, Rockwell Cage. **Monday, February 2 - W Basketball.** Salem State, 7:30pm, Rockwell Cage. **V Hockey.** Plymouth State, 7pm, rink. **Wednesday, February 4 – V Hockey.** Tufts, 7pm, rink. **V Rifle.** Tabor Academy, 4pm, duPont Rifle Range. **Thursday, February 5 – JV/F Wrestling.** Emerson, 7:30pm, duPont Wrestling Rm.

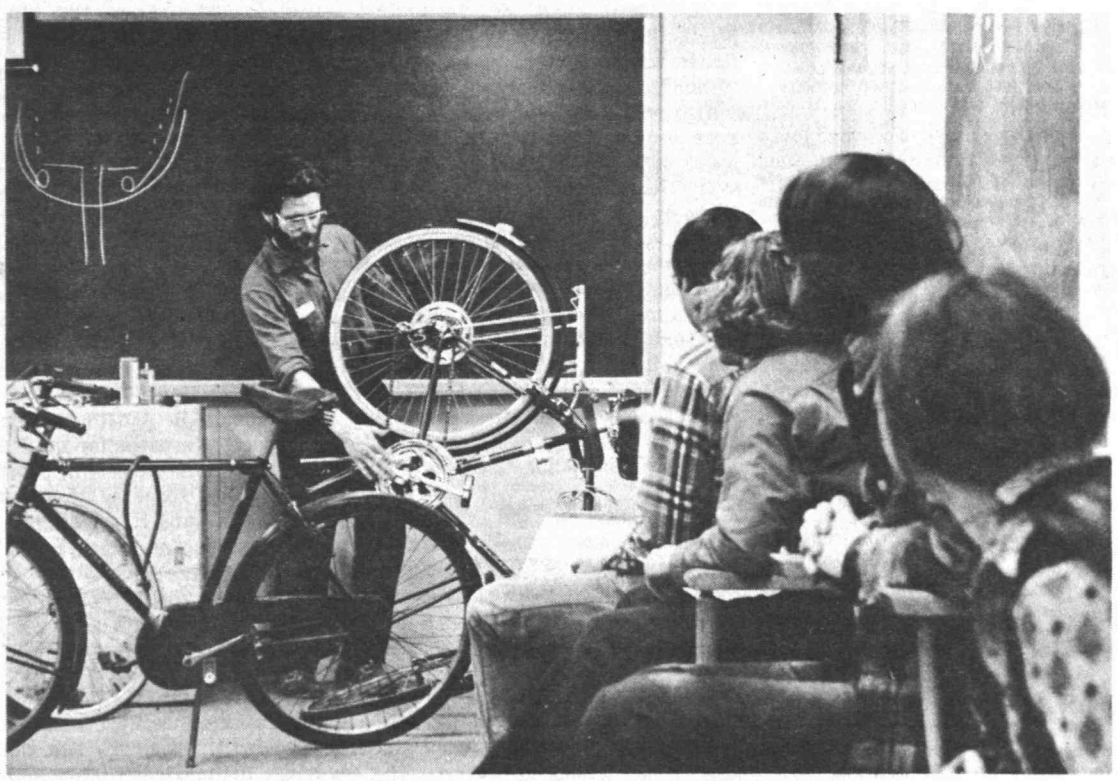
Freshmen are encouraged to attend departmental lectures and seminars. Even when these are highly technical they provide students one means to learn more about professional work in a department and field.

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

Farewell, IAP '76!

IAP'76—boasting more activities than ever before—draws to a close today, with school as usual to begin again next week. MIT's sixth Independent Activities Period gives every evidence of having been as successful as its predecessors, according to Joel Orlen, chairman of the IAP Planning Committee, who monitors its progress from year to year. Activity reports, he says, are coming in faster than usual, reporting enthusiastic reception of a wide variety of activities, greater than expected attendance, and the same low number of cancellations as in previous years. Below is a sampling of activities during the last week.

Staff members and employees got a chance to find out what architecture is all about by designing a small house for a client during an IAP architectural design studio taught by Jan Wampler. Assembling models of their designs are (left to right): Bonnie Blanchard, Barbara Haven, Linda Laplante, and Nicholas Elton, teaching assistant for the course.



The growing popularity of bicycles as clean, healthy transportation, drew economy-minded students to a class in bicycle repair offered last week by Peter Fiekowsky, a junior in physics, sponsored by the Experimental Study Group.

'Midst coffee cups and cookies, mingling was the word for the second annual IAP party given by the President and the Chancellor. Here, Chancellor Gray is in conversation with some of the throngs who attended the party in the Bush Building Lobby last week.

Otto K. Harling Appointed Director of Nuclear Reactor

(Continued from page 1)

pleted at the reactor late last summer, however, which greatly improved its usefulness as a beam source for research in such fields as physics, chemistry and materials science.

With completion of the renovation, the facility was redesignated as an independent interdepartmental activity and was renamed the MIT Nuclear Reactor Laboratory.

Dr. Jones and Dr. Rasmussen said Dr. Harling's objective will be to develop, with the help of an interdisciplinary steering committee, a research program that takes full advantage of the potential of the newly renovated facility.

As an interdepartmental facility, the laboratory will continue to provide facilities for the training of nuclear reactor engineering students and for research on the design and development of new reactor technologies, two activities for which MIT has become world renowned. At the same time, the reactor, due to improvements achieved with renovation, will be able to provide significantly better facilities for the conduct of research in diverse scientific and engineering fields requiring irradiations with neutrons and gamma rays.

Dr. Harling is widely known for important research contributions to the understanding of phenomena associated with the scattering of neutrons and on the effects of nuclear radiations on a wide variety of materials, particularly those used in reactor construction. He has a total of more than 25 years of experience in a very broad range of research activities, both basic and applied. His responsibilities have included the direction of technical efforts as well as the development and management of research programs.

A 1953 graduate of the Illinois Institute of Technology in physics, Dr. Harling received the master of science degree in physics from the University of Heidelberg, Germany, in 1955, and the PhD degree in physics from the Pennsylvania State University in 1962, while employed as a Staff Physicist with HRB-Singer. He served as a senior physicist with the General Electric Co. Hanford Laboratory, Hanford, Wash., from 1962 to 1965 when he joined the Battelle Northwest Laboratory at Richland. As a staff scientist at Battelle he currently directs several research programs related to new energy conversion technology and he manages the Surface Science Group. He was a senior research associate in the MIT Department of Nuclear Engineering during the 1972-73 academic year.

Dr. Harling has served as an adviser on controlled thermonuclear research to the US Energy Research and Development Administration and was a member of an ERDA team of scientists which visited the Soviet Union recently to review controlled thermonuclear research in that country. He has been, while at Battelle, a member of the physics faculty and a member of the executive committee of the Richland Joint Center for Graduate Studies, operated by the University of Washington and Washington State University as well as an adjunct associate professor at Washington State University. He is the author or co-author of numerous professional articles and has acted as a reviewer for several professional journals. He is a member of several professional societies including the American Nuclear Society, the American Physical Society, the New York Academy of Sciences, the Society of Sigma Xi and Sigma Pi Sigma.

In his new assignment at MIT, Dr. Harling will hold appointments as Senior Research Scientist and Visiting Professor in the MIT Department of Nuclear Engineering.

The reactor originally was designed, built and operated under the direction of the late Dr. Theos J. Thompson. Dr. Thompson, professor of nuclear engineering at MIT, was one of the nation's leading authorities on nuclear reactor design, safety and operation and on the use of research reactors in the training of nuclear reactor engineering students. He was on leave of absence from MIT serving as a member of the US Atomic Energy Commission

in 1970 when he was killed in the crash of a small plane in Nevada while on an AEC inspection trip.

Dr. Thompson directed early planning for the renovation program and many of the ideas employed were his. The program itself was carried out under the direction of Dr. David D. Lanning, professor of nuclear engineering. Lincoln Clark, longtime research associate on the reactor staff, served as director of the facility following Dr. Thompson's death and through the renovation period. With establishment of the reactor as an interdepartmental laboratory, Mr. Clark continues as the director of reactor operations.

Until it was shut down in May, 1974, for the renovation program, MIT faculty, students and staff generated nearly 1,000 theses, journal articles and reports based on research performed at the reactor. In addition, scientists from 33 other universities and research centers, five hospitals and 44 industrial firms, used the reactor to carry out further research work. All told, the reactor logged more than 63,000 hours of operation at full power.

The original power rating of the reactor when built in 1958 was 1 megawatt. This was increased to 5 megawatts in 1965. The renovation program carried out over the past year and a half did not result in a power increase; the reactor continues to operate at 5 megawatts. The reactor does not general electricity. Power is dissipated through a cooling tower.

The renovation program centered around a new design for the reactor core so as to improve the neutron beams drawn off through ports for scientific experiments on the floor of the reactor's experimental hall. Previous to renovation, the neutron flux was three times larger ($7x10^{13}$ neutrons/cm^2) at the center of the core when compared to the beam when it reached the edges near the beam ports. The redesign has resulted in neutron flux approximately the same at the edges as at the center, thus improving markedly the value of the beams in various scientific experiments.

The renovation incorporates a more compact core cooled by light water and reflected on the sides and beneath by heavy water. The modification required new fuel, core and reflector tanks, control blades and drives, process piping, and some shielding. Most of the reactor's original components were retained, including a graphite reflector, thermal shield, biological shield, heat exchangers, pumps, cooling tower, instrumentation and containment building.

Dr. Harling plans to encourage increased use of the nuclear reactor by faculty and staff from a wide variety of MIT departments and research centers. He and the reactor staff will be available for consultation and assistance in developing new research programs using the reactor.

CLASSIFIED ADS

Ads are limited to one per person per issue and may not be repeated in successive issues. All ads must be accompanied by full name and Institute extension. Only Institute extensions may be listed. Members of the community who have no extensions may submit ads by coming in person to the Tech Talk office, Room 5-111, and presenting Institute identification. Ads may be telephoned to **Ext. 3-3270** or maailed to room 5-111. **Please submit all ads before noon, Friday, Jan 30. They will be printed on a first come, first served basis as space permits.**

For Sale, Etc.

Skis: head 720's, 210 cm, exc cond, Solomon 505 bndgs. Mike, 267-9019, aft 8pm.

Head 240 std skis, 180 cm, w/step-in bndgs, Raichle boots, sz 7½ N w/boot press, Dovre 50" poles, used about 5x, $80. Call, 484-2669.

Trunk top ski rack, fits 4 pr, almost nw, $25. x3-2368.

Ping pong tbl, folding, gd shape, low price. Call, 631-7227.

Lg tbl, $5; GE K clock, $5; LR tbl lamp, grn & gold, $5. Beverley, x3-1530.

B nw xtra lite infant back carrier, $10; elec coffeemaker, $17; baby elec bottle warmer, $1.50; baby elec dish warmer, $1.50; bassinet, $1.50; crib, $4; chldrn rm lamp, $4. Call, 494-8444.

AR 11 super spkrs, 2 pr, w/wrnty, price nego. Bob, x3-4242.

Noritake china, 8 pc set, 60 pcs, wht w/blu & slvr design, best. C. Counselman, x3-7902.

Wedding dress, sz 9, empire waist, short train, pink sash, long slvs, wht lace, made by Priscilla, $100. Kathy, x3-4271.

Brn Mouton lamb coat, sz 12-14, exc cond, must sell, best. Call, 262-6153.

Pr Head 210 cm skis, GM bndgs, $20 or best. Jeff, x7114 Linc.

Gay 90's loveseat w/carved grape back nds re-uphol, best. Call, 846-7341, aft 6pm.

Koflach Austrian bckl ski boots, m sz 11, best. x3-2918.

Ski boots: f Nordica sz 7½, blu, exc cond, used 6x, $25; m Raichle leath, bckl, sz 9½, $15. Chuck, x3-7508.

Fisher superglass skis, 185 cm, Marker Rotomat bndgs, 5 yrs, gd cond, $60. Linda, x3-6966.

Pr Sears G78x14 stud snows, $30; stereo phono w/Garrard trntbl, $20; Abercrombie & Fitch elec razor, $10; Sunbeam elec razor, $10. Chuck, x5-9587 Dorm.

Sony TC-377 tape deck, lk nw, orig crtn, $310; 20 pc set Correlle china, 4 settings, unused gift in box, $20; auto Dwell-Tach, $15. Call, 494-0471, aft 6pm.

Snow plow 7' blade w/elec lift, fits jeep or sm truck. Chuck, x8-3360 Draper.

Qn sz matt & box spr, $35. Milan, 547-4599, evgs.

CM-911 power amp, 125 w/chnl, $200; Harmon Kardon Citation II preamp, $250 or best. Roland, x5-9648 Dorm.

Fischer 175 cm skis w/Salomon bndgs & poles, $65; Hanson f ski boots, yr old, sz 7, orig $155, $75 w/boot tree. John, x3-4489.

Nw & used Alpine skis & boots, 185 cm Spaulding Sideral, 207 cm Dynamic VR-17, Strato & others, Lange boots, v cheap. John,354-5885.

Nw hand-tooled leath purse, $26; 2 brnr Swedish alcohol stove, $20; vintage Motorola 20" b&w TV w/VHF/UHF, $20; fondue set for 8, $10. Carol, x3-1332.

Tckt for Rudolph Serkin, 1/30 Victor, x3-7579.

Asst rock rcrds, $1/ea; Teac cassette deck; f ice skates sz 8; leath coat w/fur trim, sz 12, nego. Call, 267-5698, evgs best.

Teac 250 cassette deck w/Dolby, pr Dynaco A10 skprs, BSR 610 AWX changer, w/Empire 1000 ccrtrdg. John, x5-7219 Dorm.

Skis, Head 200 cm std, Miller bndgs, mtl poles, Kastinger boots sz 6½, used once, best. Helen Morgan, x8-3501 Draper.

Locomotives, 2 HO, misc track. John x8-3932 Draper.

Pr blk wall 5.60x15 VW tires, 15K; pr VW windshield wipers, '68 or earlier, unused, $3; 2 VW repair manuals, '72 or earlier, $2 ea. Keith Stevenson, x3-1357.

Skis, Fischer "Alu", 205 cm, w/Tyrolia step-in bndgs, $45 or best. Tom Schwartz, x3-6894.

LR mtch sofa & chr, blu uphol, v gd construction, could stand nw slipcovers, otherwise v gd, sofa, $40, chr, $25, tog, $60. Bob, x252 Linc.

HP 45 calc, nvr used, $165. x5-6512 Dorm, evgs.

Wilson T3000 tennis rckt, prac b nw, 4 3/4 L grip, $25-$30. David, x8-1417 Draper.

Teac tape deck, A-6010, exc cond, $235. John Harris, x280 Linc.

Lafayette SQ-W full logic 4 chnl decoder, month old, orig crtn, $80. Forrest, x3-3724, aft 1pm.

Pocket tape rcrdr, Sony C-55, lk nw, was $160, $95. Shuhei, x5-9734 Dorm.

Smith Corona port silent typwrtr, nds minor tune-up, $20. x3-1661.

Blk Panther skates, sz 10½, almost nw, $25. x5-6185 Dorm.

Wollensak 6360 tape deck w/integrated amp, 3 hds, 2 motors, 36 W RMS, orig $300, 3 yrs, $85. Call, 494-8652.

Desk, $10; bkcses, $5/ea; DR tbl & 6 chrs, $40; 2 fans, $5 & $2; 11,000 BTU AC, $100; iron brd, $3; sew tbl, $5; fl lamp, $5; bed board, $5; dbl bed, matt, box spr, $10; rattan chr & loveseat, $10 & $20. Steve, x3-5387.

Harvard Classics, compl set; DR furn; over-stuffed chr; tbl lamps; 35mm camera. Call, 876-4328, evgs.

Moving, v cheap: Fischer skis, no bndgs; boot tree; colorful paint; old lamps, nd work; K & decorative stuff; old sz 13 clothes; tell us what U want, we'll tell U if we have it. x3-6603.

Remington 600 hrdryer; Hollywd tripod, mdl headliner lift; best. x3-2851.

Dresser; 3 dbl beds; sgl matt; bed frame; lamps; K tbl & chrs; desk; armchr; bttfly chr; swivel chr; steam iron & brd; wd tbl; rugs; other items, all cheap & nego. Andrew, 266-5742, 'til 1/31.

Sears Multi band port radio, amfm, aviation & weather, almost nw, $20. Mel, x5776 Linc.

Vehicles

'64 Pont Tempest conv, 6 cyl, top exc cond, body gd, mech gd, nds tires, $500 or best. Dave, x3-7711.

'65 Chevy wndw van, semi-converted to camper, gd cond, except nds eng work, $400. x3-7364.

'65 Mustang conv, $325. Fred, x3-3831.

'65 VW beetle, bge, sunrf, radio, exc run cond, recent eng ovrhl, nw brakes, muff, etc, $450. x3-4305.

'68 Le Mans, V8, gd run cond, 45K, nw batt & exh sys, $500 or best. Josie, x3-3022.

'68 Pont Le Mans, exc int, many nw part, wrnty, amfm radio, must sell, $750 or best. Call, 494-8807.

'68 Chevelle, 6 cyl auto, 72K, runs gd, body fair, nw tires, brakes, $200. Marc, x3-2424, lve msg & nmbr.

'69 Buick Skylark, V8, radio p st, gd run cond, $400. Maria Murphy, x3-2101.

'69 Chevelle, only 40 K, body exc cond, $1,000. David, x8-3652 Draper.

'70 Ford Frlne, gd mech cond, 2 dr, red. Penny, x3-7288.

'73 Maverick, 4 dr, wht, brn vinyl roof & mldg, 4 stud snows, mtd & radials, 32 K, $2,395 or best. Jim Dunnell, 289-0451.

'75 VW beetle, must sell, 2nd car, 6 mos old. Natalie, x3-6430.

Housing

Allston, stu apt avail 3/1, sub w/ opt, freshly painted, sep K, B, entry, 2 blks T, $135 + util. Anne, x3-3133.

Camb, Peabody Sch dist, 8 rms, 3 BR, 2 B, w/sep entr 4½ rm apt, 2 BR, B, $84,000. Call, 547-0728, evgs.

Camb, Mass Ave at Orson Welles, MIT affil BR apt, lg, sub to 8/31, $186 incl ht. Don, x3-5718.

Camb, sub 3/1-5/15 or 5/31, 4 rm furn apt incl cat & plants, ½ blk T, perf for sgl or cpl, nice yd, $185 + ht. Sandy, x3-4943.

Lex contemp 5 BR, 2 B, LR, DR, K, fam rm, perf cond, spectacular setting, Estabrook Sch district, hi 70's. Call, 861-9491.

Gunstock, 3 BR chalet, mile to ski, use of indr pool, saunas, $210/wk, x8-4415 Draper.

Animals

Free kittens, m, 3 f, 6-7 wks, ready now. Bruce, x3-5691.

Free baby gerbils, make fine city apt pets, clm & easy to care for. Donald Bachelder, x3-5671.

M cats, 2, neutered & playful, nd gd home. Shaw, x3-2268.

Nd v gd, loving home for free yr old b&w f cat, extremely affectionate & gentle. x3-7720.

Lost and Found

Lost: slvr cloverleaf, vcty Bldg 1 or Kresge pkg lot, inscription "JN to EN, Xmas 1975", reward. x3-5327.

Found: cover for camera batteries, in Bldg 7 Lobby, pick up Rm 5-111.

Wanted

People interested in taking Joy of Movement Ctr course in Amer Musical Theatre Dancing, want to have it M, W or Th, 5:30 in Camb or 6 in Wtrtwn. Anita or Jane, x3-2691.

Intermed squash prtnr for evgs. David, x8-1264 Draper.

Violin & 2 classical guitars, used. x3-3666.

If anyone has sew mach that I could use for about an hr/week, wd appreciate greatly. Dan, 547-7894.

Want 3 BR home in Winchester, gd loc, wl nego. John, x8-4475 Draper.

Used 500 Series Soloman ski bndg, wl pay to $30 depending on age & cond. Jim Mayo, x614 Linc.

Skis: 150 & 160 cm, adult step-in bndgs, pref Bessar sz 10 ski boots & poles. Charles, x8-1878 Draper.

File cabs, 1 or 2, 4 drwr, price more important than age or cond. David, x5-9649 Dorm.

Visiting staff member nds furn BR apt nr MIT, Mar thru May. Karen, x3-6247.

Ride nded, Rutland, Vt, wknd of 1/30, wl share driving & exp. Etta, x3-5656.

Refrig. x5-6671 Dorm.

Dbl brnr hotplate & broiler oven. Ranjan, x5-6126 Dorm.

Newlywed looking for 1-2 BR unfurn apt withing 30 mins Emerson Hosp, avail 5/1, under $220 incl util. x5871 Linc.

Roommates

Rmmate, m or f, Cent Sq apt, own rm, non-smoker, avail 2/1, $72 incl facil. Call, 547-6181, evgs.

Rmmate for sunny apt w/workshop, back porch, washer, exc pkg, nr Red Line, $65 + util. Roy 440-9400.

F to share lg apt in 2 fam hse w/2 others, Bri, sep BR, frpl, off-st pkg, nr T, $104 + util. x7197 Linc.

F, 27+, share sunny 2 BR Wtrtwn apt, qt street, grdn, pkg, 2 min walk bus, avail 2/1, $150 incl ht, util. Peg, x3-7786.

F to share lg 2 BR apt, Beac St, Bos, avail aft 2/23, $127.50 + util, $225 sec dept. Susan, x3-5673.

M or f to share nice, mod 2 BR Som apt w/m grad stu $137.50. Mehran, 547-8638, evgs.

Sgl or cpl to share lg W Rox hse, 2 priv rms, lg yard, garage, nr T. John or Sue, 327-6539, evgs.

Share lg 3 BR, Bri apt w/2 grad stus, nr T, $108 + util. Henry or Mike, 738-4101.

Carpools

Regular riders wanted, Lex, Spr Str area to MIT. M, T, Th, F, 8am. Ilse, x3-4771.

Ride nded Lex-MIT (& back if psbl), wl pay gas $$. Tom, 862-9870, lve msg.

Miscellaneous

Half of 2 car garage for rent, nr Arl Ctr. Ken 646-3427, evgs & wknds.

Opponents wanted Arl-Lex-Bel area to play SPI games. John x7636 Linc.

Moving west? Save time & $, wl drive your U-Haul or car to Cal gratis (travel exp only), exper driver w/refs, pref Apr. Andy, 646-9638.

Stat & tech typing on IBM Selec, choice of elements. Denise, x3-2685.

It's Ronald McDonald and his traveling safety-magic show. Left to right are: Officer Safety, David Snell, Henry Jason, Cambridge Police Safety Officer, and Ronald McDonald. The show was presented for the first time in New England to fourth and fifth graders from 10 Cambridge Schools. A highlight was transformation of a disassembled bicycle into a new one with a wave of a wand and its presentation to David Snell, a fifth grader at the Webster School. The show was sponsored by the Cambridge School Department, the School Crossing Traffic Supervisors, Harvard, MIT, and the Central Square McDonald restaurant.

MIT to Play Major Role in AAAS Meeting

(Continued from page 1)

chemistry, speaking on the Viking Project; Reginald Newell, professor of meteorology, talking on "The Dynamics and Energetics of the Stratosphere;" Donald Harleman, professor of civil engineering, giving a paper "Real Time Models for Salinity and Water Quality Analysis in Estuaries;" George Clark, professor of physics, giving a lecture on "Satellite Observations of X rays from Gravitationally Collapsed Stars;" Victor Weisskopf, Institute Professor Emeritus, speaking on "The Significance of Quantum Mechanics;" and Nafi Toksoz, professor of geophysics, speaking on "Planetary Interiors."

Also within the Frontiers of Science section, Jonathan King will speak on the XYY affair in the session "Genetics and Social Policy;" Nicholas Ashford, senior research associate at the Center for Policy Alternatives, will speak on "The Basis for Legal-Political Action: Protecting Against Carcinogens" in the session on Priorities in Cancer Research, and Myron Weiner, professor and head of the Department of Political Science, will speak on "The Political Consequences of Population Movements in India: Nativism and Migration."

Participants in the meeting's "Uses of Science" section include seven members of MIT's Department of Nutrition and Food Science. Paul Newberne, professor of nutrition, will speak on "The Essential Nature of Trace Elements to Mammals;" Ernesto Pollit, professor of nutrition, and Carol Thomson, research assistant, will present a paper "The Effects of Severe Protein Calorie Malnutrition on Behavior in the Human Population;" Nevin Scrimshaw, professor and head of the Department of Nutrition and Food Science, and Robert Suskind, associate professor of clinical nutrition and pediatrics, collaborated on a paper, "Characteristics and Causation of Protein Calorie Malnutrition in the Infant and Preschool Children," to be presented by Dr. Suskind; John Stanbury, professor of nutrition will speak on "The Role of the Thyroid in the Development of the Human Nervous System" and F. James Levinson, assistant professor of nutrition and director of the International Nutrition Planning Program will talk on government planning, subsidized consumption and its role in affecting world hunger and malnutrition.

Other MIT participants in the Uses of Science section include:

Ray Pariser, advisory services officer for MIT's Sea Grant program, talking on the unrecognized nutritious value of fish products; David Rose, professor of nuclear engineering, speaking on "The Interplay of Fossil and Non-Fossil Energy Sources;" Y.T. Li, professor of aeronautics, speaking on the "Development of Future Innovators and Entrepreneurs."

Robert Whitman, professor of civil engineering, talking on earthquake engineering—seismic risk and seismic risk analysis; Robert Fano, Ford Professor of Engineering, speaking on "Problems in Productivity of Knowledge Based Services" and Eugene Skolnikoff, professor of political science and director of the Center for International Studies, participating in the symposium "Science, Technology, and Society: A Field of Study."

Jeffrey Pressman, associate professor of political science, speaking on the politics of administrative guideline writing; James Utterback, research associate for the Center for Policy Alternatives, giving a paper on "The Relevance to Science Policy of Research on the Process of Innovation."

J. Herbert Hollomon, director of the Center for Policy Alternatives and professor of engineering, will be a panel member on the symposium "Research-Based Science Policy" and Thomas Sheridan, professor of mechanical engineering, will speak on "Social Utility of Information," both part of the Uses of Science portion of the meeting.

Participants in Jonathan King's symposium "Research for the People" include Henry Kendall, professor of physics, speaking on nuclear reactor safety and Harry Meade, a graduate student in biology, speaking on biology in agriculture.

Those taking part in the Perspectives of Science sessions dealing with women in science and engineering will be Mildred Dresselhaus, Abby Rockefeller Mauze Professor of Electrical Engineering, talking on "Stumbling into Science and Engineering" in the Great Women in Science group and also talking on "Views on Undergraduate Education for Women in Science and Engineering" in the Science Education for Women group; Dr. Vera Kistiakowsky, professor of physics, presenting a talk entitled "200 Years of American Women Scientists;" and Phyllis Wallace, professor of management, serving on the panel of "The Future of Employment Opportunities for Women in Science and Engineering" symposium.

Other MIT participants in the Perspectives on Science section include: Donald Schon, Ford Professor of Urban Planning, speaking on "An Approach to Public Learning;" J. Herbert Holloman, panelist in the symposium, "Role and Importance of Communication in the Advancement of Science;" Harvey Sapolsky, associate professor of political science, talking on science in the military since WWII; Paul Wang, assistant professor of applied mathematics, speaking on "Implications of Symbolic Computations for the Teaching of Mathematics;" Seymour Papert, Cecil and Ida Green Professor of Education and Applied Mathematics, a panelist in the symposium, "The Irrelevance of Educational Research on a Precomputer Paradigm;" and Patricia Garrison, assistant to the Equal Employment Opportunities Officer at MIT, speaking on affirmative action in the academic community in the symposium, "Affirmative Action: Myth or Reality?"

POSITIONS AVAILABLE

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

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

Dick Higham	*3-4278*
Pat Williams	*3-1594*
Carolyn Scheer	*3-1595*
(secretary — Dixie Chin)	
Virginia Bishop	*3-1591*
Mike Parr	*3-4266*
Ken Hewitt	*3-4267*
(secretary — Joy Dukowitz)	
Sally Hansen	*3-4275*
Lewis Redding	*3-2928*
(secretary — Susan Bracht)	

Spons. Res. Staff, temporary, Implementation Manager, in the Automatic Programming Group, Project MAC: supervise and participate in design, implementation, testing, review and maintenance of program modules; improve existing software; detect and correct errors in the existing system; select subproblems for student members of group. Experience in design, debugging of large computer systems; ability to read and write LISP programs, knowledge of PL1, Multics, IBM OS370, ITS and the ARPA network required. Temp. to 8/31/76. D76-9 (1/28).

Spons. Res. Staff, at Project MAC to design and supervise implementation of a simulation facility for hypothetical computer architectures. Duties include logic design and programming for digital systems, utilizing microprocessors. Experience in designing simulators for computer architectures required. D76-4 (1/21).

Spons. Res. Staff, Project Coordinator in Energy Lab for N. England Energy Management Information Systems Project. Will report to principal investigators; hire personnel; work with government and other agencies to identify applications; plan work to fulfill agency application requirements. Will also evaluate employees, report progress, design and implement work procedures. Required MBA, or equivalent; experience in computer programming and systems analysis, personnel and business administration. Experience with government agencies desired. D76-7 (1/21).

Tech. Asst. V, part time, in Nutrition and Food Science to organize and maintain a computer reference file for biophysics laboratory; proofread and edit research proposals; may perform experiments in biophysics lab. B.A. or B.S. in sciences and some understanding of computer programming preferred. Familiarity with medical/biological terminology required. B76-32 (1/28).

Admin. Asst. V to handle secretarial and administrative aspects of activities of large Earth and Planetary Sciences research group: monitor research accounts; handle personnel matters, space, furniture, parking allocations; do occasional library research. Typing skill, facility with figures required. Administrative and supervisory abilities desirable. B76-18 (1/28).

Secretary V, News Office, to handle senior secretarial duties: maintain biweekly payroll, files, circulation lists for publications; type, process news releases; serve as personal secretary to director. Will also monitor accounts, process bills; handle purchasing, petty cash. Requires excellent typing, ability to work under pressure. MIT experience desirable. 37½ hr. work week. B76-42 (1/28).

Secretary IV-V to faculty member and staff in Meteorology: compose and type correspondence, manuscripts, some technical material; arrange travel; monitor accounts; maintain small library; assist in library research. Command of English language, organizational skills, ability to work independently, excellent typing skill required. College training preferred. B76-31 (1/28).

Sr. Secretary IV-V, part-time: will handle a variety of secretarial and administrative details for Mrs. Wiesner at their home in Watertown. Maintain calenders, record calls; work closely with Dr. Wiesner's secretary; handle arrangements for some Institute events; arrange travel; maintain files. Excellent typing and shorthand skills required. Discretion and tact essential to deal with confidential matters, and to work in a private home. Knowledge of the Institute preferred. 20-25 hrs/wk. B76-24 (1/21)

Secretary IV-V to Associate Department Head, Electrical Engineering and Computer Science: schedule appointments and conferences; maintain personnel files; respond to various correspondence independently; act as liaison with other Institute offices. Good secretarial skills, ability to set priorities and work with minimum supervision required. Shorthand skill, MIT experience desirable. B76-26 (1/21).

Secretary IV to 3 Political Science faculty members: type varied material including correspondence and manuscripts; file; arrange travel and appointments; may include light editing duties. Excellent secretarial skills, secretarial experience and some college training required. Applicants must be able to set priorities and work independently. B76-33 (1/28).

Secretary IV to Electrical Engineering and Computer Science Undergraduate Offices: schedule committee meetings; abstract meeting minutes; provide secretarial support to student-faculty committees; type course material including technical data; compose responses to routine correspondence; maintain student files. Technical typing skill, initiative and ability to work independently required. Shorthand, MIT experience desirable. B76-30 (1/28).

Secretary IV to faculty members in Environmental Design Group, Urban Studies and Planning: type course material, reports, correspondence; arrange appointments; duplicate, collate materials; compile data; maintain records, files; answer inquiries; do occasional library research. May be asked to help with general typing. Requires excellent typing, organizational skills, plus previous office experience. Secretarial school training desirable. B76-36 (1/28).

Secretary IV, part time, to faculty member in Materials Science and Engineering: type correspondence, course material, technical manuscripts; answer phone; file; arrange travel, maintain expense account; occasionally draft correspondence. Requires good typing, grammatical skills; office experience. Technical typing, speedwriting desirable. 15-20 hrs./wk. Nonsmoking office. B76-41 (1/28).

Secretary IV to Director and one other administrator, Information Processing Center: handle telephone, mail, routine correspondence; arrange travel and appointments; handle inquiries about information processing services. Contact will be with academic, research, administrative personnel of MIT and other universities. Requires previous secretarial experience. Interest in information processing as well as MIT background desirable. 40 hr/wk. B76-20 (1/21).

Editorial Secretary IV in Graphic Arts to prepare camera-ready justified and tabular material on IBM proportional spacing electric typewriter: operate Compugraphic Compu-Writer I, II and 7200 phototypesetting and photoreading systems. Knowledge of typesetting terms, justification, quadding, leading, kerning, type styles, specifications, required. High school graduate or equivalent, excellent typing and relevant working experience required. B76-19 (1/21).

Secretary IV, part-time to Chemistry Dept. faculty member: type correspondence, manuscripts, grant proposals, course material; arrange appointments; monitor research accounts. 1-2 years secretarial experience and technical typing skill required. 20hrs/wk. B76-25 (1/21).

Sr. Clk. IV, temporary, in Summer Session Office to type admission letters, fee information, on IBM Memory Typewriter. Will also prepare registration material. Must be available throughout summer for Monday registration at 7:45am. Requires excellent typing, knowledge of IBM Memory Typewriter, facility with figures, ability to work under pressure. MIT experience desirable. Position runs 3/76-8/76. B76-21 (1/21).

Secretary III-IV, Dean's Office, School of Architecture and Planning will provide support for Asst. Dean for Academic Administration: arrange appointments; type from machine dictation; compile information; occasionally draft correspondence. Will also serve as receptionist: answer phone; handle mail; order supplies; help set up meetings, luncheons, etc.; maintain office appearance. Requires ability to work under pressure, flexibility, good typing skills. 2-3 years experience plus machine dictation skills preferred. B76-37 (1/28).

Secretary III-IV to two faculty members, research staff in Chemical Engineering: type course material, proposals, reports; arrange meetings and travel; maintain records; greet students, advisees. Requires excellent typing, organizational skills; ability to transcribe machine dictation. B76-40 (1/28).

Secretary III-IV to assist with two research projects in the Linguistics Group of the Research Laboratory of Electronics: schedule a regular series of project-related meetings including travel and hotel arrangements; type reports and manuscripts; maintain project accounts; perform other standard secretarial duties as required. Good typing and general secretarial skills plus one year's secretarial experience required. Non-smoking office. B75-590

Secretary III to faculty member and large research group: arrange complex travel schedules for group; type technical and general material; independently compose correspondence. Will work under supervision of Admin. Asst. Excellent technical typing skill, ability to organize and maintain filing system and to work effectively with students and staff required. B76-27 (1/28).

Secretary III, part-time, to faculty member in Urban Studies and Planning. Will handle general secretarial duties: type course material, correspondence, reports; answer phones; duplicate materials; file. May be asked to help with general typing. Requires excellent typing and communication skills. 20 hrs./wk. 9am-1pm or 1pm-5pm. B76-35 (1/28).

Secretary III, Programming Development Office to assist department secretary: type correspondence, reports; file; update computer listings; use computer system to obtain information (will be trained). Will also arrange travel and appointments; answer phones; order supplies; distribute mail, memos. Requires typing ability. Experience using computer systems useful. B76-38 (1/28).

Sr. Clerk III, part time, Resource Planning to handle distribution of MIT Leadership Campaign publications: maintain publication schedules; assemble packets and coordinate distribution; maintain distribution records, files. Will also draft and type correspondence, answer phone inquiries. Requires typing, organizational, administrative skills, plus ability to work independently. 20 hrs./wk. B76-34 (1/28).

Sr. Clerk III, part time, temporary in Center for Cancer Research to provide accounting assistance: prepare invoices; post information from requisitions, purchase orders, invoices; check monthly account statements; file orders; analyze expenditures, commitments; prepare grant and fund reports. Requires typing ability, plus facility with figures and detailed work. 20 hrs./wk. Temporary through 8/31/76. B76-22 (1/28).

Sr. Clk.-Typist III for Neurosciences Research Program: type program Bulletin on IBM MTST/Selectric Composer System (will be trained). Will also provide audio/visual assistance: project and copy slides; tape-record meetings; set up conference rooms; maintain files, equipment, library and journal storage. Must have good typing skills. B76-39 (1/28).

Bookchecker II in Hayden Library: assure proper charging of books; answer questions for users; file; write overdue notices; perform other clerical duties as necessary. Accuracy with detailed work, ability to deal effectively with people required. 35 hr wk; Sun., 1pm-11pm; Mon., Tues. 3pm-11pm; Wed., Thurs. 4pm-11pm. B76-28 (1/28).

Asst. Animal Technician, hourly, Medical Department to perform routine assignments in Division of Lab Animal Medicine: clean cages; feed and water animals. May assist other personnel in their duties. Requires graduation from high school or equivalent; coursework in animal care; at least one year's experience. Wednesday-Sunday, 7am-3:30pm. H76-15 (1/28).

Technician C, Radiation Protection, in the Environmental Medical Service will perform varied duties related to radiation protection program: assist in transporting radioactive material; handle radioactive waste; conduct radioisotope surveys, decontamination operations; set up radiation shielding. Will perform other related duties such as package delivery, maintenance of good housekeeping practices in laboratories. Mass. driver's license, high school graduate, or equivalent, with physics and chemistry course work required. 40 hr/wk. H76-2 (1/21).

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

ADMINISTRATIVE STAFF:

A75-56, Sr. Consult./Trainer, Personnel Development (10/8)
A75-60, Systems Analyst, Off of Admin. Inf. Syst. (10/8)
A75-65, Acquisitions Editor, MIT Press (12/3)
A75-67, Acquisitions Editor, MIT Press (12/10)
A75-68, Project Planner, Planning Office (12/17)
A75-69, Admin. Asst. Information Proc. Center (12/17)
A75-71, Documentation Mngr., Off. of Admin. Inf. Syst. (1/7)
A75-72, Project Planner, Planning Office (1/7)
A75-74, Assoc. Staff Writer, Resource Planning (1/14)
A76-1, Admin Staff, Treasurer's Office (1/21)

BIWEEKLY:

B75-306, Sec. V, Physics (12/10)
B75-543, Sec. IV, Chem. Eng. (10/15)
B75-632, Sr. Acctg. Clk. IV, Medical (11/26)
B75-665, Sec. IV, Biology (1/7)
B75-671, Sec. III-IV, Off. of Pres. & Chan. (1/7)
B75-681, Sen. Clk. III, Physical Plnt. (1/14)
B75-685, Sec. IV, Medical Dept. (1/14)
B75-687, Sec. IV, Sloan School (1/14)
B75-689, Clk. IV, Civil Eng. (1/14)
B75-691, Sec. III, Law Relatd. Studies (1/14)
B76-4, Sec. IV, Center for Inter. Studies (1/21)
B76-6, Sec. IV, Psychology (1/21)
B76-14, Sec. IV, Medical Dept (1/21)
B76-17, Sec. III, Materials Sci. & Eng. (1/21)
B76-18, Admin. Asst. V, Earth & Planetary Sci. (1/21)

ACADEMIC STAFF:

C75-31, Asst. Humanities Librarian, Humanities Library (11/17)
C75-32, Asst. Rotch Librarian for Visual Collections, Rotch Library (12/17)
C75-33, Asst. Science Librarian, Science Library (1/7)
C75-34, Admin. Officer, Materials Sci. & Eng. (1/14)
C75-35, Tech. Asst., Biology (1/14)
C76-1, Tech. Inst., Foreign Lit. & Ling. Lab (1/21)
C76-2, Tech. Asst., Biology (1/21)

SPONS. RES. STAFF

D75-8, Biophysicist, Nat. Magnet Lab (6/25)
D75-48, Economist, Energy Lab (6/25)
D75-107, postdoc. res., Lab for Nuc. Sci. (6/25)
D75-120, Systems Programmer, Lab for Nuc. Sci. (11/26)
D75-125, energy modeling, Energy Lab (8/6)
D75-161, Economist/Policy Analyst, Energy Lab (9/10)
D75-167, end-use technology, Energy Lab (9/17)
D75-169, Plasma Physicist, Res. Lab of Elec. (9/17)
D75-205, Research Engineer, Economics (10/22)
D75-210, machine vision research, Artificial Intell. Lab (10/29).
D75-219, continuing education, Chemical Eng. (11/5)
D75-220, Executive Director, continuing education, Chemical Eng. (11/5)
D75-222, biochemist, Nutrition and Food Science (11/12)
D75-226, neurophysiological research Cent. for Space Res. (11/19)
D75-229, Research Engineer, Energy Lab (11/19)
D75-232, Programmer, Center for Space Res. (11/26)
D75-234, computer specialist, Proj. Mac (11/26)
D75-243, postdoc. res., computer science, Artificial Intell. Lab (1/7)
D75-244, postdoc. res., computer science, Artificial Intell. Lab (1/7)
D75-249, postdoc. res. physics, Lab Nuclear Sci. (1/14)
D75-250, postdoc. res. physics, Lab Nuclear Sci. (1/14)
D75-251, Joint Physiology res., Mechanical Eng. (1/14)
D75-253, Mathematical model development, Energy Lab (1/14)
D75-255, Programmer, Earth & Planetary Sci. (1/14)

HOURLY:

H75-55, Tech. B, Lab for Nuclear Sci. (6/25)
H75-117, Tech. B, Radioactivity Center (10/15)
H75-120, Campus Patrol Officer (10/1)
H75-143, 2nd. Cl. Eng. (10/15)
H75-172, Tech. A, Environmental Medical Service (1/14)

The following positions are on HOLD pending final decision:

A75-64	Admin. Staff
B75-427	Sec. IV
B75-672	Acct. Asst. V
B76-3	Senior Clk. III
B76-9	Dental Asst.
B76-15	Admin. Asst. V
E75-48	Tech. Asst.
H76-1	Photo C
E75-46	Admin. Asst.

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

D75-111	Spons. Res. Staff
B75-644	Sec. IV-V
B75-680	Clerk II
D75-230	Spons. Res. Staff
A75-59	Admin. Staff
H75-161	Tech. A
B75-689	Sec. IV
B76-7	Sec. IV
B76-8	Sec. IV
B76-2	Sec. III
B76-12	Cashier II
B75-664	Tech. Asst. — temp. pt.
A75-66	Asst. Staff Writer
B76-13	Recp. Clk. III
B75-676	Lib. Asst. III
E76-1	Inpatient Nurse
B75-688	Sec. IV
B75-656	Sec. IV
A75-59	Admin. Staff

Chemical Engineering Dedication Planned

(Continued from page 1)

Haas Company of Philadelphia, a member of the MIT Corporation, who received the SM Degree from MIT in 1942. Planning for the convocation has been aided by a Convocation Steering Committee, and a Coordinating Committee.

"Changing times have had a profound impact on our profession and on the needs for chemical engineering," Mr. Haas said in a letter inviting his fellow alumni to attend the convocation.

"Where is our profession going? What changes have occurred in recent years that affect the skills required of chemical engineers? What are the numbers needed to support our national and global efforts to use chemical and biochemical developments to serve individuals and society? How has the chemical engineering profession responded to these changes? What plans are we making to anticipate future needs? The convocation program is designed to develop responses from a number of different sources to these important questions," Mr. Haas said.

The first day of the convocation, Thursday, March 4, will be devoted to general discussions by noted members of the chemical engineering profession. The second day, Friday, March 5, will begin with a number of workshops conducted by MIT faculty members on current research and teaching in chemical engineering. Tours of the building will be conducted in the afternoon, following the formal dedication.

Ground was broken for the new structure on April 13, 1973, after a meeting of the National Sponsoring Committee which was formed to help MIT plan the building and raise funds.

The building is the first in modern history at MIT to be built entirely with funds from private and corporate donors. Nearly $12 million of the $14.6 million the facility cost was committed when ground was broken. A total of $6,726,000 had been received in commitments from corporations, foundations, individuals, and department alumni. To these was added $5 million from a $7 million anonymous gift MIT received in 1973.

The striking, concrete, triangular building includes five stories above ground and two basements. It will allow all of the department's teaching and research efforts to be housed under one roof.

The new building provides about 130,000 gross square feet for classrooms, laboratories and offices. It is located at the center of the MIT campus, adjacent to the Whitaker Building (Building 56) and across from the Green Building (54). The new structure's designation will be Building 66.

The architect is I.M. Pei of New York, designer of the Green Building and an alumnus of MIT's School of Architecture.

Near the new building is MIT's recently acquired Louise Nevelson sculpture, "Transparent Horizon."

Within the building's stressed concrete walls will be housed the various department activities now located in seven different areas, six of them at MIT and one at the Children's Hospital Research Building of Harvard University. The department's location in Building 66 will place it in close relation to those disciplines—chemistry, biology, nutrition and food sciences—with which intellectual association is most desirable.

Dr. Raymond F. Baddour, head of the department, said the new building will greatly increase the Institute's capacity to respond to the renewed demand for highly trained chemical engineers.

"Chemical engineering is one of the obvious disciplines to which young men and women at MIT will turn to fulfill a strongly increasing interest in using technology to solve large-scale social problems," he said.

The convocation will open March 4 at 8:30am with registration in Kresge Auditorium. Howard W. Johnson, Chairman of the MIT Corporation, will deliver remarks of welcome at 9am.

Following an opening statement by Mr. Haas, the panel discussion on the *Future of Chemical Engineering* will begin at 9:30am. Moderator will be Dean Alfred A.H. Keil of the MIT School of Engineering. Speakers will be Rutherford Aris, head of the Department of Chemical Engineering and Materials Science at the University of Minnesota; Jerry A. Cogan, Jr., MIT '58, president of Deering Milliken Research Corporation of Spartanburg, S.C.; Roger E. Drexel, '46, vice president and general manager, E.I. duPont de Nemours & Company, Inc., of Wilmington, Del.; Ralph Landau, '46, chairman and chief executive officer of Halcon, International, Inc. of New York City; C. Judson King, '58, chairman of the Department of Chemical Engineering at the University of California, Berkeley; and Klaus D. Timmerhaus, associate dean of engineering at the University of Colorado and president of the American Institute of Chemical Engineers.

Lunch will be at 12:30pm in duPont Gymnasium, next to Kresge Auditorium. MIT President Jerome B. Wiesner will introduce the speaker, Henry A. Hill, '42, president elect of the American Chemical Society and president of Riverside Research Laboratory, Inc. of Haverhill, Mass.

Mr. Hill's speech is titled "The American Chemical Society and the Chemical Engineer: The Next 200 Years."

The post-lunch program includes a 2pm dialogue on Chemical Engineering Applications to the Life Sciences and a 3:15pm panel presentation on Energy Resources for the Future.

Edward W. Merrill, '47, Carbon P. Dubbs Professor of Chemical Engineering at MIT, and Walter A. Rosenblith, Institute Professor and MIT provost, will take part in the Chemical Engineering Life Sciences dialogue.

Participating in the Energy Resources panel will be Maurice F. Granville, '39, chairman and chief executive officer, Texaco, Inc.; Edward A. Mason, '48, commissioner of the US Nuclear Regulatory Commission; Robert E. Siegfried, '47, president and chief executive officer of The Badger Company, Inc. of Cambridge, Mass; and David C. White, '52, Ford Professor of Engineering and director of the MIT Energy Laboratory.

The day will conclude with a social hour and the 7pm convocation banquet at duPont.

The program on Friday, March 5, will include workshops from 9am to 12:30pm to be conducted by members of the MIT faculty, formal dedication of the building, and a reception and tours of the building for convocation guests.

Zacharias Attacks 'Mathophobia' via TV

Dr. Jerrold R. Zacharias, Institute Professor Emeritus of Physics at MIT and a member of National Science Advisory Committees under Presidents Eisenhower, Kennedy and Johnson, this week will attempt to prove a long-held theory of his: that American television is the best cure for the peculiarly American malady, "mathophobia."

Dr. Zacharias is senior advisor to "Infinity Factory," the new half-hour "Sesame Street"-type mathematics program that will premiere on WGBH-TV (Channel 2) at 9:30am Saturday, Jan. 31. The twice-weekly series of 65 shows will debut later next month in Los Angeles both on public TV and in city schoolrooms. Weekday airings, via the Massachusetts Educational Network, may also be seen in Boston classrooms starting February 2.

"Infinity Factory," funded largely by a $4-million grant from the US Office of Education, was produced at the Education Development Center in Newton, which Dr. Zacharias founded two decades ago when he was involved in reforming the teaching of high school physics. The Physical Science Study Committee (PSSC) curriculum that evolved from that pedagogical revolution has today reached more than five million high school physics students.

An objective of Dr. Zacharias' latest media effort—aimed at children from 8 to 11 years old and especially youngsters from black and Latino backgrounds—is to encourage self-confidence about mathematics together with ethnic pride. The programs, filmed on location in Boston, Los Angeles, Atlanta and Mount Vernon, N.Y., include episodes on a Black urban family, the Shatags; a Latino family, the Vegas; and a "family" of seven multi-ethnic children who perform skits in a brownstone studio setting.

According to Zacharias, who once said of his own teaching skill: "If I can't make you understand it, then I don't understand it myself," reaction to pilot showings of the series has been most favorable to the spirit of fun and laughter that accompanies the teaching of concepts like estimation, mapping, graphing, and the metric system.

In a typical episode designed to provide both cognitive and humanistic messages, the local candy store owner, Scoops, and his teen-age helper, King of the Kids, listen sympathetically to a young female athlete who has been excluded from the boys' neighborhood track team. She uses a graph to show the team captain, "Sugarpie," that her running times are increasing at an even faster rate than his. Her time is slower, she acknowledges, but she is improving rapidly.

With encouragement from King of the Kids, Sugarpie realizes his own shortsightedness and agrees to consider her for the team.

Dr. Zacharias, who says he conceived the program to provide children with "an intellectual machete" to cut their way out of everyday problems, spent a year in the planning and design of diagnostic studies before cameras began to roll. Working with executive producer Jesus Salvador Trevino and a staff of educators, scientists, writers and psychologists, he surveyed the television viewing habits of 8 to 11-year-olds and used specially devised games to test their assumptions about mathematics.

To the five-part question, "What would you do 1) when someone made you angry? 2) when you felt lonely? 3) when you wanted to relax? 4) when someone had hurt your feelings? 5) when you wanted to be entertained?" children chose to watch television as a first choice in all situations except when they felt angry or hurt. During these times, they said they preferred to "go off by themselves."

Dr. Zacharias said that the program's magazine-like format of animated cartoons, "math-in-the-street" interviews, filmed documentaries and basic arithmetic facts will attempt to change attitudes towards math in five ways.

A primary aim is to remove the fear of drills and multiplication tables as threats. Dr. Zacharias draws an analogy with music: "Arithmetic relates to math as scales relate to music," he said. "You need to practice before you can participate in the full concert orchestra. We hear the beauty of music all the time and don't worry about the exercises. But most of us don't recognize the total orchestrated power of math. Most of us don't even recognize that the possibility exists."

Other program goals include showing how math is used in real situations, presenting basic tools for coping with those situations, providing help in thinking analytically, and instilling confidence about children's heritages to help them prove their points more convincingly.

Dr. Zacharias said that in the classroom, "Infinity Factory" would supplement the teacher's regular computation lessons. Study guides corresponding to each show also help tie program material to ongoing classroom instruction, he said.

"Does anyone know what 'Estimation' is?" Some answers are offered by the multi-ethnic resident cast of "The Brownstone," a mini-series within *Infinity Factory*, the new WGBH-TV math program conceived by Dr. Jerrold R. Zacharias. The show will be aired on Channel 2 Saturday mornings at 9:30am beginning Jan. 31, and Monday and Thursday mornings at the same hour, beginning February 2.

Special AAAS Concerts Planned

Two special concerts—by the Boston Pops and the New England Conservatory Ragtime Ensemble—have been arranged during the annual meeting of the American Association for the Advancement of Science, Feb. 18-24.

Tickets—at bargain rates—for the two concerts are now available in the Technology Community Association Office (Rm W20-450).

The Boston Pops concert, conducted by Arthur Fiedler, will be held in Symphony Hall Friday, Feb. 20, at 8:30pm. Floor and first balcony tickets are $6.50; second balcony tickets are $4.50.

The New England Conservatory Ragtime Ensemble will play music of Scott Joplin on Sunday, Feb. 22, at 2:15pm in John Hancock Hall. Free parking will be available at the Hancock Building. All tickets are $3.

There is a 25¢ handling charge for tickets obtained through the TCA office. For further information, call TCA, x3-4885.

New Magazine *Mithras* to Appear

Mithras, a literary magazine for the creative works of all members of the MIT community, will be published for the first time in April.

Named for the ancient Persian god of light, *Mithras* will accept contributions in fiction, poetry, essays, photography and art from students, faculty and employees. The magazine will be typeset and printed by the staff which will be drawn from all parts of the Institute community.

Publication of the semi-annual magazine is an effort to focus the "many though scattered 'arts and letters' sectors of MIT" according to Guy Nordenson, editor.

Help is welcome for all stages of production. Individuals interested in working on the magazine should contact Nordenson at 494-8974. Contributions must be in by March 5 and should be sent to Rm. 14N-305.

Astronomers Hold Meeting On Campus

Some 250 x-ray astronomers and astrophysicists from the United States and abroad are at MIT this week, attending a meeting of the High Energy Astrophysics Division of the American Astronomical Society, Tuesday through Thursday (Jan. 27-29).

According to Professor Hale Bradt of the Department of Physics, who organized the meeting, a meeting on x-ray astronomy is being held this year because of the vast amount of data coming from three satellites launched in the past year: the British satellite Ariel 5, the US satellite OSO 8 (Orbiting Solar Observatory 8), and SAS-3.

SAS-3, in particular, has strengthened MIT's position as a center for x-ray astronomy. The satellite (Small Astronomy Satellite 3), funded by the National Aeronatucis and Space Administration, is operated under the direction of Professor George W. Clark, of the Department of Physics and the Center for Space Research.

Co-investigators of the SAS-3 project are Professors Bradt, Walter H.G. Lewin and Saul A. Rappaport, of the Department of Physics and Center for Space Research; and Dr. Herbert H. Schnopper, formerly of MIT. Many other researchers are also involved.

X-ray sources being discussed at the meeting include binary stellar systems, slow pulsars, transient sources, globular clusters, extra-galactic sources and stars emitting very low energy x-rays (white dwarves and flare stars).

Members of the MIT community are welcome to attend the talks, in Room 26-100. For further information, call ext. 3-7555.

Dr. Bruno Rossi, Institute Professor Emeritus and Professor of Physics, Emeritus, gave the introductory remarks Tuesday. Professors Bradt and Rappaport of MIT presented invited papers, as did 11 leading astrophysicists from other universities in the United States and abroad.

Other MIT faculty members, students and researchers presenting papers at the meeting are: Dr. Kenneth Brecher, assistant professor of physics; Dr. James S. Buff, staff researcher in the Center for Space Research; Dr. Claude R. Canizares, assistant professor of physics; Dr. David R. Hearn, staff researcher in the Center for Space Research; and graduate student Jesse G. Jernigan, Jr.

Also: graduate student Alan M. Levine; Professor Lewin; Dr. Terry A. Matilksy, staff researcher in the Center for Space Research; graduate students Francis A. Primini and John A. Richardson; and Dr. George R. Ricker, Jr., staff researcher of the Center for Space Research.

Two New Companies Enroll In MIT Associates Program

Two new companies have become participating members of the MIT Associates Program, one of two formal programs providing access to MIT's educational and research resources to industry.

The new companies are Betz Laboratories, Inc., of Trevose, Pa., and Hendrix Electronics, Incorporated, of Manchester, N.H.

In addition, Jerome J. Schaufeld, director of the MIT Associates, said a former member, Dynamics Research Corporation of Wilmington, Mass., has rejoined the program.

The three companies bring total membership in the Associates to 39. Participating companies provide support for MIT and in return receive individual attention in locating faculty members or research projects in areas of common interests.

Other members of the MIT Associates Program are:

Aiken Industries, Inc., American Science & Engineering, Inc., Black and Decker Manufacturing Company, Cambridge Thermionic Corporation, Columbia Technical Corporation, Commercial Solvents Corporation.

Damon Corporation, Dennison Manufacturing Company, EDO Corporation, EG&G, Inc., Frequency Sources, Inc., Frigitronics, Inc.

Peter Gray Corporation/Barbour Stockwell Co., HMW Industries, Inc., Harvey Hubbell, Incorporated, Instrumentation Laboratory, Inc., IPCO Hospital Supply Corporation, Jacobs Manufacturing Company.

Kearney-National, Inc., Kendall Lexington Laboratory, Keyes Fibre Company, Edward C. Levy Company, Microwave Associates, Inc., Nashua Corporation.

National Patent Development Corporation, The National Shawmut Bank of Boston, New England Merchants National Bank, Raymond Precision Industries, Inc., Schaevitz Engineering, Scientific-Atlanta, Inc.

State Street Bank and Trust Company, The Taft-Peirce Manufacturing Company, Unitrode Corporation, Virginia Chemicals, Inc., Warren Brothers Company, Worcester Controls Corporation.

Dramashop Offers 'The Alchemist'

The MIT Dramashop will present Ben Jonson's classic Elizabethan comedy *The Alchemist* on Friday and Saturday, Feb. 6 and 7, continuing on Thursday, Friday, and Saturday, Feb. 12, 13, and 14, at 8:00pm in the Little Theatre.

The Alchemist, adapted and staged by Joseph D. Everingham, director of drama at MIT, will have sets designed by William Fregosi, costumes by Cecelia Eller, and lighting by Edward Darna. Performing the famous role of Dol Common, will be Joan Tolentino, professional actress in residence with MIT Dramashop for *The Alchemist*.

The designers are preparing a colorful and elaborate Elizabethan background for Ben Jonson's bawdy play about the world of con-artists, thieves, and bawds in the London low life of the 17th century, which Jonson portrayed with vigorous, comedic accuracy.

Tickets are $2.50. For reservations call x3-4720.

Knowledge Panel Names Morison

Robert S. Morison, Class of 1949 Visiting Professor at MIT, is a panelist today in Project: Knowledge 2000, a bicentennial program on the nation's knowledge needs at the Xerox International Center for Training and Management Development in Leesburg, Va.

The project, sponsored jointly by the National Science Foundation, the American Revolution Bicentennial Administration, and Xerox, is designed to promote discussion about the uses of knowledge in the next quarter-century. Video-tapes of the panel discussions and audience question and answer sessions will then be distributed to communities throughout the country.

Similar forums are also planned for April and June.

Sayles at AIAW

Professor Mary-Lou Sayles, director of women's athletics, represented MIT at the recent meeting of the Association of Intercollegiate Athletics for Women in Scottsdale, Ariz.

Major topics in the AIAW meeting were establishment of championship regulations for women's sports, and restructuring of the organization to meet emerging needs of women's college athletics.

Obituaries

Florence Morris

News was received in Cambridge this week of the death on Jan. 1 of Mrs. Florence Morris of Miami, Fla., wife of the late Professor Frederick K. Morris who died in 1962.

Mrs. Morris was active in the MIT Matrons, the Institute Red Cross group during World War II, and several student social activities. During Professor Morris' 23 years on the faculty of the former Department of Geology they became known for their frequent entertaining of dormitory students and MIT staff members.

Contributions in memory of the Morrises may be made to the Frederick and Florence Morris Scholarship Fund.

Harold Laird

He is survived by two sisters, Marion D. Fay of Somerville and Beatrice Higman of Danvers; two brothers, Earl of Brockton and Russell of Daytona Beach, Fla.; and several nieces and nephews.

Contributions may be made in his memory to the Heart Fund.

A memorial service will be held today, Jan. 28, 1:30pm, at the Wilson Chapel, 28 College Ave., Somerville, for Harold Laird, who died Sunday, Jan. 25. He was 70.

Mr. Laird, who retired in 1971 after 21 years as a night custodian with Physical Plant, lived at 36 College Ave., Somerville.

James J. Cunningham

James J. Cunningham, who retired in 1966 after 22 years as a security guard at Draper Laboratory, died Jan. 19. He was 76.

Mr. Cunningham is survived by his wife, Catherine R. (Croke). His home was at 34 Sheafe St., Chestnut Hill.

Donald Cumming

Donald Cumming, a designer at Lincoln Laboratory, died Jan. 16. He was 53.

An employee of Lincoln Laboratory since 1961, Mr. Cumming leaves his wife, Phyllis (Martensen); three daughters, Tammie Lynn, Heather Reid and Maria Leslie; his father, Jessie, of Polk City, Fla.; and a sister, Isabel, of the US Embassy in Belgrade, Yugoslavia. His home was a 131 Homestead Ave., Weymouth.

Contributions may be made in his name to the Memorial Fund of the Union Congregational Church in Braintree.