Massachusetts Institute of Technology

TECH TALK
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January 3, 1979
Volume 23
Number 19

A tug of war?...an invasion of the foreign octupus?...for the answers to these questions and more see story on page 3.
—Photo by Calvin Campbell

Leadership Campaign Reaches $186 Million

MIT's five-year, $225 million Leadership Campaign to muster significant endowed support that will ensure the Institute's long-term strength and vitality has reached $186 million with 16 months still to go.

That was the report at the end of the 1978 calendar year by Howard W. Johnson, Chairman of the MIT Corporation and co-chairman of the Leadership Campaign.

The new total of $186 million at year's end, Mr. Johnson said, was made possible by a series of major gifts, including one anonymous gift of $3.5 million.

The achievements to date—more than 80 per cent of the goal realized with three-quarters of the allotted campaign period elapsed—give encouraging evidence, Mr. Johnson said, that the Institute's goals continue to command widespread endorsement and support from benefactors throughout the world.

"We have many reasons to be optimistic, but the remaining 39 million that must be realized over the next 16 months cannot be taken for granted," he said.

"I'd like to extend a call to all members of the MIT community—faculty, staff, alumni, friends—to redouble efforts as we move into this difficult final phase," Mr. Johnson said.

He urged those with suggestions to contact Dr. Samuel A. Goldblith, Vice President for Resource Development, or members of his staff directly.

Mr. Johnson said that of the funds thus far raised or pledged, a third have come from individuals, a third from corporations and a third from private foundations.

Major goals that still require fulfillment, he said, are student aid endowments, endowed professorships, the $10 million School of Engineering Special Fund to permit the appointment of new additional assistant professors, a new student residence, and a new athletics/activities center. The athletics/activities center is now estimated to cost $7.9 million, of which $5 million already has been raised or pledged.

"Central to the campaign, however, is the growth in the Institute's various endowments," Mr. Johnson said. "We must, for the long term, increase our endowments substantially so that annual increases in income from endowment will more nearly keep up with inflation." Income from endowment in recent years, he said, has increased at about three per cent per year. The most effective and lasting way in which this annual income can be made to increase relative to prior years is to increase the body of the endowment itself.

Faculty Committee On Presidency Named To Advise Corporation

Thirteen members of the MIT faculty have been appointed to a Faculty Advisory Committee on the Presidency to provide advice from the faculty on selection of a new president to succeed incumbent President Jerome B. Wiesner when Dr. Wiesner retires June 30, 1980.

The faculty committee will provide advice to the newly-appointed Corporation Committee on the Presidency. Appointment of the committee on the presidency was announced by Dr. Robert I. Hulsizer, professor of physics and chairman of the faculty.

Named to serve as chairman of the Faculty Committee on the Presidency is Dr. John S. Waugh, Arthur Amos Noyes Professor of Chemistry in the Department of Chemistry and a member of the MIT teaching staff since 1953.

Other members of the faculty committee are:

Dr. David Baltimore, American Cancer Society Professor of Microbiology in the Department of Biology. A Nobel Laureate and a former postdoctoral fellow at MIT, Dr. Baltimore has been a member of the Institute's faculty since 1968.

Dr. Wilbur B. Davenport, Jr., professor of communications science and engineering in the Department of Electrical Engineering and Computer Science. A member of the teaching staff since 1946, Dr. Davenport is a former head of the Department of Electrical Engineering and Computer Science, a former director of the MIT Center for Advanced Engineering Study,

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New Center To Investigate Health Effects of Fossil Fuels

National energy policy calls for increased use of lower grade fossil fuels such as coal and coal- and shale-derived liquids in both existing and advanced forms of combustion equipment. It is therefore timely for the nation to improve its understanding of emissions from the burning of those fuels and of the potential effects of those emissions on human health. To this end, the Harvard-MIT Division of Health Sciences and Technology and the MIT Energy Laboratory have established a Center for Health Effects of Fossil Fuels Utilization with associated interdisciplinary research programs.

The Center and the research programs are supported by grants for a five-year period totaling $3.8 million from the National Institute of Environmental Health Sciences (NIEHS). Formation of the Center was announced by Professor Walter A. Rosenblith, provost of MIT.

Over the next five years the Center will carry out a comprehensive program of interdisciplinary research seeking to:

1. Determine the extents and mechanisms and formation of combustion-generated emissions products;

2. Evaluate these species for mutagenic and/or carcinogenic potential;

3. Identify combustion control methods to mitigate any hazards identified.

A significant feature of this integrated program is close collaboration among experts in com-

(Continued on page 3)

Holiday Notice

In observance of the birthday of Dr. Martin Luther King, Jr., the Institute will be closed Monday, Jan 15. Normal holiday practices will be in effect.

US-China Relationships to be Symposium Topic

The National Association of Chinese-Americans' Boston Chapter and the MIT Center for International Studies will sponsor a symposium on relations between the United States and the People's Republic of China on Saturday, Jan. 6, and Monday, Jan. 8, in Rm 9-150 at MIT.

Speaking at the Saturday session, which begins at 9:15am and concludes at noon, will be Paul Tsongas, US Senator-elect from Massachusetts; Julian Sobin, chairman of Sobin Chemical, Inc., of Boston, and C.K. Jen, associate director, emeritus, of Johns Hopkins University's Applied Physics Laboratory.

Mr. Sobin has had extensive business contacts in China and is a member of the East-West Trade Council. Dr. Jen is a close friend of Chow Pei Yuan, vice chairman of the Chinese Academy of Science and president of Peking University. Dr. Jen has been invited by Chin Hua University in Peking to assist in establishing a school of science there.

The moderator for the Saturday session will be Dr. C.C. Lin, Institute Professor and professor of mathematics at MIT, whose 1976 series of lectures on astronomy in Peking stimulated several academic contacts between the two countries.

The speakers at the Monday session, which will begin at 1:30pm and conclude at 5pm, will be Dr.

(Continued on page 3)

Umana Students Seek 'Extern' Experience

WANTED: Part-time job for high school students learning computer programming. Contact MIT or the Mario Umana Harbor School of Science and Technology in East Boston.

In any word association test, MIT is likely to be paired with computers.

So it isn't any surprise that computers are expected to play a major role in the educational process at the Mario Umana Harbor School of Science and Technology in East Boston.

The Umana school is one of 19 so-called magnet schools in the city of Boston that draw their students from throughout the city. The school is a direct outgrowth of the Phase II desegregation plan ordered by Federal District Court Judge W. Arthur Garrity, Jr., to bring about integration in the city schools.

As part of the plan, Judge Garrity directed the city school system to enter into partnerships with area colleges, universities, cultural organizations and businesses to develop a diverse array of special educational programs. He paired MIT, Wentworth Institute and Massport with the new Umana school, which overlooks Boston Harbor.

Computer science is only one of the five technical subject areas being offered at the technology-oriented Umana school—the others are aviation technology, electronics, medical technology and environmental protection.

The program in computer science is progressing so well, however, that Dr. Stanley Russell, who co-ordinates the MIT-Wentworth-Massport involvement at the school, is looking for part-time work for the computer students.

Under an "extern" program at the school, seniors are given time off from their studies to do work in their field of choice. Jobs also are being sought for the summer, said Dr. Russell, whose official title is Director of MIT's Secondary Technical Education Project.

Louis J. Cicolari, the Boston public school system's head computer science teacher at the school, said, "We want to provide as many students as possible with job or learning opportunities both during the school year and the summer."

"Our goal is to have the students, before they leave high school, go into business, industrial or office settings to put some of what they are learning to use, to hold a job and to expand their capabilities," he said.

"Many of these kids," he continued, "can use the kind of confidence building such opportunities can provide. It also helps them see how what they are doing here at the school is relevant to their lives and careers. Furthermore, these working students serve as role models for their fellow students."

Mr. Cicolari said the program, still in its embryonic stages, has generated considerable enthusiasm. "We have a group of kids who have caught the bug, and

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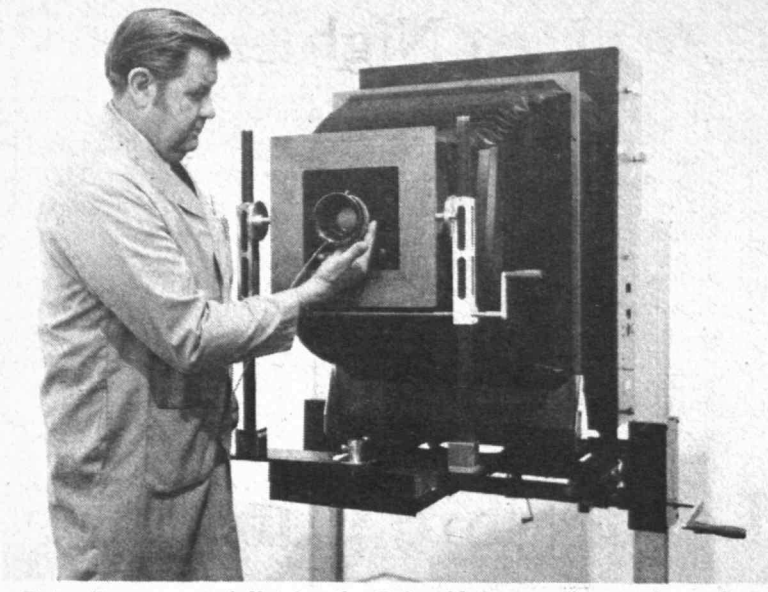
Teacher Louis J. Cicolari, second left, with students in the computer center at the Umana school in East Boston. The students, from the left, are Nelson W. Piacenza, a junior, of East Boston; Frank A. Davis, a senior, of Roxbury; Kathleen M. Evans, a junior, of East Boston; and Hannibal King, a junior, of Roxbury.



Peter Bass, a specialist for the Polaroid Corporation, makes a lens adjustment on the experimental 20 × 24 inch camera for today's opening of "Focusing on Faces" in Hayden Gallery. The exhibition will feature artists-in-residence Joel Janowitz (Jan. 3-9), Jim Dine (Jan. 10-14) and Chuck Close (Jan. 17-20). Gallery hours will be noon-2pm.

Artists to Explore Potential of Large Format Camera

By Paula Ruth Korn
Staff Writer

Three prominent, contemporary artists, invited by the Committee on the Visual Arts, will explore the aesthetic potential of Polaroid Corporation's very large format 20 × 24 inch camera at the Institute's Hayden Gallery, January 3-22.

"Focusing on Faces," an artist-in-residency program will be the first working collaboration between painters and the new photographic technology. Distinguished artists in residence will be Joel Janowitz, January 3-9; Jim Dine, January 10-14; and Chuck Close, January 17-20.

Hayden Gallery will become a studio space. An informal exhibition of works-in-progress will be open to the public from noon to 2 pm during the period of the artists' residencies. During this time, the artists and the technical staff from Polaroid will be available to answer questions.

This project will mark the first opportunity for these painters, each of whom has employed photographs in a variety of ways, to use the experimental 20 × 24 inch format. The very large size of this format will allow the artists to experience photographically a scale previously limited to painting on canvas. Polaroid's instant development feature will also give them the same one-to-one, intimate relationship with their works of art as have traditional painters or sculptors.

On January 16, the camera will be available for use by students from the Visible Language Workshop and on January 22, to those from the Creative Photography Laboratory. The public is invited to observe from 12-2pm.

"Focusing on Faces," combining the resources of an educational institution and a corporation, will further the interaction between artists and scientists which invariably influences the nature and development of both art and technology.

The residencies will be sponsored by the Committee on the Visual Arts at MIT and are made possible by a grant from the National Endowment for the Arts in Washington, and the generous support of the Polaroid Corporation.

THE ARTISTS

Throughout his career, Jim Dine has used various media to make portraits of friends, artists, writers and of himself. While acclaimed as avatar of the Neo-Dada or Pop movement in the 1960's, Mr. Dine abandoned recently the constructions which incorporated mundane objects for a more traditional, pictoral art. His work has been consistently expressionist and autobiographical.

Mr. Dine collaborated with photographer Lee Friedlander on a portfolio called *Photographs and Etchings*, in which their respective contributions were combined in a mutually enhancing relationship.

Riva Castleman, director of the Museum of Modern Art's Department of Prints and Illustrated Books, wrote of Mr. Dine's etchings, "Dine is incapable of creating a dispassionate work of art..."

Chuck Close has worked exclusively in portraiture for about the past 10 years. He makes photographs of himself and his friends from which he does monumental, mythic paintings, pastels, watercolors and etchings. He translates photographs into other media by dividing the image into a grid and enlarging the information contained within each of its squares from one medium to another.

For his recent color paintings, Mr. Close worked from three-color photographic separations and made three one-color paintings on top of each other to constitute the final image. Mr. Close uses photographs in order to get closer to the reality of a person while working within the artifices of painting.

To the extent that Mr. Close's imagery is created from repeated units of information, one is reminded of early mosaics. Similarly, the gigantic scale of Mr. Close's work harkens back to such iconic works as the Fourth Century Head of Constantine. As Kim Levin wrote in *Arts Magazine*, June, 1978—"Chuck Close: Decoding the Image"—"...the information to be decoded had to do with focus, depth of field and lens type. The information was photographic, not psychological."

Joel Janowitz has made use of photographs as the point of departure for his paintings, pastels and watercolors. His work often places a person or group of persons within the context of a larger natural environment such as the desert or ocean. As in Mr. Dine's work, Mr. Janowitz often invests ordinary objects or landscapes with psychological resonances. In his images, mundane objects suggest themselves as a metaphor for a human being.

Dealing with issues of illusionism and perception, Mr. Janowitz reveals the painterly process while evoking the visual reality. Local Boston critic Kenneth Baker wrote, "Janowitz is known as a realist with a fondness for views of mostly empty spaces... there is no horizon and no shoreline. Even the viewpoint is adrift, as we are adrift in experience."

THE CAMERA

Polaroid Corporation first developed the very large fomat 20 × 24 inch camera in 1975 and has since refined it through a series of prototypes. The characteristics of this large format photography require the photographer to acclimate himself to new surroundings, lighting, depth of field, exposure and, particularly, composition.

In MIT's "Focusing on Faces" exhibition, three painters interested in portraiture will work with a technology that not only brings a photographic work up to the scale of an expression on canvas, but also magnifies the very structure of detail, nuance and form.

INSTITUTE NOTICES

Announcements

Registration for IAP Physical Education classes**—Monday, Jan. 8, 10:30am-12noon in duPont Gym.

Operation Crossroads Africa*—Summer work/study/travel program in rural village communities. Projects in art, oral history, archaeology, ethnomusicology, agricultural development, community development, tutoring, clinical medical work, health education, media development, construction of clinics, schools, community facilities. Info: Vernell Bruen, Rm 12-170, x3-4733.

Oak Ridge Associated Universities Student Research Particiipation*—Gives selected students opportunity for independent research under guidance of Department of Energy staff scientists. Eligible juniors will be considered for 10 week appointments with stipend of $125/wk. Applicants must be enrolled in U.S. institutions and be U.S. citizens or permanent resident aliens. Application deadline, Jan. 8, 1979. Info: Preprofessional Office, 10-186, x3-4158.

Long Island Jewish-Hillside Medical Center**—Program designed to give student understanding of current concepts in biomedical sciences and opportunity to participate in a current research project at the Medical Center. Positions awarded on basis of scholarly achievement, letters of recommendation, previous research experience and statement of interest in the program. Info: Preprofessional Office, 10-186, x3-4158. Application deadline: Jan. 15, 1979.

John Motley Morehead Foundation**—Three fellowships awarded annually to attract to University of N. Carolina at Chapel Hill School of Law, student of superior character, academic achievement and potential. Fellowship has three year term, pays full tuition and fees plus $4,000. Info: Preprofessional Office, 10-186, x3-4158. Application deadline: Jan. 15, 1979.

Andover Teaching Fellowship Program**—Prepares college graduates for career in secondary boarding school in fields of English, mathematics, classics, French, German, Spanish, Russian, biology, chemistry, physics, history, music and social studies. Teaching Fellow receives stipend of $5,000 plus living quarters in dormitory or house and board in school dining hall. Applications available at Preprofessional Office, 10-186, x3-4158. Application deadline, Jan. 15, 1979.

Michael Reese Medical Center Summer Medical Research Fellowships**—Ten week training program for students who have completed two years of college, whose activities and interests are likely to lead to careers in biomedical research or academic medicine. $1,000 stipend. Info: Preprofessional Office, 10-186, x3-4158. Application deadline: Jan. 25, 1979.

Argonne National Laboratory Undergraduate Research Participation Programs**—for juniors or seniors planning careers in engineering or science. Student is expected to complete and report on an individual research project done with guidance of an Argonne staff member. Summer program from June 4-August 17, 1979. Info: Preprofessional Office, 10-186, x3-4158. Application deadline: Feb. 1, 1979.

Club Notes

MIT/DL Bridge Club**—ACBL Duplicate Bridge, Tuesdays, 6pm, Rm W20-473.

Figure Skating Club**—People who can skate backwards comfortably, bring your figure skates every Sunday from 11am-1pm to the MIT ice rink.

MIT Juggling Club*—Thursdays, 7:30-11pm, Sundays 1-4pm, W20-491. Visitors welcome.

Religious Activities

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

Tech Catholic Community*—Sunday masses: 9:15am, 12:15 and 5:15pm. Weekday masses: Tuesdays and Thursdays, 5:05pm, Fridays, noon, in the Chapel.

Christian Service*—Sundays, 10:30am, Chapel. All invited.

Service of Holy Communion*—Wednesdays, 5:10pm in the chapel. All welcome. Sponsored by the Lutheran and Episcopal Ministries.

Placement

The following companies will be interviewing during the time period covered by the current Institute Calendar. Those interested may sign up in the Career Planning and Placement Office, Mon-Fri, 9am-3pm, Rm 12-170, x3-4733.

IAP Notices

IAP Blood Drive**—MIT Red Cross drive staffed by professional nurses and volunteers. Sponsored by TCA. 9:45am-3:30pm, January 11-12, 9:45am-3;30pm, Sala de Puerto Rico. Refreshments.

IAP #190, Australian Languages**—will meet Monday and Tuesday, Jan 8 and 9 from 10am-6pm in Rm20E-204. The film, "Not To Lose You, My Language," will be shown Monday, Jan 8 at 8:30pm in Bldg. 20.

Register for IAP Art Classes**—Drawing, clay, stained glass, photography, calligraphy and Chinese brush painting, Jan 3-8, 1-5pm, Student Center, Rm 429.

Preregistration Required for these IAP Courses
Interpretation of C13 NMR Spectra (99)**—Dr. Dan Traficante, 9am-noon, Jan 16-19, Rm 4-370.
Advanced Programming Applications in TROLL (321)**—Mark Gelfand, research associate, Center for Computational Research, Economics and Management Science, Sloan School of Management, 1:30-3pm, Jan 24,25,26, Rm E38-219.
Project Management in the Urban Environment (343)**—Prof. Kent Colton, associate profesor, urban studies and planning, 9:30-noon, Jan 22-30, Rm 1-132.
Introduction to Multics for Programmers (435)**—Eric Engberg, project analyst, User Services, 2-3:30pm, Jan 22,24,26, Rm 39-400.
Do-It-Yourself Electronics (576)**—Electronics for the beginner, Tuesdays, Wednesdays & Thursdays, Jan 9-31, 7:30pm, Rm 20C-104.
The Life in the Spirit Seminars: An Introduction to Charismatic Christian Spirituality (635)**—Bob Simon, president, Tech Catholic Community. First meeting Jan 9, 6:30pm. For place and details, call x3-1858.

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.

Eloranta Summer Fellowship Program

A limited number of summer research fellowships for MIT undergraduates to be awarded this spring. Eloranta fellowships are intended to support summer research or study projects and associated travel. Any MIT undergraduate may apply, including seniors. A written proposal outlining plans for a summer project, including an indication of how the project will contribute to his/her education objectives, how the project will be carried out, the support available, and a budget must be submitted. Letters of recommendation should be included. Proposals for the summer of 1979 should be submitted before March 23, 1979, to Ms. Norma McGavern, UROP Office.

Summer Research at Wellesley

Two summer grants of $1,000 are available for MIT students to work with Wellesley faculty members for 8-10 weeks on scientific research projects. MIT students should apply through the MIT UROP Office. Ongoing projects are desirable (see listing in UROP Office) but not essential. Final selection of students will be made by a committee of Wellesley science faculty. Applications due March 5, 1979. For further information, contact Dr. Harold Andrews, Wellesley College, Science Center Office, at 235-0320, ext. 761.

IAP Research: Resource Recovery From Wastes

This project involves work with an eddy-current separator which uses permanent magnets to recover nonferrous metals from solid wastes, and will be concerned with the effects of operating variables on the recovery and grade of the several products. Other investigations will be concerned with the separation of glass and aluminum. The project, conducted in laboratories of the Raytheon Company, will be limited to a small number of students who will be expected to work several days a week. This activity will also offer opportunities for directed analytical research investigating various aspects of the recovery of resources, especially from municipal solid wastes. This project continues beyond IAP and will be open to one or two students as a spring term or summer UROP opportunity. An organizing meeting will be held M, Jan 8, at 4pm in 13-5002. Contact Prof. M.B. Bever, 13-5026, x3-6915 for more information.

Boston Zoological Society

The Department of Behavioral Research of the BZS is planning to start a token economy with the three orang-utans housed at the Stone Zoo in Stoneham for research purposes and to increase the activity level of the animals. A token economy is a system whereby participants manipulate an apparatus in a predetermined manner to receive a reward of a token, which can be exchanged for certain valued goods such a favorite foodstuffs. The project is in need of someone to design and build an apparatus for the orangs to manipulate for tokens; and a "vending machine" in which the orangs may deposit the tokens for food.

Animal Experimentation in Functional Muscle Recruitment

A technique gaining increasing attention as a means of returning function to people with paralyzed limbs is Functional Electrical Stimulation (FES). The considerable promise of this method is presently undermined by the rapid fatigue and low-force levels characteristic of muscle activity induced by FES. In an effort to understand the physiological bases for inadequate contractions and to exploit reflex neurophysiology to develop improved stimulation strategies, a project is underway at the West Roxbury Veterans Hospital Animal Laboratory. Opportunities exist for an undergraduate in experimental procedures, equipment development, or data analysis with supervision by physicians and MIT staff.

Energy Development and Employment

The Boston Industrial Mission (BIM), an ecumenical center doing community education on economic justice, invites a student to do research on varying strategies for energy production and the relative numbers of jobs each provides. This project will attempt to calculate the number of jobs created per kilowatt hour produced and per dollar spent on energy production for various types of energy production in the United States, including nuclear power plants, coal and coal gasification, oil, solar and geothermal production. Attention will subsequently be paid to energy production in the underdeveloped world. There are few studies available on this issue. The BIM student will therefore seek and compile statistics from a variety of primary sources.

Graduate Studies

NATO Advanced Research Fellowships**—A limited number of grants will be offered to 1979-80 candidates from NATO member states to promote study and research leading to publication on aspects relevant to the North Atlantic Alliance. Candidates must be nationals of member states and must undertake research projects in one or more member countries. Grants are intended for scholars of established reputation. Applicants must apply to the appropriate authority of the countries of which they are nationals. Info and list of research areas: Graduate School Office, Rm 3-136. Application deadline: Jan 5, 1979.

Essay Competition**—on urban land policies in developing countries, open to MIT and Harvard graduate students, sponsored by Kennedy School of Government and Lincoln Institute of Land Policy. Deadline, Jan 31, 1979. Awards of $500 each for best three essays. Info: S. Ramakrishnan, 495-3006, or John D. Montgomery, 495-1171.

Bell Laboratories Graduate Research Programs for Women**—Financial support for outstanding women students doing full-time doctoral studies in chemistry, computer science, economics, electrical engineering, experimental human psychology, materials science, mathematics, operations research, physics and statistics. Fellowships (2) provide tuition and fees and stipend of $525/mo, plus book and related travel allowance. Grants (4) provide annual award of $1,500. Both are renewed on yearly basis. Application deadline: Jan 15, 1979, supporting material, Jan 31. Info: Dean Jeanne Richard, Rm 3-136, x3-4869.

Josephine de Karman Fellowships*—Twelve fellowships of $2,500 each for 1979-80 academic year. Graduate students in any discipline entering third year or more of graduate study are eligible. Special consideration to applicants in the humanities. Info: Rm 3-136. Application deadline: Jan 31, 1979.

CABLE TV SCHEDULE X3-3625

January 3-9, 1978

Wednesday, January 3
Channel 8:

12-1pm	*COMMUNITY TELEVISION*—Tomas Rivera, Director, South End Telecommunications Demonstration Project.
1-3pm	*ELECTRICAL ENGINEERING*—Prof. Michael Athans, Dept. of Electrical Engineering and Computer Science. "What is Engineering?" seminar series.
3-4pm	*PAUL WINTER CONSORT* by BASEMENT VIDEO.

Thursday, January 4
Channel 8:

12-1pm	*SKY LADDERS*—Elizabeth Goldring, Center for Advanced Visual Studies.
1-3pm	*MECHANICAL ENGINEERING*—Prof. Herbert Richardson, Dept. of Mechanical Engineering. "What is Engineering?" seminar series.
3-4pm	*BOSTON REPERTORY BALLET* by BASEMENT VIDEO.

Friday, January 5
Channel 8:

12-1:30pm	*MEDIA PLANNING DEVELOPMENT*—Antonio Muntadas, Center for Advanced Visual Studies.
1:30-2:30pm	*OCEAN ENGINEERING*—Prof. Kim Vandiver, Dept. of Ocean Engineering. "What is Engineering?" seminar series.
2:30-4pm	*AIRCRAFT AND SPACECRAFT NAVIGATION*—Prof. Emeritus Charles Stark Draper, Dept. of Aeronautics and Astronautics.

Monday, January 8
Channel 8:

12-1pm	*SYNTHETIC FUELS FOR TRANSPORTATION*—Prof. J.P. Longwell, Dept. of Chemical Engineering.
1-3pm	*CIVIL ENGINEERING*—Prof. Daniel Roos, Dept. of Civil Engineering. "What is Engineering?" seminar series.
3-4pm	*PETE SMITH* by BASEMENT VIDEO.

Tuesday, January 9
Channel 8:

12-1pm	*VLBI: A RADITELESCOPE AS BIG AS THE EARTH*— Prof. Bernard Burke, Dept. of Physics.
1-3pm	*CHEMICAL ENGINEERING*—Prof. Kenneth Smith, Dept. of Chemical Engineering. "What is Engineering?" seminar series.
3-4pm	*BROTHER BLUE* by BASEMENT VIDEO.

TECH TALK
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New Center To Investigate Health Effects of Fossil Fuels

(Continued from page 1)

bustion science and engineering, the biological sciences, and the physical sciences.

The new program complements two existing energy/health effects projects that are now part of the Center. One of these projects is entitled, "Health Effects of Combustion-Generated Soot and Polycyclic Aromatic Hydrocarbons." Supported by the U.S. Department of Energy, this project involves fundamental studies of the toxicological effects of soot and polycyclic aromatic hydrocarbons produced under conditions pertinent to pratical-scale combustors.

The other existing project is an interdisciplinary study of combustion-generated inorganic particulates. It is supported by the Electric Power Research Institute, and its primary objectives are to:

1. Develop an understanding of the manner in which the composition of coals and variations in combustion conditions affect the nature of resulting inorganic emissions;

2. Develop an understanding of the thermochemical and physicochemical factors that determine the nature of the inorganic particulates formed;

3. Assess the respiratory toxicology of these emissions by measuring the response of experimental animals to inhalation of carefully characterized aerosols representative of coal combustion products.

Three coordinated elements of the new NIEHS funded program are combustion engineering, chemical analysis, and toxicology.

Combustion engineers will investigate the formation of organic particulates and polycyclic aromatic hydrocarbon compounds in a range of combustors from small-scale laboratory flames to semi-pilot-scale equipment. The research will involve collection and detailed characterization of soots and other emissions formed by combustion of vaporizable and nonvaporizable fuels, pulverized coals, coal- and shale-derived liquids, and residual oil, with special emphasis on fuels with low hydrogen-to-carbon ratios. The work will also involve collection of selected field samples from pilot- and commercial-scale combustion equipment such as pulverized-coal-fired utility boilers, domestic oil burners, and fluidized bed coal combustors.

Chemical analyses of the emissions products from the various combustors will be used to identify the specific organic compounds present. Chemists will use gas chromatographic-mass spectrometry to quantify polycyclic aromatic compounds, and laser spectroscopy to perform real-time monitoring of combustion products, identifying and quantifying these products both at their points of formation in combustors, and in surrounding atmospheres.

Toxicologists will assess biological activity of the particulate samples and individual organic compounds that have been identified and isolated in the combustion experiments. Specifically, they will use both human cell and bacterial mutation assays to determine mutagenic activity of those materials, and will further test those indicating positive responses for carcinogenicity. The biological assays use protocols chosen to reflect as closely as possible the responses expected from human tissues.

The mutagenic effects of emissions materials will be studied by examining the molecular interactions of specific test compounds representative of fossil fuels emissions with genetic material such as DNA and RNA. These studies should indicate how molecular structures interact to form or break chemical bonds and in the process cause alterations in human cells and chromosomes.

The investigators will seek to determine which effluent products are likely to be mutagenic or carcinogenic, or to be hazardous to the respiratory system and will try to identify potential strategies for minimizing noxious health effects. Control methods may include variation in combustion operating conditions and modification of fuel types.

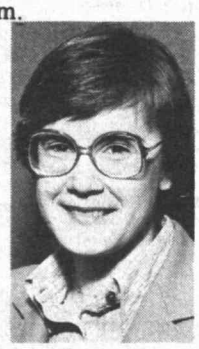
The Center will support exploratory projects in new research areas pertinent to the health effects of fossil energy utilization. In the first year, exploratory projects will be concerned with the biological effects of particulates found in the exhaust from diesel engines, and the use of bacteriophages (bacterial virus) in exploring the molecular toxicology of compounds found in combustion-generated soots. The Center will cooperate closely with all MIT and Harvard investigators interested in the field of health effects of fossil fuels and will facilitate communications of new data and information through a program of special symposia and conferences.

Director of the Center is Gerald N. Wogan, professor of toxicology in the MIT Department of Nutrition and Food Science; associate director is Jean F. Louis, MIT professor of aeronautics and astronautics and associate director of the MIT Energy Laboratory; and executive officer is Irving A. Berstein, assistant director of research and program development of the Harvard-MIT Division of Health Sciences and Technology.

Other researchers affiliated with the new Center are: Professors Janos M. Beer, Ronald A. Hites, Jack B. Howard, John P. Longwell, and Adel F. Sarofim, Department of Chemical Engineering; Professor Jeffrey I. Steinfeld, Department of Chemistry; Professor William G. Thilly, Department of Nutrition and Food Science; Professors John F. Elliott and Gregory J. Yurek, Department of Materials Science and Engineering; Professor Jonathan A. King, Department of Biology; Professor Mary O. Amdur, MIT Department of Nutrition and Food Science and Harvard School of Public Health; and Dr. William A. Peters and Dr. Joe M. Rife of the MIT Energy Laboratory.

Picardi Promoted

Dr. Shirley M. Picardi of Wellesley, an insustrial liaison officer since 1976, has been promoted to assistant director of the Industrial Liaison Program.



In her new position, Dr. Picardi will take on additional responsibilities in the training of new liaison officers in the expanding ILP. Announcement of her appointment was made by Dr. Samuel A. Goldblith, vice president for resource development.

Dr. Picardi will retain her group of 19 industrial clients for whom she serves as the interface with MIT faculty and staff members. The majority of the companies she serves are in the food and chemical fields.

She will also continue to oversee operations of the ILP publications staff and the "Monthly List of Publications" circulated to members of the ILP.

After receiving the BA degree in chemistry, *summa cum laude*, from Radcliffe College, Dr. Picardi came to MIT for graduate study under a National Science Foundation fellowship. She received the SM and PhD degrees in food science and technology in 1972 and 1976 respectively.

In addition to her ILP work, Dr. Picardi is a guest lecturer in two subjects in the Department of Nutrition and Food Science and she participates annually in an IAP course in nutrition.

Dr. Picardi is a member of the Institute of Food Technologists, the Society for Nutrition Education, the American Dietetic Association and the American Association for the Advancement of Science.

'Anemone' Delights First Nighters

"A giant palm tree with frost bite," was how one on-looker described "The Milwaukee Anemone," opening event for Boston's third annual First Night celebration on New Year's Eve.

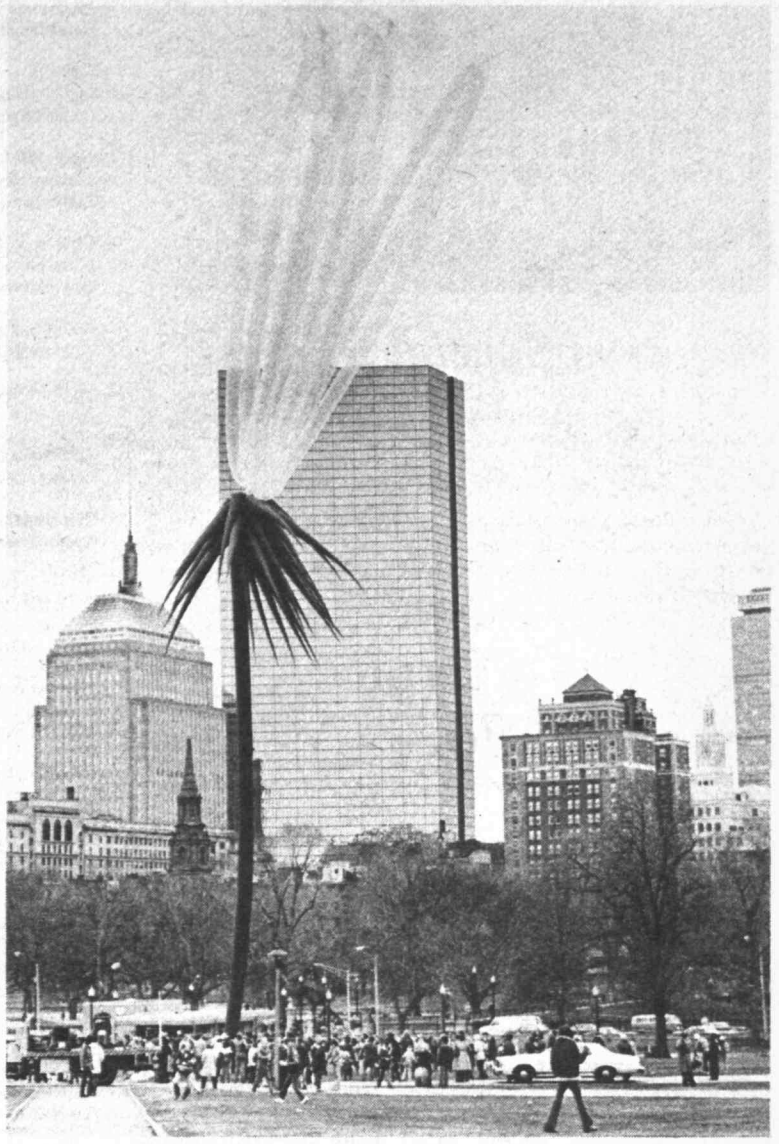
The great 150-foot high, 45-foot wide red flower attracted hundreds of tourists and local merrymakers on the Boston Common Sunday afternoon (Dec. 31). The sculpture is one of several similar environmental works created by Otto Piene, director of the MIT Center for Advanced Visual Studies.

Students from CAVS and volunteers from the public helped to launch the "octopus...monster... big balloon..." and guide it using three attached cables. Filling the seven, 100-foot long, polyethylene looped tubes with helium began at about ten in the morning, despite drizzling gray skies and ten knot winds. The helium-filled tubes lift the flower and air blown into the stem at ground level keeps the work inflated.

As the flower gracefully drifted in the winds at varying altitudes, the crowds gathered in a festive, playful atmosphere, watching in amazement and delight with sounds of Viennese music playing from nearby loudspeakers. Children were the busiest of all, darting about the people and the sculpture. One was reminded of the fantasy-like Danish amusement park, Tivoli, in the center of Copenhagen, particularly when the Boston Christmas lights were turned on at dusk.

And as the last of the gleaming helium-filled tubes opened into the cold night sky, First Night and Boston prepared to do a fair amount of partying, theatre-going, entertaining in what is fast becoming viable competition for Mardi Gras festivities.

Or as one television reporter put it, "This is MIT's way of wishing the people of Boston a very Happy New Year."



It's a bird...it's a sea monster...it's Otto Piene's "Milwaukee Anemone," blooming on the Boston Common and adding new dimension to Boston's skyline on New Year's Eve.

—Photo by Calvin Campbell

UROP Broadcast

The Cambridge Forum program, "My Research and Its Social Consequences—MIT Undergraduate Research Projects," will be aired on WTBS-FM (88.1) three times during IAP.

The program was recorded in the MIT Chapel on May 1, 1978, with participants Diana Altrichter, a junior in chemical engineering; Stanley Hudson, student financial aid officer and former associate director of UROP; Margaret MacVicar, associate professor of physics and director of UROP; Louis Menand, senior lecturer in political science; Amy Powell, then a senior in urban studies and planning; Judah Rose, a junior in economics, and Z Smith, a sophmore in physics.

The program will be broadcast Wednesday, Jan. 10, at 4pm, Tuesday, Jan. 16, at 9:30pm, and Friday, Jan. 27, at 4pm.

The IAP Corner

Child Care Office Plans Lectures For Parents

Children: Loving them is the Easy Part! is the overall title of a series of four lectures on different aspects of child rearing sponsored by the Child Care Office, with speakers from both MIT and the Cambridge community. The lectures will be given Tuesdays from 12-2pm in Rm 4-153.

The first problem for discussion is titled "Peanut Butter and Fluff: Is That Enough?" Dr. Judith Wurtman of the Department of Nutrition and Food Science, will explain what happens to children when they won't eat what we know they should eat. The lecture will be presented Tuesday, Jan. 9.

"Would I Ever Really Punch My Child?" is a question that more parents are asking themselves. John Cuneo of the Cambridge Task Force on Child Abuse and Neglect will explore the reasons for child abuse—what makes some of us abuse our children and others not—on Tuesday, Jan. 16.

On Tueday, Jan. 23, Luise Flavin, director of the Technology Children's Center, Inc., will talk on socialization of young children. Her talk, entitled, "Yes, I Can," tells how children learn to live with the larger environment.

In the final lecture on Tuesday, Jan. 30, "A Safe Place for Young Children," Terry Mason, founder of the Women's Community Health Center, Cambridge, will present ways to make homes safe and how to cope with emergencies in the home.

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The Plasma Fusion Center's tutorial lecture series on fusion is now complete. Dr. Victor Weisskopf, Institute Professor Emeritus, will be the lead-off lecturer with "Fusion in the Stars", which he will present at 10am, Tuesday, Jan. 9 in Rm NW16-212. The other scheduled lectures in the series can be found in the IAP Final Guide, IAP #481. The final lecture, which was not confirmed in time for inclusion in the Final Guide, will be given at 2pm on Tuesday, Jan. 22 in Rm 6-120, when Dr. Stephen O. Dean, Office of Fusion Energy, Department of Energy, will speak on "The U.S. Fusion Program, an Overview."

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Preparation for Actuarial Exams (IAP #239a) offered by Prof. William DuMouchel, will begin on Monday, Jan. 8 at 5pm, with a special introductory lecture by a practicing actuary on the challenges and opportunities in the field. Following the introductory lecture there will be three series of lectures: six lectures on probability and statistics, Tuesdays and Thursdays from 4-5pm, beginning Jan. 9; six lectures on numerical analysis Mondays and Wednesdays from 4-5pm beginning January 10; and 12 lectures on the theory of interest, Mondays, Tuesdays and Thursdays from 5-6, beginning January 9.

Students who are interested in this course should call the undergraduate mathematics office, x3-4977 or Professor DuMouchel, x3-4986.

US-China Symposium

(Continued from page 1)

Walter A. Rosenblith, Institute Professor and Provost at MIT, who visited the People's Republic of China in June and July of 1977; Dr. Mary Bullock, staff director of the Committee on Scholarly Communication with the People's Republic of China; Dr. Lucien Pye, professor of political science at MIT and vice chairman of the National Committee on United States-China Relations, and Ping-ti Ho, Thompson Professor of Chinese History at the University of Chicago.

Moderator for the Monday session will be Dr. Eugene Skolnikoff, professor of political science at MIT and director of the Center for International Studies.

Arrangements for the symposium were coordinated by Dr. Y.T. Li, professor of aeronautics and astronautics at MIT and vice chairman of the Boston Chapter of the National Association of Chinese-Americans.

Applications Due For Whitaker Fund

Applications are due Monday, Jan 15, for 1979-80 grants from the Whitaker Health Sciences Fund.

Plans for graduate fellowships and faculty research awards in the life sciences and medicine were announced by Dr. Irwin W. Sizer, president of the Fund.

About 10 fellowships will be available for doctoral students throughout the Institute, as well as five fellowships in the Whitaker College of Health Sciences, Technology and Management.

Faculty research grants of $25,000 will be made to junior investigators in the biomedical sciences as follows:

—10 to MIT faculty members

—5 to faculty members of Harvard Medical School who are collaborating with MIT faculty members.

—4 to Boston University School of Medicine faculty members who are collaborating with MIT faculty members.

Further information is available in the Whitaker Health Sciences Fund office, Rm 4-234, or by calling x3-7878.

THE INSTITUTE CALENDAR X3-3270

January 3 through January 14

Events of Special Interest

A New Era in United States-China Relations* — Session I- Speakers:**Paul Tsongas,**US Sentor-elect from Massachusetts; **Julian Sobin**, Chairman, Sobin Chemical Company, Inc, Trustee, Boston University; **C.K. Jen,** Ph.D. , Associate Director (Emeritus), Applied Physics Laboratory, Johns Hopkins University; Moderator: **C.C. Lin,** Institute Professor, Mathematics, MIT. Sponsored jointly by the National Association of Chinese-Americans, Boston Chapter and The Center for International Studies. Sat, Jan 6, 9:15am-Noon, Rm 9-150.

A New Era in United States-China Relations* — Session II- Speakers: **Walter A. Rosenblith,** Institute Professor, Provost, MIT; **Mary Bullock,** Ph.D., Staff Director, Committee on Scholarly Communication with the People's Republic of China; **Prof Lucien Pye,** Political Science, MIT, Vice Chairman, National Committee of US-China Relations; **Ping-ti Ho,** Thompson Professor of Chinese History, University of Chicago; Moderator: **Prof Eugene Skolnikoff,** Political Science, Director, Center for International Studies. Sponsored jointly by the National Association of Chinese-Americans, Boston Chapter, and The Center for International Studies. Mon, Jan 8, 1:30pm-5pm, Rm 9-150.

IAP Blood Drive* — MIT-Red Cross drive staffed by professional nurses and volunteers. Sponsored by TCA. January 11-12, 9:45am-3:30pm. Sala de Puerto Rico, Student Center. Refreshments.

Seminars & Lectures

Friday, January 5

Recent Experiments in Lanuage Processing * — Dr. Virginia Holmes, psychology, University of Melbourne and Psychological Laboratories, C.N.R.C., Paris. Psychology Colloquium, 4:30pm, Rm E10-013. Coffee at 4:15pm.

Monday, January 8

What it Takes to Publish a Newspaper (594F) — Steve Frann,** managing editor, *The Tech*, 7pm-12pm on Monday; all day on Tuesday, Rm W20-483.

Theory and Applications of NMR Spectroscopy (98) — Dr Dan Traficante,** Yale University, 9am-Noon, Rm 4-370.

Workshop on Race Relations (348) — Leroy Hush,** human relations trainer; **Fernando Cruz-Villalba,** co-trainer, 9am-5pm, Rm 10-400.

Predictability (257) — Prof Edward N. Lorenz, Predictability of Meteorological and Other Processes,** 10am-11:30am, Rm 54-1510.

Seabrook Week (269) — Prof Neil E. Todreas,** nuclear engineering, **How Nuclear Plants Work,** 10am. **Norman Cullerot,** manager, Nuclear Information, Public Service Company, NH, **The Seabrook Station**, 11am, Rm 54-100.

See Japan Today (653) — Orientation,** 10am-4pm, Rm 4-149.

Structural Theories of Hydrodynamics (83) — R. C. Armstrong,** assistant professor, chemical engineering, 10am, Rm 66-154.

Introduction to SPSS (436) — Suzanne Chen,** senior application analyst, 10:30-Noon, Rm 39-400.

Can You Fool All The People All Of The Time?(319) — Barbara Sakitt, Seeing Invisible Light: Counting Every Photon,** 11am-Noon, Rm 4-231.

Curricular and Extracurricular Guide to Alternatives at MIT: The Grapevine (659)* — First meeting to develop the guide, everyone welcome, 11am-1pm, Rm 20C-016.

Ice Action on Marine Structures (283) — Paul C. Xirouchakis,** assistant professor, ocean engineering, 11am-Noon, Rm 5-234.

How Should Doctors Be Paid — And How Much? (500) — Randall Borbjerg,** Senior Attorney, Massachusetts Division of Insurance, **Health Policy?,** Noon-1:30pm, Rm 4-145.

Data Acquisition with Mini/Micro Computers (589) — Jerry Kaplan,** Data General, **Introduction to Data Acquisition with mini/micro computer,** 12:30pm, Rm 35-225.

Climate and Energy (251) — Dr. R. Bacastow,** Scipps Institution of Oceanography, **Atomospheric CO_2: Will it continue to increase and thereby cause climatic warming?** Meteorology, 2-3pm, Rm 54-100.

What is Mathematics and Why Won't It Go Away? (230) — Gerald E. Sacks,** professor of mathematics, **What is Mathematical Logic?**, 2pm, Rm 2-190.

Physics Potpourri (305) — Prof Victor Weisskopf, Atoms, Mountains, and Stars,** 3pm, Rm 4-231.

The Jewish Problem in the USSR (168a) — Maurice Friedberg,** chairman, Slavic Languages and Literatures, University of Illinois-Urbana, **Recent developments in the USSR including last summer's trails of dissidents,** 8pm, West Lounge, Student Center.

Tuesday, January 9

What it Takes to Publish a Newspaper (594F) — Steve Frann,** managing editor, *The Tech*, 7pm-Midnight on Monday; all day on Tuesday, Rm W20-483.

Theory and Applications of NMR Spectroscopy (98) — Dr Dan Traficante,** Yale University, 9am-Noon, Rm 4-370.

Workshop on Race Relations (348) — Leroy Hush,** human relations trainer; **Ferando Cruz-Villalba,** co-trainer, 9am-5pm, Rm 10-400.

Fusion Energy Tutorials (481) — Prof Victor Weisskopf,** physics, Emeritus, **Fusion in the Stars,** 10am, Rm NW16-212.

How to Drive an X-Ray Astronomy Satellite (406)* — Dr. William Mayer research staff, **Operation and Results of MIT's Small Astronomy Satellite,** 10am, Rm 37-422.

LINUS — A Conceptual Design for an Imploding-Liner Fusion Reactor* — Dr. A.E. Robson, Naval Research Laboratory, Plasma Fusion Center Seminar, 10am-Noon, Rm 37-252.

Curricular and Extracurricular Gudie to Alternatives at MIT: The Grapevine (659)* — First meeting to develop the guide, everyone welcome, 11am-1pm, Rm 20C-016.

Children: Loving Them Is The Easy Part* — Dr. Judith Wurtman, nutrition and food science, **Peanut Butter and Fluff: Is That Enough?,** Noon-2pm, Rm 4-153.

Redesigning MIT (652) — Jim Stiles,** ecology action, **An Appropriate Approach to the MIT Campus,** Noon-1pm, Rm W20-002.

So You Want to Be A Lawyer (327) — Lawyers in private practice,** Noon, Rm 7-335.

Climate and History (252) — Prof R.E. Newell,** meteorology; **Tamara Ledley,** Student, meteorology, 1-2pm, Rm 54-1510.

Electrographics for the Benefit of Everyone (23) — Tom Norton,** research affiliate, visible language workshop, architecture, 1-3pm, Rm 7-427.

Food for Peace/Food for War: The Role of Food Aid in US Foreign Policy (446A) — Dr. Mitchel B. Wallerstein,** research associate and lecturer, political science, 1-3pm, Rm E38-762.

History of Ships: Their Design and Construction (282) — William A. Baker,** lecturer, ocean engineering; curator, Hart Nautical Museum. Series of six lectures, illustrated with slides, 1pm, Rm 5-234.

Frictional Behavior of Metals* — Masaie Tohkaei, Sponsored by the Laboratory for Manufacturing and Productivity, Mechanical Engineering Seminar, 1:30pm, Rm 37-252.

Causes of Human Cancer (376) — Prof David Baltimore,** biology, 2pm, Rm 6-120.

A True Picture of the World Community of Al-Islam in the West (6-64C) — Nashid Abdullah Khaalig, History and Teachings of the Nation of Islam,** 2pm, Rm 4-370.

Women in Chemistry (94) — Mary Roberts,** and **Ellen Henderson,** assistant professors, chemistry, **Experiences of Women in the Field of Chemistry,** 2-5pm, Rm 6-233.

Physics Potpourri (305) — Prof Alan Barrett, Molecule in Space,** 3pm, Rm 4-231.

Computer Dating (679) — Henry Perkins,** undergraduate, 4pm, Rm 3-270.

International Development (646) — Anthony Arrot, Bob Burkhardt, Bill Paseman, Introduction to the group for International Development,** 4pm, Rm 1-134.

Arthurian Legend(600) — Jessica Crist,** Lutheran Chaplain, 5pm, Rm W2A.

Politics, Policy, and Cartoons (497) — Paul Szep,** Pulitzer Prize winning Cartoonist for the Boston Globe, **An Evening with Paul Szep,** 7:30-9:30pm, Rm 9-150.

Christ and the Crisis of Man's Identity (641) — Van Parunak,** Harvard University, **In search of Our Roots,** 8pm, 2nd Floor Lounge, Ashdown House.

Wednesday, January 10

Theory and Applications of NMR Spectroscopy (98) — Dr. Dan Traficante,** Yale University, 9am-Noon, Rm 4-370.

How to Drive an X-Ray Astronomy Satellite (406)* — Dr. William Mayer research staff, **Operation and Results of MIT's Small Astronomy Satellite,** 10am, Rm 37-422.

Future Large Satellite Communications Networks (144) — Prof David H. Staelin,** electrical engineering and computer science, 10am, Rm 36-428.

Predictability (257) — Prof Edward N. Lorenz,** Predictability of Meteorological and Other Processes, 10-11:30am, Rm 54-1510.

Seabrook Week (269) — Dr. Andrew Kadak,** New England Power Company; **Jerry Kline,** US Nuclear Regulatory commission; **Frank Bove,** Massachusetts PIRG; **Jim McConaha,** Seacoast Anti-Pollution League. Panel discussion on the need and environmental acceptability of the Seabrook Plant, 10am, Rm 54-100.

Introduction to SPSS (436) — Suzanne Chen,** senior application analyst, 10:30-Noon, Rm 39-400.

Can You Fool All The People All Of The Time? (319) — Helene Intraub,** Don't Blink, You'll Miss Something, 11am-Noon, Rm 4-231.

Ice Action on Marine Structures (283) — Paul C. Xirouchakis,** assistant professor, ocean engineering, 11am-Noon, Rm 5-234.

African Tribal Art: A Personal New (410) — Prof Boris Magasanik,** chairman Committee on the Visual Arts, professor of biology, Noon-2pm, Rm 10-105.

All Men are Mortal, or Some Cogitations on Medicine and Medical Research (360) — Dr. Robert S. Lees,** director, Arteriosclerosis Center, **What is Medicine and What Do Doctors Do?,** Noon-1pm, Rm E17-415.

Politics, Policy, and Health (502) — David Rosenbloom,** commissioner, Boston Department of Health and Hospitals; **David Polock,** Deputy Commissioner, Boston Department, Health and Hospital; **Duncan Yaggy,** assistant commissioner, Massachusetts Department of Public Health, **So You Want to be in Health Policy, but You Don't Want to be a Doctor?,** Noon-1:30pm, Rm E52-461.

So You Want To Be A Lawyer (327) — Lawyer in Public Practice,** Noon, Rm 7-335.

Student Seminars in Atmospheric Science (259) — Robert S. Chen,** meteorology, technology and policy program, **A Possible Rise in Global Mean Sea Level Caused by CO_2-Induced Climatic Warming -or- The Future of the Green Building as a Light House,** Noon-1pm, Rm 54-1510.

Bicycle Maintenance and Repair (586) — Peter Fiekowsky,** undergraduate, 1pm, Rm 24-612.

The Boston Plan (330)* — Gordon Brigham,** member, Boston City Administration, 1-3pm, Rm 3-415.

Chemical and Biological Oscillation: How and Why? (66) — H. Brunengraber,** associate professor, physiological chemistry, **A Biochemist's View,** 2-4pm, Rm 6-120.

Fusion Energy Tutorials (481) — Prof Bruno Coppi,** physics, **Alto Campo Fusion,** 10am, **Prof Mark Heald,** visiting professor, **Fusion Experiments,** 2pm, Rm NW16-212.

Megavitamin Dosing: Fact and Fancy (275) — Prof G. Wolf,** nutrition and Food Science, **Nutritional Biochemistry,** 2-4pm, Rm 66-168.

What is Mathematics and Why Won't It Go Away? (230) — P... George B. Thomas, Jr.,** Emeritus, **Things I Like in Number Theo...** 2pm, Rm 2-190.

Physics Potpourri (305) — Prof John King, Null Experiments ... Physics,** 3pm, Rm 4-231.

The Museum as Educator (425) — Robert Dean Perry,** Dean, Stahl a... Rogers Inc., **The Beaux Arts Influence in Architectural Drawings ... MIT,** 3:30pm, Rm N52-260.

Faith: Scientific and Religious: Are They Related? (637) — Dr. ... Frederick Reisz, Jr.,** Lutheran Chaplian, 4-5pm, Rm W2A.

Things You Thought You Were Never Taught: How It Happened a... Why It Should Not (664D) — Dr. David G. Stratman,** direc... Govermental Relations for the National P.T.A., **National Education at ... Turning Point,** to be followed by an informal buffet supper, 4pm, Rm ... 310.

Research HIghlights in Electrical Engineering and Computer Scien... — Prof David Adler,electrical engineering. Undergraduate Thesis Requi... ment, 4:30pm, Rm 10-105.

Problems of Censorship (456) — Louis Menand,** senior lectur... political science, panel discussion with **Edwin Diamond,** senior lectur... political science and **John Roberts,** executive director, Mass Civil Liberti... Union, **Censorship: Approaches and Perspectives Overview,** 6:30pm, R... 66-110.

Thursday, January 11

Career Perspectives in Biomedical and Clinical Engineering (351) ... Dr. Philip A. Drinker,** senior associate in surgery, Harvard Medic... School, director, Clinical Engineering Service, Peter Bent Brigha... Hospital, 9am, Rm 4-149.

Theory and Applications of NMR Spectroscopy (98) — Dr. D... Traficante,** Yale University, 9am-Noon, Rm 4-370.

Corporate Information (461) — Michael Gruenberg,** representive fro... Disclosure; **David Lewallen,** Dewy reference librarian, **How to find info... mation about corporations,** 10am-Noon, Rm E53-220.

Fusion Energy Tutorials (481) — Prof Abraham Bers,** electric... engineering and computer science, **Fusion Theory,** 10am. **Prof Louis ... Smullin,** Dugald Caleb Jackson Professor of Electrical Engineering, T... **Plasma Heating Problem,** 2pm, Rm NW16-212.

Possible Role of Atmospheric Electricity in the Solar Modulation ... Weather (256) — Dr. Ralph Markson,** aeronautics and astronautics, ... 11:30am, Rm 54-915.

Seabrook Week (269) — Representives from the Massachusetts Voice ... Energy and the Clamshell Alliance, 10am, Rm 54-100.

Early Xian History: Acts of the Apostles (643) — Jessica Chris... Lutheran Chaplain, 11am-Noon, Rm W2A.

So You Want To Be A Lawyer (327) — Lawyers who don't practi... Noon, Rm 7-335.

Student Seminars in Atmospheric Science (259) — George Huffma... meteorology, **A Two-Cylinder Cloud Model,** Noon-1pm, Rm 54-1510.

History of Ships: Their Design and Construction (282) — William ... Baker,** lecturer, ocean engineering; curator, Hart Nautical Museum. Ser... of six lectures, illustrated with slides. 1pm, Rm 5-234.

What Is It Like to Major in Chemistry at MIT? (93) — Informal discu... sion in which upperclassmen give views on the department for freshman a... sophomores considering course V, 1:30-4pm, Rm 6-321.

The Renaissance Artist as Quantifier (414B) — Samuel Y. Edgerto... Jr.,** professor, Art History, Boston University, 2-3:30pm, Rm 10-105.

Slow and Exotic Viruses and Human Degenerative Disease (380) — ... Weinberg,** associate professor, 2pm, Rm E17-614.

The Spanish Civil War (187) — Prof Will Watson,** Humanitie... Historical Perspective of the Spanish Civil War,** 2-3pm, Rm 4-153.

A True Picture of the World Community of Al-Islam in the West (... 64C) — Azim Sharief,** economics student, Bentley College, **Economic... Principles and Development in the World Community of Al-Islam,** 2pm ... Rm 4-370.

Physics Potpourri (305) — Prof Kenneth Johnson, What are t... Elementary Particle?,** 3pm, Rm 4-231.

American And Catholic: Religion in a Technological Society (639) Par... I — Rev Robert Moran,** Catholic Chaplain, **Religion and Credibility i... General: A Perennial Challenge,** 3:15pm, Rm 1-132.

Communications Satellites for the Public* — J. Russell Burke, Join... Council of Educational Telecommunications, Washington, DC; **Be... Cowlan,** Co-Director, Public Interest Satellites Association, New York, NY; **Howard Hupe,** HEW, Washington, DC. Research Program on Communic... tions Policy Seminar, 4-6pm, Rm 37-252.

Perfection (Almost)-The Titanic Disaster (664) — Leonard Epstein,** ... 6:30pm, Rm 4-145.

The Art and Science of Change Ringing (685) — David Westmorelan... Ring Master, Guild of Bell Ringers, The English manner of ringing churc... tower bells, 7pm, Rm 10-105.

Leadership Workshop for Dormitory Members (415) — Dave Hegedu... and Steve Felsher, Sloan Doctorial Students, 7:30pm, Rm E52-542.

Politics, Policy, Humor, and Satire (496) — Former Governor Franc... W. Sargent Dick Flaven,** political satirist, **What Makes Politcs Funny ... Massachusetts and Elsewhere,** 7:30-9:30pm, Rm 9-150.

Friday, January 12

Theory and Application of NMR Spectroscopy (98) — Dr. Da... Traficante,** Yale University, 9am-Noon, Rm 4-370.

The Art of Test-Taking (79) — Mark Altbush,** undergraduate, 10am ... Noon, Rm 66-319.

Predictability (257) — Prof Edward N. Lorenz, Predictability ... Meteorological and Other Processes,** 10-11:30am, Rm 54-1510.

Introduction to SPSS (436) — Suzanne Chen,** senior applicati... analyst, 10:30-Noon, Rm 39-400.

Can You Fool All The People All Of The Time? (319) — David Mar... The True Story of Stereopsis,** 11am-Noon, Rm 4-231.

Ice Action on Marine Structures (283) — Paul C. Xirouchakis,** assi... tant professor, ocean engineering, 11am-Noon, Rm 5-234.

Pragmatists' ESP (64A) — Experiments,** discussion, 12:15-4pm, Rm ... 105.

Climate and History (252) — Prof R.E. Newell,** meteorology; **Tamar... Ledley,** student, meteorology, 1-2pm, Rm 54-1510.

Fusion Energy Tutorials (481) — Prof Lawrence M. Lidsky,** nuclear engineering, **Alternate Fusion Concepts,** 10am. **Peter A. Politzer,** assistant professor, nuclear engineering, **A New Look at Stellarators,** 2pm, Rm 16-212.

What is Mathematics and Why Won't It Go Away? (230) — Prof Alar Toomre,** applied mathematics, **Colliding Galaxies,** 2pm, Rm 2-190.

Physics Potpourri (305) — Prof Bernard Burke, Physics of Music,** 3pm, Rm 4-231.

Seminar on Meditation * — Three parts; Swami Sarvagatananda, Religions Counsellor at MIT; Monk of Ramakrishna Order, Sponsored by the Vedanta Society, **Necessicity of Meditation,** 5pm, Chapel.

Community Meetings

Technology Wives Organization Weekly Exercise Class** — An hour of serious exercise led by Marilyn De Kleer. Every Monday through Jan 22, Exercise Room, 2nd floor, Du Pont Gym, Info: Call Marilyn de Kleer 494-9056.

Superwoman: Ms or Myth* — Dr. Brunetta Wolfamn will lecture. Sponsored by the Women's Forum. Mon. Jan 8 Noon-1pm, Rm 10-340.

Making Bamboo Pipes (169C) — Charlotte Poletti,** Manufacturing of Your Own Bamboo Pipes, recorder-like instruments. Jan 9-30 Tues. & Thurs. 4:30-6pm, Rm 2-147.

Gay Warner Memorial Lecture** — Sponsored by the Women's Forum. The Naked Truth: The Cultural Conditioning of Women Via Advertising. Slide show presented by Jean Kilbourne, Wed, Jan 10, 6pm, Rm 9-150. Refreshments served at 5:30pm, Bldg 9 Lobby.

The Irish Connection** — Sponsored by the Women's League. Judi Hanhisalo, museum lecturer, will discuss selections from the medieval collection as references for comparison with the Early Irish Art. Wed, Jan 10, 11am, Meet at Huntington entrance Museum of Fine Arts, luncheon at Noon. Ticket fee $6 for lecture and luncheon remit to the Women's league, Ms. Mary Pinson by Mon, Jan 8, 5pm, Rn 10-342.

Lowell, Ma., Study of the Nineteenth-Century Industry (340) — Janet M. Corpus,** instructor. Wed, Jan 10, 1-4:30pm, meet at 77 Mass Ave, Bus Stop.

Oceanographic Field Trip (521)** — Crusie on the R/V Edgerton, our oceanographic research vessel, Fri, Jan 12. Call x3-7041 for reservation and information.

Seabrook Week (269)** — Tour of Seabrook Construction site, Fri, Jan 12, tickets purchased at Monday's seminar $2.50, limited space, 8am, Bldg 7.

Social Events

Winter Retreat** — Sponsored by MIT Hillel. Weekend retreat in the country, sports, discussions, good food, good people. Jan 12-14, No. Andover, Mass. Meet at 312 Memorial Drive to leave. Call Hillel for reservations, $25. x3-2982.

Faculty Club*** — Open Monday through Friday: Luncheon served Noon-2pm; Dinner served 5:30-8pm. Happy Hour: Monday through Friday, 4:30-6:30pm, wide variety of drinks $1.05.

Movies

Dollars** — LSC IAP movie. Fri, Jan 5, 7 & 9:30pm, Rm 10-250. Admission: 75¢ w/MIT or Wellesley ID.

Snoopy Come Home** — LSC IAP movie. Sat, Jan 6, 7 & 9:30pm, Rm 10-250. Admission: 75¢ w/MIT or Wellesley ID.

Bedazzled** — LSC IAP movie. Sun, Jan 7, 7 & 9:30pm, Rm 10-250. Admission: 75¢ w/MIT or Wellesley ID.

Student Art Association (550)** — Films about Photography: Mon, Jan 8: A Dream of the Wild Horses; Calder's Circus; Hands of Maria, 5:15pm, Rm 425, Student Center. Refreshments served, free.

Visions of the City (328) — Leo Marx, Richard Leacodk, Robert Hollister,** Introduction to series films: The City, Ralph Steiner and Willard Van Dyke; and Twenty-Four Dollar Island, Robert Flaherty. Mon, Jan 8, 7:30pm, Rm E21-010.

Seabrook Week (269)** — Tues, Jan 9: Nuclear Power in New England by the New England Utilities, 10am. The Last Resort, by The Clamshell Alliance, 10:30am, Safety-Second to None, by the US Department of Energy, 11:30am, Rm 54-100.

Mathematics Film Festival (225)** — Curves of Constant Width, Topology. Tues, Jan 9, Noon, Rm 2-190.

Microwave Optics Film Series (482)** — Microwave Optics: An Introduction; Fresnel Diffraction and Zone Plates. Tues, Jan 9, 12:30pm, Rm NW16-212.

Perspective on Water Resources Development-A Film Series (104)** — Tongpan, a film from Thailand. Tues, Jan 9, 3pm, Rm 48-316.

Student Art Association (550)** — Films about Photography: Tues, Jan 9: Eugene Atget; Mogen Cunningham, Photographer; Notes on the Port of St. Francis, 5:15pm, Rm 425, Student Center. Refreshment served, free.

Action and Animation Under the Dome-Short films by the National Film Board of Canada (450)** — Satellites of the Sun; Bead Game; Sand Castle; Mindscape; Mosaic. Wed, Jan 10, Noon & 5:30pm, Rm 10-500.

Microwave Optics Film Series (482)** — Bragg Reflection Using Microwaves; Scattering Demonstrations Using Microwaves. Wed, Jan 10, 12:30pm, Rm NW16-212.

Rollerball** — LSC IAP movie Wed, Jan 10, 7 & 10pm, Rm 26-100. Admission: 75¢ w/MIT or Wellesley ID.

Vision of the City (328)** — Prof Leo Manx, The Elegiac City. Film: City Lights, Charlie Chaplin. Wed, Jan 10, 7:30pm, Rm E21-010.

German Films at MIT* — Trotta, German with English subtitles, 100 minutes Wed, Jan 10, 8pm, Rm 4-370.

Film Program for IAP-1979-Safety Office (705)** — Fire Safety: Another Man's Family; Your Clothing Can Burn. Thurs, Jan 11, 11-2pm, Rm 3-133.

Microwave Optics Film Series (482)** — Angular Momentum of Circularly Polarized Radiation. Thurs, Jan 11, 12:30pm, Rm NW16-212.

The Fourth Dimension and Computer-Animated Geometry (236)** — Thurs, Jan 11, 3:30-5pm, Rm 2-129.

German Films At MIT** — John Gluckstadt, German with English subtitiles. Thurs, Jan 11, 8pm, Rm 66-110.

Fluid Dynamics Film Festival (269B)** — Eulerian and Lagrangian Description in Fluid Mechanics. Fri, Jan 12, 4pm, Rm NW12-220.

See Japan Today (653)** — Festival in Japan, Steel Industry in Japan. Fri, Jan 12, 4-6pm, Rm 4-370.

Fiddler on the Roof** — LSC IAP movie. Fri, Jan 12, 6:30 & 10pm, Kresge Auditorium. Admission: 75¢ w/MIT or Wellesley ID.

Visions of the City (328)** — Prof Robert Hollister, Opportunity vs Oppression. Film: The Crowd, King Vidor. Fri, Jan 12, 7:30pm, Rm E21-010.

The Sound of Music **——LSC IAP movie. Sat, Jan 13, 6 & 10pm, Rm 26-10. Admission: 75¢ w/MIT or Wellesley ID.

Romeo & Juliet (1968 version)** — LSC IAP movie . Sun, Jan 14, 7 & 10pm, Rm 10-250. Admission: 75¢ w/MIT or Wellesley ID.

Music

Guest Artist Series* — Sponsored by the Music Section, Department of Humanities, co-sponsored with the Goethe Institute of Boston. The Kontarsky Brothers, duo pianists will play Stockhausen's Mantra. Thurs, Jan 11, 8pm, Kresge Auditorium. Free.

Exhibits

Focusing on Faces* — Three painters, as well as a technical staff from Polaroid will be in residence to explore the qualities and potential of the Polaroid Corporation's experimental format camera. The artists in residence: Joel Janowitz, Jan 3-9; Jim Dine, Jan 10-14; Chuck Close, Jan 17-20, Noon-2pm, Hayden Gallery. On Jan 16, the camera will be available for use by students for the Visible Language Workshop, and on Jan 22, to those for the Creative Photography Labortory, public invited to observe from Noon-2pm. Sponsored by the Committee on the Visual Arts. Made possible by a grant from the National Endowment for the Arts and the generous support of the Polaroid Corporation.

Man and Machine: The Development of Scientific Illustration in Renaissance Europe* — The relationship between art and science in medical and mechanical textbook illustrations of the Renaissance will be explored through photo-enlargements and original works. Sponsored by the Committee on the Visual Arts. On view daily Jan 3-24, Hayden Corridor Gallery.

The Graduate Seminar Show* — Student work in film, computer graphics, photography, interactive portraiture, visual poetry and color xerography. On view Jan 9 through Jan 30, Mon-Fri, 9am-10pm; Sat, 10am-6pm; Sun Noon-8pm, Creative Photography Gallery, 120 Mass Ave, Cambridge, Mass.

The Outdoor Collection* — There are many fine pieces of contemporary sculpture displayed on the MIT campus, including works by Alexander Calder, Louise Nevelson, Pablo Picasso, Henry Moore, Tony Smith and Jacques Lipschitz. For information and guides to the campus, call the Information Office, x3-4795.

MIT Science Fiction Society* — Come and visit the world's largest lending science fiction library. Hours posted on door, Rm W20-421.

Department of Architecture Fourth Floor Exhibition Program* — Selected Projects from Fall Studios. On view daily through Feb 8.

Faust and Music* — Music Library, Rm 14E-109. Musical and pictorial representations of the Faust legend.

Strobe Alley* — High speed photographs by Harold E. Edgerton, Institute Professor and Professor of Electrical Measurement, Emeritus. Bldg 4, 4th floor.

MIT Historical Collections* — In house exhibits include antique globes; the Ellsworth A. Wente Collection of motors and meters; rare insturments including compasses, sundials and other measuring devices from the 17th and 18th centuries; Early Alumni and several exhibits of memorabilia and photographs honoring prominent graduates of the Instiute; Charles Stark Draper: Many Facets of the Man; The Compton Years, a photographic essay of the lives of Dr. & Mrs. Karl Taylor Compton. On view daily, 9am-5pm, 265 Mass Ave, 2nd floor, Camb, Mass.

MIT Historical Collections* — Katharine Dexter McCormick, '04; **Vannevar Bush,** '16; Bldg 4 corridor. **The New Technology Exhibit,** 2nd floor balcony of Lobby 7. **Energy Exhibit,** Bldg E40, 1st floor. **Solar Energy,** Bldg 8, main corridor. **Center for Space Research, Astrophysics Exhibit,** main corridor, Bldg 4, **Rogers Building Exhibit,** Bldg 4. **Norbert Wiener,** and **Karl Taylor Compton,** Bldg 4. **Laboratory for Physical Chemistry,** Bldg 6.

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

Theater

Under Milk Wood* — Educational Studies Playhouse Fri & Sat, Jan 5, 6, 8pm, Rm 26-100. Admission $2. For information call x3-4882.

Much Ado About Nothing (613)* — Presented by the Shakespeare Ensemble, Jan 10 and Jan 11, 8pm, Kresge Little Theatre. Tickets $2.50 on sale in Bldg 10 Lobby, Jan 8-11, 11am-5pm, or at the door, reserved by calling x3-2903.

Athletics

Home Schedule* — Mon, Jan 8: MV Basketball, University of Lowell, 8:15pm, **M JV Basketball,** University of Lowell, 6:15pm, **Fri, Jan 12: MV Basketball,** Stevens Institute of Technology, 8pm; **V Hockey,** Clark, 7pm. **Sat, Jan 13: MV Basketball,** Bates, 8:15pm.

Coed Speedball (55)* — Mon, Tues, Wed, Thurs, 3:15-5pm, Briggs Field.

Dance

Dance Technique Workshop (650)** — Mon, Jan 8, 1pm, T-Club Lounge, duPont Gymnasium.

Beginners Israeli Dance (609)** — Sponsored by the MIT Hillel. Intensive Israeli dance instruction. Jan 9, 11, 16, 18, 23, 25, & 30, Noon-1pm, Rm 407, Student Center. Information call 253-2982.

Israeli Folk Dancing for Intermediates (610)** — Ed Kaplan, Hora, Yemenite and Debka style Israeli Dances. Jan 11, 18, 25, 8pm, Rm 407, Student Center.

Dance Workshop** — Workshop director Beth Soll will teach both technique and compostion/improvisation classes. Class meets Mon & Wed, 3-5pm, T-Club Lounge, duPont Gymnasium. For further information call x3-2908.

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**

Send notices for Jan 10 through Jan 21 to Calendar Editor, Rm 5-113, x3-3270 before Noon, Fri, Jan 5.

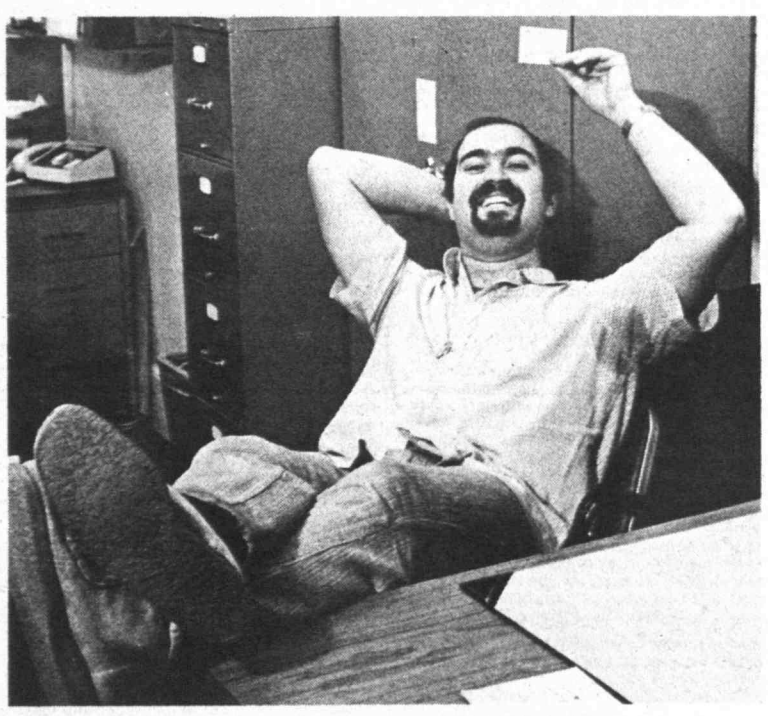
New Turkle Book Wins Accolades

Professor Sherry Turkle, assistant professor of sociology in MIT's Program in Science, Technology and Society, is the author of a new book, *Psychoanalytic Politics: Freud's French Revolution*, published recently by Basic Books, exploring how in the late 1960's psychoanalysis became a dominant intellectual, political, as well as therapeutic doctrine in France, the country which had most strenuously resisted it.

The book includes a chapter on the controversial visit to MIT by Jacques Lacan, the leading French psychoanalytic theorist. Reviews have described it as "psychoanalytic understanding and intellectual history at its best" (*New Republic*) and as "a brilliantly staged fashion show of French emotional and intellectual life" (*New York Times*).

New Subject Deadline

Faculty members who wish to propose new subjects for inclusion in the 1979-80 Courses and Degree Programs issue of the MIT Bulletin must do so by Friday, Jan. 12. Proposals received after this date cannot be acted upon in time to meet catalog printing schedules.



THE WINNAH!—Beaming in anticipation of visiting the beaches at Montego Bay is Joseph Boustani, a graduate student in mechanical engineering from Beirut, Lebanon. Announcement of the winner was deferred because Mr. Boustani, who has no Institute office or telephone, was never home to be told he had won. A letter did the trick and he eagerly appeared to claim his prize. Proceeds from The Trip amounted to $1,587.75 (apparently someone sold a bargain ticket) before the state lottery tax—five per cent— was paid. The Trip is sponsored twice a year by the Quarter Century Club to benefit the Community Service Fund. Mr. Boustani's winning ticket was No. 823.

—Photo by Calvin Campbell

Skating Classes Are Reoffered

A series of five elementary group skating lessons for children ages 6 to 14 will be offered on Saturday mornings beginning January 13, 1979. The original classes were cancelled because of insufficient enrollment (a minimum of 20 children is needed). However, it now appears that there is increased interest and so an attempt will be made to get the classes filled and off the ground. Two classes will be offered:

Beginners - 10:00am - 11:00am (Children who have had limited or no skating experience)

Advanced - 11:00am - 12:00pm (Children who are beyond the beginner level)

Because proper fitting skates are so important in learning skating skills, it is requested that parents pay particular attention to this detail. Skates must be single blade, either hockey or figure skates. It is suggested that a hockey helmet be worn by beginning skaters. All children must wear a hat and gloves.

An Athletic Card is required. There is a $10 instruction fee for each child enrolled in the classes, payable at time of registration. Checks should be made payable to MIT and returned with the registration blank to the Department of Athletics, W32-117, no later than Wednesday, January 10th.

The schedule of classes is as follows: January 13, 27; February 3, 10, 17.

For information regarding possible cancellations because of bad weather, please call the MIT switchboard, 253-1000, after 9:00am. If necessary, makeup sessions will be given on Monday, Feb. 19, Tues., Feb. 20 or Sat., Feb. 24.

CEP Summary

Summary of CEP Meeting on December 21, 1978

The CEP reviewed and discussed the recommended guidelines for the distribution portion of the humanities requirement which had been prepared by the Committee on the Humanities, Arts, and Social Science Requirement.

Professor Rosenblith discussed the spring visit to MIT of the accrediting team from the New England Association of Schools and Colleges, and the self-studies that MIT is undertaking in anticipation of that visit.

The next meeting of the CEP will be on January 18, 1979.

CLASSIFIED ADS X3-3270

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. Persons who have no extensions or who wish to list only home telephones may submit ads by coming in person to the *Tech Talk* office, Rm 5-113, and presenting Institute identification. Ads may be telephoned to x3-3270 or mailed to Rm 5-113. **Dead line is noon Friday before publication.**

For Sale, Etc.

Tw box sprngs, vy clean, $5. Call 862-1935.

Ladies white figure skates, sz 5½. Call Bob Cronin x8-4433 Draper.

Snows 155x12 usd 1 winter, $35 pr. Call Andrew 275-2000 x41.

Astrophysical Journal '73-'76, '78. $25/yr & Astronomical Journal '72-'77, $7/yr. Call Larry x3-3169 or 484-7136.

Pr Hyde All Stars, sz 8, gd cond, best. Call Marty x5-6382 Dorm.

Pr AR4X spkrs, best. Call 245-8260.

Nordica boots, downhill & carry, W sz 11, M sz 10, $40 ea; W figure skates, sz 11, $15, hiking boots, w sz 11, M sz 10, $25 pr. Call Laura x3-5658.

75 8 track tapes w/2 cases, $50; set of headers Ford 390, $35; 4 barrel carb, reblt Ford, $15; pr sprng shock absorbers Ford or Cadillac, $15; AM car radio $10 w/spkrs. Call Charlie or Faith x3-6507.

Complete W ski sys 160cm Fisher skis, Solomon bindings sz 7, Rieker boots, 36" metal poles usd only few times, $100 or best. Call Davis 326-0436.

Sears adjustable stat wg pet fence, $19. Call Lee x3-1782.

Pr nw Pirelli stdd tires, mntd, sz 5.60-14, $80. Call x3-1691.

Pr snows for Pinto w/rims A78-13, $25. Call George x7708 Lincl.

Leaving sell: Sylvania stereo phonograph w/2 sep spkrs, Westinghse fan, Wilson tennis racket, & tw sz matt. Call Bingeng 267-6815.

Kenwood Kx-1030 csst deck, mint cond, top-of-the-line, 3 head deck, clean sounding machine w/-many features, mst see & hear, ask $330. Technics SL-20 trntble w/Empire 2000E-III cart, mint cond, clean sound, mst hear, ask $105. Call Elliot x5-7161 Dorm.

Hockey skates Bauer M sz 8½-9, usd 3 seasons. Call 491-1850.

Csst tape deck, Harmon-Kardon HK-1000, $250. Call 661-9046.

Tw bed & box sprng, $20. Call x3-5980 wkdays.

4 snows mntd on rims which fit all Saabs except '77 & later mods, exc cond; rads, 6 ply, tubeless 165SR15; prefer to sell complete set for $100; wl consider selling a pr or tires only. Call 969-3454 betw 7 & 10pm.

Pioneer stereo receiver, mod SX434, trntble BSR McDonald, spkrs KIN, $160; hair dryer, $15. Call 876-8225, aft 6.

Pr stdd snows, Delta Sure Trac, F78-14, 1 w/rim, gd for 4 yrs, usd 1½ seas, $35, Call 734-5452 eves.

Refrig Admiral side-by-side, $150. Call x3-3017.

Canon 814E, Super 8 movie, zoom 7.5-60 f/1.4 w/-case, remote control, filters, lenshood, exc cond, $250. Call Antonio x3-7187.

Head standard skis, 5'3", exc cond w/bindings, $60. Call Alice x3-4897.

Couch, opens into vy comfortble double bed, $50. Call 492-2392 eves.

Dine tble for 4, glass top w/chrome, $70. Call 864-2771.

Brnd nw Delco AM push button radio, perfect cond, w/connectors for pw & spkrs, $20. Call Bob x7288 Lincl.

Portbl Sanyo radio csstte recorder AM/FM, $40; Lafayette radio AM/FM, $10; golf clubs best, mntd mirror, $5. Call x3-5483 or 876-7551 ask for Lin.

Tw bed w/head board, matt, box spring, $35, exc cond. Call Joanne x8-1811 Draper.

128 ozite charcoal carpet tiles; baby changing tble, baby scale; GM car seat. Call 491-2238.

5 gal aquarium & access, $20; hockey net $7; 110 lb weight set, $10; Jester hood ornament, $5; motor-cyle helmet w/fll face shield, $20; sm AM radio, $3; 90 assorted paperback books suitable for child grad 6-high sch, $9. Call Dave x5893 Lincl.

Travelling? for sale Eur sty 220V blow dryer vy reasonable. Call Louise x3-3821.

Criterion Spkrs, selling for $200/pr, exc cond, pick up & take as is. Call Joe x3-6904.

Tektronics plug-in or type 81 adapter for 580 series oscilloscope. Call Terry x3-1606.

Ski boots M sz 8, '77 mod Raichle, lke nw, usd once. Call Wolf x3-6781.

2 Vencer bkshlvs, 2½x1x6, $60 ea or best; AM/FM Sony digital clock radio, $35 or best. Call Edwin x3-5812 or 244-6675 eves.

Skis, Spaulding Chapral 170's Marker-4 bindings, exc cond, $80. Call Cris 273-7218 days.

Pr Firestone Super Belt tires C78-15 on rims, gd cond, $55 pr. Call x3-2075.

Hotpoint gas range 36" w/storage compartment, 4 burner, white, gd cond, ask $90 firm. Call Mac x444 Lincl.

2 match sngle beds w/matt, box sprng, $70 ea, $120 both; 4 chrs Nordic $10 ea, $35 all, tble, $60; 2 baby strollers, $10 ea; big wall shlvs, $80; wall pictures $5. Call Castro 628-4839 or x3-5317.

Nikon Nikkor 35mm, f/2 len w/L37 UV filter, sun shade, hard case & specs, exc cond, usd twice, $175. Call x3-5890.

Moving boxes cheap. Call Bruce x3-5570.

Sectional sofa $100; match 3 lamp set, $100. Call Lynn x3-5119.

Typewriter, IBM Select, mod 713, elite, 11" carriage, $450. Call 262-2952 6-9pm.

Westinghse port dishwasher, $35. Call x3-7850.

DEC LS11 printer, 132 CPS, interfacing Unibus; 10 nw RK-05 disc packs; PDP-11 spc sys unit back plain ext; MF-11 Unibus memo back plain; Unibus cables, nw HP-22, Precision sport arch welders. Call Mark 494-8888.

Bauer hockey skates M sz 6, $15; Koflach ski boots, ladies sz 7, $25; Cubco A step-in bindings, $15; both exc cond. Call 729-5837.

Color TV 19" 2 yrs old, $120; loveseat sofa-bed, $20; black leather armchr, $22; green carpet $20; 3 matchstick curtains 3'x6' $10; carpet sweeper, $5 formica dining tble w/4 chrs, $20; Call Ben x3-6705 or 536-2863.

Mst sell, 2 studio couches, matchin pr, vy gd cond, $40. Call x3-1392 or x3-7147 Kate.

Color TV w/tble; clock/radio; dine tble w/6 chrs; crib & matt; dresser; qu sz bed & tble; ss cookware; high chr, etc. Call 494-8461.

Vehicles

'67 Buick Special Wg, 112K, 1 owner, not pretty but reliable trans, 6 tires, incl mntd snows. Call Jack x8-2471 Draper.

'69 Van-Ford Cateau Club, 8 pass, 302 + auto, 4 nw tires + 2 stdd snows, nw batt, more, gd cond full write up avail $1250. Call Ralph x3-2321.

'70 Buick Lasaba, 4 dr, nw rads, no rust, A/C, all power opt, stereo tape FM, cruise control, $850 or best. Call Ed x7695 Lincl or 275-9265.

'70Gremlin, $200 or best. Call Hank x8-3977 Draper.

'70 Gemlin, nw tires, batt, exh, gd eng, no rust, $400 or best. Call x3-1588 or 494-8348.

'70 VW Fastback, '72 eng, runs ok, bdy nds work, must sell soon, best. Call Holly x3-7786.

'71 Mercury Montego, exc cond, 4 dr, sedan, PS & PB, auto, A/C, radio, r/defrost, white walls rads + snows, vnyl roof, $750. Call x3-1737.

'72 240Z Datsun exc shape, 53K, $2500. Call 862-5043 eves.

'72 Dodge Dart, std, 83 K, exc cond, nw brkes, 25 mpg, $1350 or best. Call 965-3739.

'73 Pinto Station Wg, Calif reg no rust, exc cond, $1650. Call Margaret x3-4862.

'73 Super Beetle, exc cond & bdy, clean, 86K, ask $1300, moving to Ca. Call x3-4089.

'74 Mustang II, exc cond, 4 spd stand trans, 4 cyl, nw tires, exc service record, bronze w/tan interior. Call 426-7769 or 395-7265.

'74 VW 412, stat wg, ht r/window, auto, A/C, radio, gd tires, gd shape, $2500 nego. Call 899-1025.

'75 Mercury Bobcat, runabout, 3 drs, 36K, 4 cyl, stand, nw mfflr, nw batt, exc cond in & out. $2000. Call Ali x3-4242.

'76 Buick Skylark, exc cond, A/C, stereo nw brks, nw batt, 38K, ask $3390 or best. Call 646-4241.

'76 Ford Torino, 4 dr, 8 cyl, A/C, PS, AM/FM stereo tape deck, vnyl top, rads, snows, theft alarm, exc cond, $3300 or best, Call Tony 484-4237 aft 5 pm.

Housing

Brkline 2 BR, LR, DR, $220/mo incl ht, conv to stores & T, avail Jan 1. Call Peter Kinder 232-8962.

Bkrkline 7 rm apt, htd, 1½ B, 3BR, elect K, rr pch & park, nr MIT, stores, T, no pets. Call x3-2527.

Brighton sublet Feb 1, 2 BR, $290/mo incl ht, nr T. Call Su-Ray x3-3703 or 787-2910 eve.

Camb, Eric St, br nw twnhse, 3BR, 2½B, D&D, washr & dryer, priv park, $625/mo. Call 876-6108 eves or x3-7966.

Cohasset back of Victorian hse upstairs & down, furn or unfurn, 2BR, LR, eat-in K, screen porch, on bus line, $350/mo + util, no-smokers. Call x8-4537 or 383-1520.

Sublet 1Br apt avail, Eastgate, Jan 1-15. Call x3-4165.

Yr round chalet, on 1.75 wood acres, on gravel rd, 500 ft from rte 116, White Mtns, 1½ stories, 3BR, LR w/free standing frpl, B, K, sun deck, furn, built well, 25.5. Call Eva x3-5742.

South End, lux 1Br apt, w/frpl, skylite, exposed brick wall, D&D K, ww, avail Feb 1, $415/mo + util. Call Martha x3-3601.

Winchester, 6 rms, mod bath & K, park, 2nd fl, $325 unht, adults pref, sec deposit req. Call x3-6147 or 729-6443 ask for Lorraine.

Lost and Found

Lost: silver 3 prong pearl earring. Call please x3-2916.

Found: clip-on earring, near Alumni Swimming pool. Call Bob D x3-2701.

Wanted

Visiting foreign scientist sks 2 BR or lg 1 BR apt, furn, March-May, nr T to MIT, max $550/mo incl util. Call Ginny x3-3639.

Pro male in his 30's, seeking hsesitting situation or 3Br apt, in general Bos area or suburbs, references available. Call Richard 924-1897.

Lg garage for a car in the winter. Call Pat 261-1391.

Auto radio AM/FM csste or AM/FM. Call x3-3185.

TV set. Call 864-1999 eves.

MIT professor plan sab wishes to trade hse at Berkeley from 9/79-5/80, Berkeley loc desired, offering 4 BR comtemp, 3B, on wood lot in Bedford. Call x3-7129 or 275-9397.

1 or2 riders wntd to shr driving & expenses to eastern Florida, lv about Jan 2nd return 3 wks dates flex. Call Richard x3-4107 or 628-3192 eves.

Rm, board & salary for live in person & part time help w/children, G 3 yrs; B 9 mos, start Jan '79, French family, prv hse betw Harv & Porter Sq, reference prefer. Call Ripka 864-5066.

Pool partner wntd to keep me honest and swimming, lets make a schedule and stick to it. Call Jay x3-7090.

Wanted usd double bed, desk & dine set 4-6 chrs. Call Bijlani x3-5315 or x3-3131.

Roommates

M rmmate to live in bsmt of a duplex in Woburn, 1 mi from Rte 128, w/4 lg windows, ww, prv fl B, prv entrance, shr K, $225 + elect & phone. Call 933-2683 aft 6pm or wkend .

Watertown, nd 3rd rmmate, M or F, rent $135/mo no util, nd someone 1/1 or before, 5 mi from MIT on T, walk distance to shops. Call Barbara x3-5345.

M rmmate to shr 2BR off Central Sq, furn, avail Jan 15, $100 + util, grad student pref, non-smoker. Call Mike x3-6547 or 492-6035.

Mature W to shr lg 2BR Allston apt, quiet, sun, & conv to T to Harv & Central sq & Boston College greenline. 20 min walk to Harv & Central sq, $125/mo incl ht, avail mid-Jan or Feb 1, lease renewable in Sept. Call Laurie or Lisa 782-1280.

F rmmate wntd Brkline, Collidge Corner, late 20's to earl 30's to shr lg sun 2BR apt, w/pro W, D&D & other extras, no pets, avail Feb 1, $175/mo incl ht & hw. Call x3-1552 or 731-1869.

Non-smoke rmmate nd for Mass Ave apt nr Harv Sq, 2BR, $130/mo incl ht & hw, start Feb 1. Contact Skip or Dave 354-2781.

Carpools

Carpool from Nashua NH, work, 9-5. Call Judy x3-7005.

Ride nd Whitman, MIT, 9-5pm. Call Lee x3-3991.

Carpool Medfield area to Harv Sq/Fresh Pond, shr drv, several times/wk. Call Brian 491-1850 x734.

Miscellaneous

Retired accountant prepares income taxes by computer & if nd be can maintain your records at low cost. Call 332-6004 or 731-6838.

Exc classical piano teacher, beginners welcome. Call Judith 566-1584 eves.

Typing, theses, academic papers, ms, IBM Select. Call M.J. 282-9270.

Tech typist spec in bio sciences, quality. Call Judy x3-7002.

Pro typing done. Call x3-3380.

Exp sec wl do theses, MS, reports, fast & accurate, IBM Self Correct. Call x3-4528.

Wl type, anythng, tech, etc, IBM Correct Select, reas rates. Virginia 926-8894.

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 the Special Assistant for Women and Work (10-215) and Minority Affairs (10-211), and in the Personnel Office, (E19-239).

Information on openings at Lincoln Laboratory (Lexington, MA.) is available in the Personnel Office.

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 — Tertia Perkins)	
Virginia Bishop	*3-1591*
Richard Cerrato	*3-4266*
Ken Hewitt	*3-4267*
(Secretary — Paulette Chiles)	
Sally Hansen	*3-4275*
Laurence Milan	*3-2928*
kathleen Rick	*3-4269*
(Secretary —Jenni Leibman)	

Admin. Staff, Opeations Manger, in the food Service to assist in all aspects of the food service, with major emphasis on unit operations; assist in personnel selection; develop menu structure for contract and case unit operations; evaluate new and currently used products; assist in preparing unit budgets; identify and recommend revisions in unit operational procedures. A Bachelor's degree, or equivalent, plus at least 5 years' administrative experience required. A strong food background, preferable with a commercial food operation also necessary, as well as merchandising ability. A78-84 (1/3)

Admin. Staff, Data Base Administrator, in Information Processing Services Operations to install data base systems; program access modules in the data base language and maintain module; coordinate all requests for access to and utilization of data bases. Position requires at least 2 years' experience in OS and a high level programming language, preferable PL1, and familiarity with time sharing systems and applications. A78-85 (1/3)

Admin. Staff, Safety Consultant, in the Safety Office to assit in the development of safety programs to conform with federal, state, and local regulations, and implement such programs for accident prevention at the Institute. Responsibility will include assessing safety recommendations about chemical/electrical experiments, construction/renovation projects; perform safety audits/surveys; secure legal permits as required; conduct accident investigations and evaluate new safety-oriented projects. Bachelor's degree in a technical field, or equivalent combination of education and experience required, as well as 3 to 5 years experience in a university, hospital or industrial safety program and a knowlege of occupational safety laws. Certification as a safety professional is desirable. A78-87 (1/3)

Academic Staff, Librarian, part-time, in the Barker Engineering Library to collect and disseminate information re: mineral resources collections; develop subject lists and guides; publish a newletter; identify collection gaps; recommend materials for purchase. M.L.S. degree required. Public service experience in an academic library, experience with scientific and technical literature and ability to work independently also required. 20-25 hr./wk. C78-39 (1/3)

Academic Staff, Associate Director, in the Sloan School to assit in the Management of 2 executive programs; participate in evaluation of courses; assist with administrative work load. Advanced degree required. Good interpersonal and communications skills and ability to teach graduate level seminars required. C78-37 (1/3)

Academic Staff, Asst. Rotch Librarian for Collections Coordination, to be responsible for coordination with other library units, for collection development in selected areas of architecture, art history and urban planning; supervise searcher-typists, manage limited access collections; provide reference service; catalogue pamphlets in subject areas. An M.L.S. from an accredited library school, knowledge of architectural history or planning at graduate level, and professional experience with collections in similar subject library required. Language skills in German or Italian, as well as supervisory and bibliographic skills also necessary. C78-38 (1/3)

Admin. Staff, Industrial Liaison Officer, in the Industrial Liason Program to provide interface between MIT and member firms; solict new companies. Bachelor's and Master's degree required, including one degree in chemical engineering, materials science or mechanical engineering. Three years industrial experience also necessary. Excellent interpersonal skills and indepth knowledge of MIT also required. MIT degree preferred. A78-83 (12/13)

Sponsored Research Staff, Theoretical Plasma Physicist, in the Plasma Fusion Center to do research related to the physics of intense charged particle beams including intense microwave genration and the equilibrium and stability properties of beam-plasma systems and field-reversed configurations. A PhD in Theoretical Physics and background in plasma kinetic theory required. Some postdoctoral experience and skill in numerical analysis are desirable. R78-305 (1/3)

Sponsored Research Staff, in the Laboratory for Information and Decision Systems to participate in research programs in control system design, numerical analysis, estimation theory and large scale systems applications. A solid foundation in one or more of the indicated areas and a minimum of a Master's degree required. R78-306 R78-307, R78-308 (1/3)

Sponsored Research Staff, Theoretical Plasma Physicist, in the National Magnet Laboratory to formualte and solve theoretical problems in plasma physics related to tokamak confinement in the Alcator A and Alcator C experiment. Postion requires a PhD in theoretical physics and a background in resistive MHD stability and plasma kinetic theory. Some postdoctoral expeience and skill in numerical analysis desirable. R78-309 (1/3)

Sponsored Research Staff, Statistican/Econometrician, in the Center for Computational Research in Economics and Mangement Science to work on an interuniversity research project studying statistical methods for evaluating model reliability where a model may be a single regression equation or system of equations. Will conduct independent research as well as coordinate interuniversity activities, and participate in programming algorithms or procedures. A Master's degree or PhD in statistics or econometrics and experience with application programming required. R78-310 (1/3)

Sponsored Research Staff, Computer Programmer, temporary, in the Energy Laboratory to work as part of a team to develop an advanced computing system for simualtion and design of fossil energy processes: design and code computer programs; debug and test programs; document programs and subsystems; implement programs for formatting reports of cost estimation and economic analysis; develop specialized assembly language programs. Bachelor's degree in science or engineering required. At least 1 year experience in technical computer programming and proficiency in FORTRAN and IBM operating systems also required. Temporary throught 8/79. R78-316 (1/3)

Sponsored Research Staff, in the Laboratory of Computer Science to assist in development of new interfaces to the symbolic manipulation system. A strong background in computational physics is required, as well as a working knowledge of LISP and a PhD in the natural sciences and consulting experience. R78-313. (1/3)

Sponsored Research Staff, in the Laboratory for Computer Science, Domain Specific Systems Research Group, to do research related to desgin and implementation of operating systems, and of compilers. A systems programming background is required as well as operationg systems experience, preferable with UNIX. Graduate degree is preferred. R78-311, R78-312 (1/3)

Sponsored Research Staff, temporary, in Biology to do research pertaining to genetic and biochemistry techniques used to study control of antibody synthesis in tissue culture cells as a model for the regulation-expression of cellular gene. Posiotion requires a Bachelor's degree in Biology, Biochemistry, or a related area and laboratory experience in the handling and surgical knowledge of mice and analysis of immune functions. Knowledge of immunological technology, sterile techniques, cloning of cell lines and use of cell counter and radioactive counters also necessary. R78-314 (1/3)

Sponsored Research Staff, Experimental Plasma Physicist, in the National Magnet Laboratory to conceive and perform complex plasma physics experiments on high field tokamak thermonuclear research devices. Will design and direct assembly of plasma diagnostic experiments to be used on the tokamak; interpret results of diagnostic experiments in terms of plasma parameters in order to optimize machine operation. A PhD. in experimental plasma physics and at least 3 years' experience in tokamak research required. R78-315 (1/3)

Sponsored Research Staff, Systems Programmer, in the Sloan School of Management to work a large interactive system for econometric and statistical analysis called TROLL. Responsibility will include maintaining and enhancing the TROLL system. Familiarity with IBM 370 Assembler, Fortran and a structured language, such as PL/1 is required. R78-296 (12/13)

Sponsored Research Staff, Research Analyst, in the Sloan School of Management to develop statistical and systems analytic methods for analysis of econometric models; implement this system using TROLL functions and Fortran. Position requires knowledge of Fortran, TROLL, systems theory and econometrics. R78-297 (12/13)

Sponsored Research Staff, Systems Analyst/Programmer in the Artifical Intelligence Laboratory to develop and maintain PDP11 software supporting exotic peripherals; determine nature of and localize hardware failures; assist researchers in development of system software interfaces, and perform picture input and output operations for computer vision group. Experience with PDP11 Assembly Language, with PDP11 Assembly Language, with DOS operating system, knowledge of PDP11 architecture and UNIBUS, of process control computer methods and photographic techniques are required. Interest in computer vision and in collaborating with researchers is also necessary. R78-299 (12/13)

Jr. Programmer V in the Artifical Intelligence Laboratory LISP Machine Group to develop and maintain software for an experimental testbed of personal computers. Experience in maintenance of large LISP systems and knowledge of networks helpful. Programming experience on the ITS system helpful. B78-775 (1/3)

Technical Asst. III/IV, temporary, in the Operations Research Center to assist project evaluation of social programs, design, mail and analyze questionnaires; provide genral support services; edit material. Bachelor's degree preferred. Temporary through June 1979, 40 hrs. /wk, B78-784 (1/3)

Secretary V to Department Head and Administrative Officer in Earth and Planetary Sciences to type various material including manuscripts assist visitors to headquarters; handle matters relate to general department administration and general secretarial duties for supervisor's research staff; supervise part-time clerk. Excellent secretarial skills including ability to transcribe machine dictation, to recognize priorities, and to work effectively with others required. B78-789 (1/3)

Admin. Asst. V in the Plama Fusion Center to assist with general administrative and financial functions: monitor financial aspects of academic and research programs; prepare related budgets; type correspondence; handle other related duties as necessary. Written and spoken communication skill, ability to exercise judgment and to work independently required. Experience in payroll, accounting, purchasing and personnel procedures desirable. B78-782 (1/3)

Admin. Asst. V in the Nuclear Engineering Dept. to prepare payroll reports; monitor academic and research programs; prepare budgets; type correspondence; handle a variety of tasks associated with records and information. Good interpersonal, communications and typing skills and ability to make independent judgment required. Experience in payrolls, accounting, purchasing and personnel procedures also required. B78-755 (12/13)

Secretary IV to a Political Science Faculty member to type correspondence, manuscripts, course material; arrange travel and meetings; file; assist students, handle some administrative details of projects. Some college training as well as secretarial school or secretarial experience required. Command of the English Language also necessary. B78-771 (1/3)

Secretary IV in the Undergraduate Physics Office to assist with arrangements for several physics courses: type materials; maintain records interact with faculty and students. Will also maintain graduate school information file and bulletin boards; perform variety of other duties related to administration of academic programs. Good general secretarial skills are required as well as flexibility for changing work assignments. Technical typing skill is helpful, but selected applicant can be trained. B78-776 (1/3)

Secretary IV (Word Processor), in the Sloan School of Management System Dynamics Group, to type correspondence, manuscripts, proposals and class materials from draft and/or dictation equipment; edit as necessary, answer phone, arrange for printing, travel, audio-visual rentals, etc., some minor research in subject matter. Good organizational and typing skills, capacity for detailed work and problem solving, and good command of English grammar required. Ability to work independently and to take initiative also required. Candidate must be flexible for some overtime work and have at least 2 years applicable experience. Will be trained for word processing equipment. Non-smoking office. B78-788 (1/3)

Secreyary IV to two Economics faculty members to type and do minor editing of class materials and manuscripts, as well as correspondence; arrange meetings and travel; maintain files; assist students. Will also answer phones for two additonal faculty members. Good typing and English grammar skills required, as well as ability to work independently. B78-780 (1/3)

Secretary IV to 3 Ocean Engineering faculty members: will assist in coordinating research activiites and in editing reports; arrange travel and appointments; answer phones; monitor research accounts; maintain related files. May compose routine correspondences. Organization skill, ability to set proiorities required as well as the ability to type technical material. MIT experience preferred. B78-781 (1/3)

Secretary IV to Manager of Sloan Automotive Engine Laboratory to type course material and correspondence from verbal instruction, written draft or machine dictation; maintain files and supplies; arrange seminars and other activities. Position involves substantial interaction with faculty, staff, and students, and may include activiities related to projects such as library research, report editing, etc. Excellent typing, ability to organize work and to exercise initiative required. At least 2 years secretarial experience also required. B78-562 (1/3)

Secreatry IV in the Laboratory for Computer Science to work with 2 faculty members: type technical and general material on typewriter and computer; maintain student records and other files; arrange travel and meetings. Genral secretarial skills are required, as well as the ability to learn computer text editing and word processing systems. B78-786 (1/3)

Secretary IV to assist Political Science Administrative Officer: type correspondence, financial reports, prepare payroll reports; review accounting records for accuracy; maintain alumni records; arrange meetings and travel; operate computerized editing equipment. College training or equivalent, excellent administrative and secretarial skills required, as well as at least 3 years applicable experience. Familiarity with MIT accounting systems helpful. B78-695

Secretary IV, in Mathematics to assist a faculty group: type papers with mathematical content, as well as course material and general correspondence; arrange travel; maintain files and records. Excellent typing skill, ability to organize work load independently required. B78-757 (12/13)

Secretary IV, to the Executive Officer in the Chemistry Dept. to assist with various administrative processes: key and parking space distribution; room reservations; type forms, correspondence and other material including some manuscript typing for faculty; maintain files. Good typing skills required. B78-758 (12/13)

Secretary III/IV to Meteorology faculty member and research group to type correspondence and manuscripts (some technical content); arrange appointments and travel; monitor accounts; maintain a small departmental library. Applicants should be able to work with minimal supervision, and have excellent typing and orgainzation skill. Some college training preferred. B78-779 (1/3)

Secretary III, part-time, temporary to assist Admin. Asst. in Earth and Planetary Sciences: type correspondence and manuscripts; assist with reprint mailings, answering phones, ordering supplies, running errands, etc. as necessary. Excellent typing skills (from handwritten drafts and dictaphone) with some knowledge of technical typing required, as well as abilty to switch from one project to another rapidly. Congenial manner and ability to work under supervision necessary. Ocassional overtime may be required. Postion is from 1/79 through 6/79 with possibilty for extension. 17.5 hrs./wk. B78-766 (1/3)

Lib Gen. Asst. III in the Libraries Catalogue Dept. to type catalog entries onto OCLC terminal to prepare catalogue cards; perform clerical aspects of reclassification and cataloguing; edit on-line and off-line; type reference cards; prepare charge cards; perform various clerical duties as necessary. High school graduation or equivalent, typing skill, ability to interpret complex directions for input on OCLC 100 terminal required. B78-777 (1/3)

Library Asst. III, Technical Processing, in Dewey Library to process all monographs; assist in card catalogue manitenance (changes, corrections); file and make revisions in author, title, subject catalogue and shelf list; supervise student employees, perform varied related duties as necessary, including coverage at public sevice desks. Library experience, knowledge of the organization of a card catalog and of card filing rules required. Must be able to perform a wide vaiety of tasks with a minimum of supervision. B78-769 (1/3)

Library Asst. III, part-time, temporary, in the Library's Catalogue Section to compose serial entries in MIT master files with corresponding entires in the DDC and LC catalogues to identify holdings and entry conflicts, etc; participation in over-all resoultion of conflicts; file in catalogue. Ability to interpret complex records and to work with a minimum of supervision, neatness, accuracy and capacity for detail required. High school graduation also required. Library experience preferred. 18 hrs./wk. temporary through 6/79 B78-783 (1/3)

Accounting Clerk III/IV in the Energy Laboratory to assist 2 accountants in varied duties; process requisitions purchase orders, invoices, expense

vouchers; maintain various files and records. High school graduation plus 2 years clerical experience, accuracy with figures required. Some MIT experience preferred. B78-763 (1/3)

Payroll Clerk III/IV in the Comptroller's Accounting Office to review and log all types of general file manintenance; research telephone and counter inquiries concerning discrepancies; provide explanations or make corrections as necessary; calculate and prepare adjustment and special checks; review forms for errors, discrepancies and completeness; notify administrative officers of any discrepancies. At least 2 years office experience required. Good clerical and interpersonal skills and ability to handle detailed work also required. B78-760 (1/3)

Nurse's Aide III in the Medical Dept. to maintain supplies for patient care and to assist nurses and physicians in delivering patient care; order supplies; stock examining rooms and other patient care facilities; transport patients on wheelchairs or stretchers; clean and sterilize/autoclave equipment; chaperone routine examinations. Abilty to work effectively with patients and staff required. Previous experience in a medical setting, especially involvement in supply and equipment, is preferred. 37.5 hrs./wk. B78-761 (1/3)

Clerk Typist III in the Energy Laboratory to a large research group, will type technical reports and general correspondence using word processing equipment. answer phones; xerox; file; handle a variety of other general office procedures. Excellent typing and general clerical skills required. B78-762 (1/3)

Clerk III, in the Registrar's Office to work with the Undergraduate Records section: transcribe grades, check computer input/output. Responsible for dat entry via CRT visual input teriminal. (Approximately 1200 records need to be kept up to date.)Answer phone inquiries concerning grades and general information, and assist others in office as necessary. Good typing skills with emphasis on accuracy required. Some college experience and an interest in detailed work is desirable. B78-767 (1/3)

Communications Console Operator III, in Physical Plant Admin. Services to maintain communications with Work Control Center and others using telephones, radio pages, radio tranceivers and other means including some personal contact. Respond to alarms and emergencies by notifying proper people. Perform incidental clerical work as necessary; process all calls to and from MIT; assist callers in transferring calls and in processing of conference calls. High school graduate with command of English language skills required. Operationg experience in an enviroment similiar to Physical Plant and/or Telecommunications desirable. Ability to react properly in an emergency required. Applicant must be at least 18 yrs. of age. Position involves weekend shifts. B78-765 (1/3)

Sr. Clerk III in the Comptrollers Accounting Office to control and maintain the journal voucher system; maintain batch controls and edit input against chart of accounts; create tapes for computer processing; assist in statement distribution and with files. Facility with figures required and familiarity with keypunch and computer printouts helpful. B78-768 (1/3)

Hourly, Electrician, in Physical Plant to install and maintain all types of electrical equipment and systems. Will work from blueprints, verbal instruction or sketches. A minimum of 5 years applicable experience and Mass. State license required. Must be able to work all shifts and an irregular schedule. Some electronic experience is desirable. H78-201 (12/13)

Hourly, Machinist A, in the Nuclear Reactor Laboratory to set up and operate all commonly used machine tools; make tools; jigs and fixtures as may be required. Will handle and be exposed to radioactive materials. Postion requires at least 5 years applicable experience as machinist. H78-197 (12/13)

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

ADMINISTRATIVE STAFF:
A77-3, Admin. Staff, Systems Programmer, Information Processing Services (2/16)
A78-38, Admin. Staff, Systems Programmer, Information Processing Service (8/30)
A78-56, Admin. Staff, Asst. Director, Resource Planning & Devel. (10/25)
A78-67, Admin. Staff, Director of Systems Planning and Devel., Information Processing Services (10/4)
Asst. Director, Consortium on Finacing Higher Education (10/18)
A78-70, Admin. Staff, Managing Editor, Technology Review (Alumni Assoc.) (10/25)
A78-71, Admin. Staff, Budget Officer, Fiscal Planning & Budget Office (11/8)
A78-79, Admin. Staff, Asst. to Director of Administration, Plasma Fusion Center (12/6)
A78-80, Admin. Staff, Applications Guidance Coordinator, Office of FAcilities Management Systems. (12/6)
A78-81, Admin. Staff, Programmer Analyst, Information Processing Services (12/13)

BIWEEKLY STAFF:
B77-655, Sec. IV, Chemical Engineering (10/25)
B78-154, Sec. V, Lab for Nuclear Science (11/15)
B78-178, Sec. IV, Provost's Office, Upward Bound Program (10/11)
B78-185, Account Rep. V, Administrative Computer Services (4/26)
B78-275, Sec IV, Harvard/MIT Division of Health Sciences & Technology (6/8)
B78-306, Sec. IV, Reserach Lab of Electronics (7/12)
B78-343, Sec. IV, Energy Lab (11/15)
B78-511, Sec. IV, Sloan School (9/13)
B78-518, Tech, Typist IV/Magcard Operator, Economics (9/13)
B78-523, Tech, Asst. V, Alumni Association (9/13)
B78-570, Sec. IV, Civil Engineering (9/27)
B78-573, Editorial Sec. IV, Matrials Science & Engineering (9/27)
B78-589, Sec. IV, Earth & Planetary Science (11/8)
B78-598, Sec. IV, Research Lab of Electroncis (10/4)
B78-617, Sr. Clerk III, Admissions (10/11)
B78-658, Sec IV, Lab for Nuclear Science (11/8)
B78-663, Sec. III/IV, Electrical Engineering & Computer Science (11/8)
B78-666, Sec. IV, Nutrition & Food Science (12/13)
B78-674, Sec. IV, Development Office (11/15)
B78-677, Edit. Asst. IV, MIT Press (11/15)
B78-678, Sec. IV, Chemistry (11/15)
B78-681, Sec. III/IV, Energy Lab (12/6)
B78-687, Sec. IV, part-time, Economics (11/29)
B78-693, Sec. IV, Center for Policy Alternatives (11/29)
B78-696, Sec. IV, Political Science (11/29)
B78-697, Sec. IV, Sloan School (11/29)
B78-698, Admin. Asst. V, Sloan School (11/15)
B78-705, Secretary IV, Information Processing Services (12/6)
B78-711, Editorial Sec. IV, Graphic Arts (12/6)
B78-712, Technical Illustrator IV, Research Lab of Electronics (12/6)
B78-714, Secretary/Receptionist III/IV, Physics Dept. (12/6)
B78-717, Sr. Secretary V, Sloan School Fellows Program (12/6)
B78-724, Secretary V, News Office (12/6)
B78-740, Admin. Asst. V, Sloan School (12/13)
B78-742, Sec. IV, Math (12/13)
B78-744, Sec. III/IV, Civil Engineering Headquarters (12/13)
B78-750, Admin. Asst. V, Development Office (12/13)

HOURLY STAFF:
H77-89, HVAC Designer/Draftsperson, Physical Plant (10/5)
H78-106, Sr. Technician (Electronic), National Magnet Lab (8/16)
H78-183, Mechanic A, Lab for Nuclear Science (12/6)
H78-184, Technician A, Lab for Nuclear Science (12/6)
H78-185, Technician A (Electronic), Lab for Nuclear Science (12/6)

ACADEMIC STAFF:
C78-6, Acad. Staff, Asst. Eng. Librarian, Engineering Library (4/5)
C78-17, Acad. Staff, Research Associate (7/12)
C78-23, Acad. Staff, Marketing Representative, Medical Dept. (8/30)
C78-26, Acad. Staff, Librarian, Head, OCLC/LC Cataloguing Section, Libraries (9/20)
C78-29, Acad. Staff, Applications Programmer, Electrical Engineering (10/11)
C78-32, Acad. Staff, Associate Dewey Librarian, Dewey Library (11/8)
C78-33, Acad. Staff, Records Management Officer (11/1)
C78-34, Acad. Staff, Librarian, Libraries (11/29)
C78-36, Acad. Staff, Manager, Finacial Information & Planning (12/13)

EXEMPT STAFF:
E77-56, Exempt, Estimator/Scheduler Physical Plant (11/9)
E78-35, Exempt, Tech. Supervisor, Physical Plant/Telecommunications (8/16)
E78-36, Exempt, Principal Operator, Physical Plant (8/16)
E78-58, Exempt, Technical Asst., Alumni Association (11/1)
E78-61, Exempt, Asst. Accountant, Lab for Nuclear Science (11/8)
E78-65, Exempt, Draftsperson, Planning (11/15)
E78-68, Exempt, Nurse, Medical (12/13)

SPONSORED RESEARCH STAFF:
R77-53, Spons. Res. Staff, Res. Lab of Electronics (4/12)
R77-91, Spons. Res. Staff, Sr. Accelerator Physicist, Lab for Nuclear Science (5/18)
R77-137, Spons. Res. Staff, Experimental Physicist, Bates Linear Accel. (8/31)
R77-161, Spons. Res. Staff, Elec. Engineer, Mechanical Engineering (9/7)
R77-201, Spons. Res. Staff, Prog./Data Analyst, Earth & Planetary Science (10/26)
R77-211, Spons. Res. Staff, Computer Systems Design, Lab for Computer Science (12/7)
R77-212, Spons. Res. Staff, Computer Software Designer, Lab for Computer Science (12/7)
R77-228, Spons. Res. Staff, Plasma Physicist, Res. Lab of Electronics (1/4)
R78-55, Spons. Res. Staff, Staff Scientist, Arteriosclerosis Center (4/5)
R78-58, Spons. Res. STaff, National Magnet Lab (4/12)
R78-60, Spons. Res. Staff, Combustion Engineer, Energy Lab (4/12)
R78-64, Spons. Res. Staff, Earth & Planetary Science (4/12)
R78-70, Spons. Res. Staff, Energy Analyst, Energy Lab (4/12)
R78-83, Spons. Res. Staff, Lab for Nuclear Science (4/19)
R78-85, Spons. Res. Staff, Technical Asst., Nutrition & Food Science (4/19)
R78-93, Spons. Res. Staff, Res. Engineer, Civil Engineering (5/10)
R78-102, Spons. Res. Staff, Lab for Nuclear Science (5/31)
R78-103, Spons. Res. Staff, Lab for Nuclear Science (5/31)
R78-104, Spons. Res. Staff, Physicist, Temp., Lab for Nuclear Science (6/7)
R78-105, Spons. Res. Staff, Temp, Lab for Nuclear Science (5/31)
R78-113, Spons. Res. Staff, Sloan School of Management (7/12)
R78-117, Spons. Res. Staff, Temp., Economics (7/12)
R78-119, Spons. Res. Staff, Theoretical Plasma Physicist, National Magnet Lab (7/12)
R78-135, Spons. Res. Staff, Research Lab of Electronics (7/26)
R78-136, Spons. Res. Staff, Lab for Computer Science (8/16)
R78-145, Spons. Res. Staff, Electronics Engineer, Lab for Computer Science (8/16)
R78-146, Spons. Res. Staff, Electrical Engineer, Bates Linear Accelerator (8/16)
R78-147, Spons. Res. Staff, Systems Programmer, Lab for Nuclear Science (8/16)
R78-154, Spons. Res. Staff, Program Director, Neurosciences Research Program (8/30)
R78-160, Spons. Res. Staff, Programmer, Center for Space Research (8/30)
R78-162, Spons. Res. Staff, Systems/Scientific Programmer, National Magnet Lab (8/30)
R78-166, Spons. Res. Staff, Research Analyst, Center for Policy Alternatives (8/30)
R78-168, Spons. Res. Staff, Programmer, Center for Space Research (8/30)
R78-170, Spons. Res. Staff, Programmer, Center for Space Research (8/30)
R78-184, Spons. Res. Staff, Research Engineer, Artificial Intelligence Lab (9/13)
R78-189, Spons. Res. Staff, Radiochemist, Nuclear Reactor Lab (9/13)
R78-197, Spons. Res. Staff, Research Engineer Energy Lab (9/13)
R78-206, Spons. Res. Staff, Tech Asst., Arteriosclerosis Center (9/27)
R78-207, Spons. Res. Staff, Applied Magnetism Research, National Magnet Lab (9/27)
R78-208, Spons. Res. Staff, Postdoctoral Research, Nuclear Materials, Nuclear Reactor (9/27)
R78-209, Spons. Res. Staff, Postdoctoral Research, Nuclear Materials, Nuclear Reactor (9/27)
R78-211, Spons. Res. Staff,Postdoctoral Scientist, Physics, Center for Space Research. (10/4)
R78-212, Spons. Res. Staff, Physics, Center for Space Research (10/4)
R78-217, Spons. Res. Staff, Research Associate, Civil Engineering (10/18)
R78-225, Spons. Res. Staff, Research Associate, Nutrition & Food Science (10/18)
R78-228, Spons. Res. Staff, Research Engineer, temporary, Energy Lab (10/18)
R78-237, Spons. Res. Staff, Nutrition & Food Science (10/18)
R78-238, Spons. Res. Staff, National Magnet Lab (10/25)
R78-246, Spons. Res. Staff, Systems Programmer, Lab for Computer Science (11/1)
R78-250, Spons. Res. Staff, Research Associate Materials Science & Engineering (11/1)
R78-252, Spons. Res. Staff, Tech Computer Programmer, temporary, Energy Lab. (11/1)
R78-253, Spons. Res. Staff, Digital Engineer, Research Lab of Electronics (11/15)
R78-258, Spons Res. Staff, Tech. Asst., Earth & Planetary Science (11/5)
R78-265, Spons. Res. Staff, Technical Asst., temporary, Biology (12/6)
R78-269, Spons. Res. Staff, Technical Asst., Nutrition & Food Science (12/6)
R78-271, Spons. Res. Staff, Center for Information Systems Research, Sloan School (12/6)
R78-272, Spons. Res. Staff, Research Specialist, Energy Lab (12/6)
R78-273, Spons. Res. Staff, Technical Asst., part-time, Division for Study & Research in Education (12/6)
R78-274, Spons. Res. Staff, Software Manager, Mechanical Enginneering.(12/6)
R78-275, Spons. Res. Staff, Tech. Asst., Harvard-MIT Division of Health Sciences & Technology (12/13)
R78-276, Spons. Res. Staff, Electron Microscopist, Center for Materials Science & Engineering (12/13)
R78-277, Spons. Res. Staff, Research Engineer, Center for Materials Science & Engineering (12/13)
R78-278, Spons. Res. Staff, Research Engineer, Center for Materials Science & Engineering (12/13)
R78-279, Spons. Res. Staff, Research Engineer, Center for Materials Science & Engineering (12/13)
R78-281, Spons. Res. Staff, Tech Asst., Nutrition & Food Science (12/13)
R78-282, Spons. Res. Staff, Chief Linac Operator, Lab for Nuclear Science (12/13)
R78-283, Spons. Res. Staff, Mechanical Engineering, Lab for Nuclear Science (12/13)
R78-284,285, Spons. Res. Staff, Accelerator Physicist, Lab for Nuclear Science (12/13)
R78-286, Spons. Res. Staff, Systems Programmer, Lab for Computer Science (12/13)
R78-287,288,289, Spons. Res. Staff, Lab for Computer Science (12/13)
R78-290,291,292, Spons. Res. Staff, Center for Transportation Studies (12/13)

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

H78-166	Hourly (canceled)
E78-64	Exempt
R78-210	Spons. Res. Staff
B78-69	Sr. Clerk IV
B78-682	Sec. IV
B78-704	Clerk III
B78-639	Admin. Asst. V
B78-739	Sec. IV
B78-710	Sec. IV
R78-158	Spons. Res. Staff
A78-15	Admin Staff
B78-636	Sec. IV
B78-748	Lib Asst. III
B78-730	Clerk III
B78-732	Clerk IV
R78-257	Spons. Res. Staff
B78-731	Sec. V
B78-716	Sec. IV
B78-690	Clerk III
A78-69	Admin Staff
B78-675	Sec. IV
B78-676	Sec. IV
B78-665	Clerk II
B78-707	Sec. V
B78-683	Acct. Rep. V
A78-76	Admin Staff
B78-722	Sec. V
H78-117	Maint. Mech.
R78-255	Spons. Res. Staff
A78-23	Admin. Staff
B78-691	Sr. Clerk IV
R78-125	Spons. Res. Staff
B78-754	Sec. IV
H78-23	Hourly
B78-743	Tech. Asst. V
B78-654	ClerkII
B78-734	Lib Asst. III
B78-709	Clerk Receptionist III
R78-298	Spons. Res. Staff
B78-759	Sec. IV
B78-737	Sec. IV
H78-202	Hourly
B78-733	Sec. III
B78-329	Sec. IV
B78-746	Sec. V
B78-756	Clerk III
B78-735	Sec. IV
B78-650	Sec. IV
B78-694	Sec. IV
B78-725	Clerk III
H78-199	Hourly
B78-738	Sec IV
R77-95	Spons. Res. Staff
E78-68	Exempt (canceled)
A78-66	Admin. Staff
A78-77	Admin. Staff
B78-749	Sect. Head V
H78-144	Hourly
R78-201	Spons. Res. Staff
B78-745	Sec. IV
R77-230	Spons. Res. Staff
H78-200	Hourly
A78-44	Admin Staff
H78-167	Hourly
E78-69	Exempt

The following positions are on HOLD pending further decision:

B78-454	Clerk III
C78-35	Acad. Staff
B78-700	Sec. IV
A78-20	Admin. Staff
B78-717	Sr. Sec. V
R78-264	Spons. Res. Staff

Faculty Committee On Presidency Named To Advise Corporation

(Continued from page 1)

and a former staff member and assistant director of MIT's Lincoln Laboratory.

Dr. Morris Halle, Ferrari P. Ward Professor of Modern Languages and Linguistics in the Department of Linguistics and Philosophy and the 1978-79 James R. Killian, Jr., Faculty Achievement Award Lecturer. Dr. Halle has been a member of the faculty since 1951 and Ward Professor since 1976.

Dr. John G. Kassakian, associate professor of electrical engineering in the Department of Electrical Engineering and Computer Science. Dr. Kassakian has been a member of the faculty since 1973.

Dr. C.C. Lin, Institute Professor and professor of applied mathematics in the Department of Mathematics. Dr. Lin has been a member of the faculty since 1947. He became Institute Professor in 1966.

Dr. James D. Litster, Professor of Physics in the Department of Physics. He has been a member of the Institute's teaching staff since 1965 and a member of the faculty since 1966.

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Dr. Robert W. Mann, Whitaker Professor of Biomedical Engineering in the Department of Mechanical Engineering. A member of the MIT staff since 1951 and a member of the faculty since 1953, Dr. Mann is a former Germeshausen Professor (1970-72) and a former professor of engineering (1972-74) in the School of Engineering.

Dr. Henry A. Millon, professor of history and architecture in the Department of Architecture. A member of the faculty since 1960, Dr. Millon is a former director of the American Academy in Rome, Italy.

Dr. Frederick A. Putnam, Joseph R. Mares '24 Assistant Professor of Chemical Engineering in the Department of Chemical Engineering. Dr. Putnam has been an assistant professor since 1976 and was appointed to a Mares Career Development Chair earlier this year.

Dr. Paul A. Samuelson, Institute Professor and professor of economics in the Department of Economics and a Nobel Laureate in Economics. A member of the faculty at MIT since 1940, Dr. Samuelson has the longest continuous service on the faculty of all members of the faculty now active. He has been Institute Professor since 1966.

Dr. Phyllis A. Wallace, professor of management in the Sloan School of Management. A faculty member since 1975, Dr. Wallace is a former visiting professor (1973-75) and visiting lecturer (1972.) She was a research associate in the MIT Urban Systems Laboratory 1970-71.

Dr. Sheila E. Widnall, professor of aeronautics and astronautics in the Department of Aeronautics and Astronautics. An MIT alumna, she has been a member of the faculty since 1964 when she became the first woman ever appointed to faculty rank in the School of Engineering.

Dr. Hulsizer, in announcing the appointments of the committee members, said the committee will serve as the mechanism whereby individual members of the faculty will be able to make their views and suggestions known with regard to the presidency. He said he was asking the committee to consider three aspects of the presidency: the organization of the Executive Office, criteria that should be applied in selecting a new president and specific suggestions for the presidency.

The faculty committee's advice will be provided to the Corporation Committee on the Presidency which was appointed a month ago by Howard W. Johnson, chairman of the MIT Corporation, to begin now the process of selecting a new president to succeed Dr. Wiesner who plans to retire on June 30, 1980. Carl M. Mueller, a Life Member of the Corporation and a 1941 graduate of MIT in mechanical engineering, is chairman of the eight-member Corporation Committee.

Shakespeare Ensemble Sets Performance, Tour Plans

The MIT Shakespeare Ensemble will revive its fall production of *Much Ado About Nothing* on January 10 and 11 at 8pm, in the Little Theatre.

The production will return with few cast changes and will be again directed by MIT alumnus Jonathan Ivester. Costumes were designed by Theresa Wright; set and lighting designed by Leon Shiman, postdoctoral associate in the MIT Department of Mathematics; renaissance dances were choreographed by Ingrid Brainard; and music performed by John Cook, Institute organist.

Partly funded by the IAP Committee, the two performances will be open to the public for $2.50 a ticket. Tickets will be available in the lobby of Building 10, January 8-11, 11am-5pm, or at the door. For reservations, call 253-2903.

On January 13, the production of *Much Ado* will depart on the Shakespeare Ensemble's third annual tour of MIT alumni clubs in the northeast, with a presentation at the Bowne Theatre of Drew University, Madison, N.J. On January 14, the group will perform at the Theatre Intime at Princeton University; on January 15 at Tower Hill School, Wilmington, Del., and on January 17 at St. Alban's School, The National Cathedral, Washington, D.C.

Additional performances will be announced at a later date. They will all be performed at 8pm, and are open to the public. The Ensemble also plans to perform scenes from various plays at two high schools along the way.

The tour is made possible partly by grants from MIT alumni clubs, the MIT Quarter Century Club and the office of the Secretary of the Institute. Accommodations throughout the tour are provided by local MIT alumni families.

The *Much Ado* production will also be presented in the Boston area on Tuesday, January 9, at 7:30pm, at the Isabella Stewart Gardner Museum. The performance will be given in the Museum's Tapestry Hall, and will be the first full-length theatrical production ever held there.

Bidigare Named to Alumni Post

James L. Bidigare, Jr. of Grosse Pointe Woods, Mich., president of the MIT Class of 1978, has joined the Alumni Association as regional coordinator for the Mid Atlantic states. He will be based at the New York Alumni Center.

Mr. Bidigare will be responsible for various programs and activities with emphasis on Alumni Fund programs, including special projects as directed by Stephen P. Denker, director of the Alumni Fund. He will also work with the board of governors and the secretary for alumni relations at the Alumni Center.

As a student, Mr. Bidigare was active in his fraternity and the interfraternity conference, which he served as secretary and as chairman of community relations. He was also captain of the varsity lightweight crew and wrote for Technology Review.

Met Seats Available

Technology Community Association (TCA) can secure priority seating for performances of the Metropolitan Opera for members of the MIT community who order tickets before January 11. A price list, seating chart and detailed list of casts for each performance are available now at the TCA office, W20-450. Performances will be at the Hynes Auditorium, Prudential Center, the week of April 23.

Performance Schedule

Don Pasquale	April 23
Otello	April 24
Tosca	April 25
Tannhauser	April 26
Don Carlo	April 27
The Bartered Bride (matinee)	April 28
Dialogues of the Carmelites	April 28

Dertouzos on TV

Professor Michael L. Dertouzos, director of MIT's Laboratory for Computer Science, can be seen on television tonight (Wednesday, Jan. 3) when Channel 7 repeats at 8:30pm a program on home computers originally broadcast October 11.

20 Complete ADP Course

Participants in the eleventh Administrative Development Program were awarded certificates of completion during a luncheon graduation ceremony on December 20 at the Faculty Club.

Dr. Thomas F. Jones, vice president for research, was guest speaker at the luncheon and presented certificates to the 20 graduates of the ADP XI.

The ADP program covers principles of organizational psychology, taught by Drs. Adam and Maureen Yagodka, co-directors of the Office of Personnel Development; financial management theory, taught by Dr. Zvi Bodie, assistant professor of finance and economics at the Boston University School of Management; and financial management at MIT, coordinated by George Prendergast, assistant director of the Office of Sponsored Programs. The financial section included presentations by George Prendergast; John Currie, director of finance; Anne Hartung, assistant director of finance; Robert Lee, administrative investment officer; James Bruce, associate dean of engineering; Jack Frailey, director of student financial aid; George Dummer, director of the Office of Sponsored Programs, and Nelson Lees, executive director of resource development and director of resource planning.

Graduates of the ADP XI are:

Donald Batson, Safety Office; Cheryl Butters, Electrical Engineering and Computer Sciences; Harold Curtis, Jr., Center for Space Research; Donna Dutton, Nuclear Engineering; Eleanor Egan, Medical-Radioactivity Center.

George Gordon, Center for Space Research; Ellen Henderson, chemistry; Kenneth Hewitt, Personnel Services; Joseph Jacquart, IPS — Administrative Computing Services; Elenore Kehoe, Financial Aid Office.

Richard NacNabb, National Magnet Lab; Kenneth Progran, Lab for Computer Science; Marilyn Reisse, Center for Policy Alternatives; Margaret Richardson, Physics; Carole Schildhauer, Libraries.

Dante Somma, Physical Plant; Nora Treimanis, Energy Lab; Ruth Walsh, Comptroller's Accounting Office; Marion Wasserman, Division for Study in Research in Education; Robert Wright, Comptroller's Accounting Office.

The current ADP group, ADP XII, completed the organizational psychology portion of the program on December 13, 1978 and will begin the financial management section in late February.

Those interested in more information about the ADP can call the program administrator, Vera Ballard, x3-4277.

Umana Students Seek 'Extern' Experience

(Continued from page 1)

almost certainly will go on to better things," he said. "One has bought a home computer for himself, another has gone beyond what I teach in class to dig into the manual and one went out and got a summer job in computer operation."

Mr. Cicolari said heavy emphasis is put on having students continue their education beyond high school. "We try to provide the foundation for them to go onto college and be successful."

The Umana school, for the 7th through 12th grades, opened two years ago and this June will have its first graduating class (seniors who entered as sophmores when the school opened).

The program worked out by Dr. Russell, the curriculum development committees, the administration and others has students sample each of the five subject areas, in equal amounts, in their freshman year. In the next three years, they spend 20 per cent of their time in one of the five areas.

The decision to make computer science one of the subject areas was natural enough, given the nature of the school, but the plan is to go beyond that—to make the computer central to all instruction and activity at the school.

This was explained by Dr. Myron Tribus, MIT professor of engineering, director of the Center for Advanced Engineering Study and a member of an ad hoc MIT faculty committee that has helped to form the school's curriculum.

"We decided the central core for any technical school should be the computer," he said. "We're counting on the computer to revolutionize the kids' attitudes toward learning. It's demanding, but it's fun. It's our idea to infect this school with computers, and it seems to be working."

When the school opened, it had, as a stop-gap measure, 10 computer terminals tied into MIT's Multics computer system.

Now, however, state and city funding have provided a PDP 11/34 computer, 16 terminals (three video displays and the rest hard copy), a tape drive, disc drive, high-speed line printer, three key punch machines and a card reader—all the hardware needed, in short, for teaching computer programming. The instructional setup is believed to be the largest in the city at the secondary level, and probably in the state.

Dr. Russell and his colleagues are seeking still more terminals to spread them into classrooms outside the computer science center and into some of the school offices.

"We're already in the process," Mr. Cicolari said, "of giving a course for the teachers to show them what they can do with computers in their own subject areas."

The major course of instruction in computer science at present is computer programming in BASIC PLUS, one of the more common high school computer languages.

According to Mr. Cicolari, this will soon be expanded into a three-year course in which there will be two years of instruction in BASIC PLUS programming, and then a project-oriented year in BASIC PLUS, combined with instructional courses in COBOL and FORTRAN, two other widely-used computer languages.

Mr. Cicolari is being assisted in his teaching this year by two MIT graduates.

Virginia C. Grammer, '47, of Charlestown, who received her SM in educational technology in 1977, is serving the school as both computer system manager and teacher. Maureen Hart, '78, of Glens Falls, N.Y., is a computer laboratory assistant.

Under the court-ordered desegregation plans, costs incurred by universities and colleges working in partnership with city schools are met through grants from the Massachusetts Department of Education.

As the computer science program was being explained to visitors on a recent morning, one of the students working at a terminal in the computer center was Michael Mancusi, a senior, of 193 London Street, East Boston.

Last summer, Michael obtained a job with the Air Force's Electronics Systems Division at Hanscom Field, Bedford, on the basis of what he had learned at the Umana School.

"I actually did computer operating. I was doing and learning at the same time and getting paid for it. And I have an option to return this summer."

Michael has applied to Northeastern University to study computer and electrical engineering.

It is the kind of job experience he had that Dr. Russell and Mr. Cicolari are hoping to duplicate for other students.

MIT graduate Virginia C. Grammer, teacher and computer systems manager at the Umana school, with students Michael Mancusi, a senior, of East Boston, and James B. Willis, a senior, of Hyde Park.

Use of Computer Changes Physical Plant Operations

The Facilities Control System (FCS) computer has helped save MIT considerable amounts of energy since it began operation on December 26, 1976.

Use of the computer has brought changes in the operations of Physical Plant, and organizational adjustments have been made to reflect these changes. FCS, Work Control Center and the Mechanical Services Group now report to a single manager of Mechanical Operations. Thomas F. Vacha, formerly project director for FCS, holds this position, reporting directly to Paul F. Barrett, superintendent of building operations and associate director of Physical Plant.

George E. West, Jr., formerly manager of Mechanical Services, has been appointed Building Operations Staff Mechanical Engineer. He will do engineering studies in the mechanical operations area and work on energy conservation assignments with Carl Hagge, Environmental Engineer.

The FCS computer controls the heating and air conditioning systems of 33 buildings on the MIT campus. During the winter rooms are heated to a minimum of 68° when they are occupied, and to 60° when they are not. Hallways and vestibules are kept between 50° and 65° at all times, depending on their use and proximity to occupied areas.

During the summer, buildings with air conditioning are cooled to a maximum of 78°-80° during occupied hours. Special requirement rooms, such as animal rooms, computer rooms, special equipment rooms, and "cold" and "warm" rooms are controlled locally.

The FCS computer has an internal alarm system to note problems. When a monitored limit is exceeded, an alarm is triggered on the operator's terminal. The alarm problem is printed on the terminal display, and the alarm sound continues until the operator acknowledges the alarm. After the operator has acknowledged the alarm, action is taken at his discretion.

A summary of all alarms sounded over a 24-hour period is printed by the computer at midnight. Every morning the computer also prints a summary of operating conditions of all the buildings on the system. Through examination of these printouts, the operator can detect major problem spots and more subtle problems which were not detected by the alarms and act immediately to correct the situation.

Even though the FCS computer system and Physical Plant control most of the Institute's energy consumption, 25 per cent of the total consumption is controlled by the individual members of the MIT community. The following suggestions from ENCON are a guide to energy conservation in these areas.

1. Set thermostats or other controls, where available, to 68° in occupied areas. Reduce the temperature at night or when higher temperatures are not required.
2. Don't leave doors and windows open.
3. Don't use electric space heaters. They consume large quantities of energy.
4. Avoid using electrical appliances for long periods of time.
5. Turn off lights and other electrical equipment when they are not in use.
6. Report all equipment malfunctions, especially those which affect energy consumption, to the Physical Plant Work Control Center. Dial FIXIT (x3-4948).
7. If you have any ideas or suggestions of other methods of energy conservation, please call the Environmental Engineer. Dial ENCON (x3-6266) for energy conservation.

McClintock, Ritchie Honored

Professor Frank A. McClintock, an expert in the mechanical behavior of metals, ceramics and rocks, has been honored by the American Society of Mechanical Engineers with its Nadai Award, which recognizes distinguished contributions to the field of engineering materials.

Professor McClintock, a member of the MIT faculty since 1950, accepted the award at ASME's annual winter meeting.

Also honored at that meeting was Professor Robert O. Ritchie who received the Best Paper Award from the Journal of Engineering Materials and Technology for "Near-Threshold Fatigue Crack Propagation in Ultra High Strength Steel: Influence of Load Ratio and Cyclic Strength," which appeared in the July 1977 issue.

The citation accompanying the award to Professor McClintock read: "For his milestone contributions to the understanding of the mechanics and mechanisms of the fatigue and ductile fracture of metals, and for his ceaseless efforts as an educator in the subject of mechanical behavior of engineering materials."

Professor McClintock is the author of more than 60 professional papers in his field. One of those papers, "Plastic Flow Around a Crack Under Friction and Combined Stress," presented before the 4th International Institute Conference on Fracture held in 1977 in Waterloo, Canada, represented a significant gain in the task of predicting the development of derailment-causing fractures in railroad track.

Professor Ritchie joined the faculty at MIT in 1977 as an assistant professor and was promoted to associate professor the next year. His main research interest is the deformation and failure of engineering solids. he is known for his work in the fields of instrumentation for crack monitoring and the cleavage fracture, fatigue crack propagation and environmental failure of metals. Most recently, he has been concerned with the materials problems associated with thick-section steel used in nuclear and coal gasifier pressure vessel construction.

League Sponsors Museum Visit

The MIT Women's League is sponsoring a luncheon visit to the Museum of Fine Arts on Wednesday, Jan. 10, open to all members of the community.

The visit will begin at 11am with a tour of the Medieval Galleries led by Judi Hanhisalo, well known museum lecturer and art historian. Ms. Hanhisalo will discuss selections from the Medieval collections as references for comparison with the exhibition of Early Irish Art.

After luncheon at noon, those attending will be welcome to visit the Irish exhibition at leisure.

Those wishing to attend should send a check for $6 to the Women's League, c/o Mary Pinson, Rm 10-342 by 5pm Monday, Jan. 8. The price covers admission and lunch.

Maggie Lettvin Is Featured As Chef

The great gray Times has taken note of Maggie Lettvin—not as an expert on exercise, but as brunch chef to Bexley Hall.

In a major article in the New York Times of Wednesday, December 27, Barbara Burtoff, a Boston writer on food and consumer news, tells of the Lettvin's activities as faculty residents of Bexley Hall. Among these is brunch served every other Sunday to Bexley's student residents, prepared by Ms. Lettvin. The picture in the center of the page shows Ms. Lettvin using well trained muscles to toss a salad suitable for about a hundred people.

MIT Sends Greetings to Fiedler

Generations of MIT people have attended Boston Pops concerts, and MIT Night at the Pops is one of the major alumni events of the year.

On Dec. 21, Chancellor Paul E. Gray sent the following telegram to Pops conductor Arthur Fiedler, who is convalescing following surgery:

Dear Maestro:

Students, faculty, staff, alumni and friends of the Massachusetts Institute of Technology join in concert to extend birthday greetings and warm wishes for your speedy recovery. We acclaim your musical genius and inspirational lifetime example. Your baton has harmonized all ages, peoples and nations. In the spirit of the holiday approaching, we rejoice in your enduring gift of cultural excellence, which has given spirit to generations of MIT men and women and which brings life and joy to the world.

Scientific Illustrations to be Shown

"Man and Machine: The Development of Scientific Illustration" will be exhibited in the Hayden Corridor Gallery, January 3-24, 1979.

Presented by the MIT Committee on the Visual Arts, the exhibition has been organized in collaboration with Dr. Samuel Y. Edgerton, Jr., professor of art history at Boston University, who is presently completing a book on the relationship of art and scientific thinking during the Italian Renaissance.

The relationship between art and science in great medical and mechanical textbook illustrations of the Renaissance will be explored through photo-enlargements and original works.

Dr. Edgerton will present an illustrated lecture, "The Renaissance Artist as Quantifier," Thursday, Jan. 11, at 2 pm, in the Bush Room (10-105) in conjunction with the exhibit.

"Man and Machine" is being made possible by the generous support of the MIT School of Engineering.