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## 108th Ceremony

## 1,300 to Graduate At Commencement

## By CHARLES H. bALL

 Staff WriterMIT will award degrees to approximately 1,300 seniors and graduate students at its 108 th commencement Friday morning, May 31, beginning at 10:30am in Rockwell Cage.
Howard W. Johnson, chairman of the MIT Corporation, will preside, as is customary, at the

> The Committee on Commencement urges faculty members to attend an informal reception immediately following graduation whether or not they plan to march in the academic procession.
> The reception, which takes the place of the commencement luncheon, will be held under tents on Kresge Plaza. Areas will be set aside for each school, where faculty members can meet with graduates and their parents.
exercises. President Jerome B. Wiesner will give the commencement address and award the degrees individually to each of the
graduates.
Other principals include Dr. James R. Killian, Jr., honorary chairman of the MIT Corporation, and Chancellor Paul E. Gray.
The chief marshal will be, by custom, the president of the MIT Alumni Association. He is William S. Edgerly, class of 1949, financial vice president of Cabot Corporation of Boston
For the first time at an MIT Commencement, a woman will give the invocation. She is Rev. Constance F. Parvey, MIT Lutheran chaplain and pastor of University Lutheran Church in Cambridge.
The official commencement week activities will begin Thursday, May 30, at 11am, with the annual commissioning of officers from MIT's Army, Navy and Air Force ROTC units.
Eighteen students will be com-missioned-eight in the Army, three in the Navy, and seven in the Air Force.
Speaker at the commissioning exercises will be Maj. Gen. Benjamin N. Bellis, commander of the Air Force's Electronic Systems Command.


Former Governor Luis A. Ferre of Puerto Rico discusses one of the 36 paintings on display in Hayden Gallery in the current exhibition of nineteenth-century European and American paintings from the Museo de Arte de Ponce, Ponce, Puerto Rico. Mr. Ferre, who founded the Ponce museum, attended a special press preview of the show last Friday. The exhibition will remain on view through June 8. Visitors may sense a rather high humidity in the gallery where the climate is controlled to correspond approximately to the humid Caribbean atmosphere that prevails in the open architecture of the Ponce museum.

## MIT to Close July 4 \& 5

John M. Wynne, vice president for administration and personnel, has announced a special holiday closing on Friday, July 5, in addition to the Independence Day holiday on July 4. The usual pay practices applying to special holiday closings will be in effect.

## Faculty Meeting to Complete Agenda Today

A motion to establish the rank of Adjunct Professor will be the major topic of discussion at a meeting of the faculty today, Wednesday (May 22) at $3: 15 \mathrm{pm}$ in Room 10-250.
The meeting is being held to complete action on the agenda of the regular May meeting, which took place May 15.
William L. Porter, Dean of the School of Architecture and Planning will recommend today that the faculty endorse the establishment of the ranks of Adjunct Professor, Adjunct Associate Professor, and Adjunct Assistant Professor, in accordance with the proposal included in the Call to the meeting.
A discussion of the proposed revision of the MIT judicial process will be continued by Chairman of the Faculty Professor Elias P. Gyftopoulos, and Professor Thomas B. Sheridan, who chairs the Subgroup of the CEP on the judicial process

## '78 Class Has

 Than All MITMore undergraduate women will enter MIT's freshman class next fall than held places in all of MIT's academic departments ten years ago.
A record 20 percent of students admitted to the Class of 1978 are women and 9.5 percent are from minority groups.
Peter H. Richardson, director of admissions, said that of 1874 acceptances mailed out, 802 men and 209 women have sent back affirmative replies. Also expected to attend are 44 blacks, 10 Mexican Americans, 6 Puerto Ricans and one American Indian.

## Role of Automobile to Be Explored <br> By ROBERT C. DIIORIO <br> their spouses and families are <br> ranging from automotive fuels to

Staff Writer

The automobile-symbol of a society beset with problems but one still ripe with promise-will be the subject of the annual Alumni Days program June 2 and 3 at MIT.
Entitled Automobility, the program will review the opportunities and challenges created by the interrelationships between technology, science and society.
More than 2,000 MIT alumni,
expected back on campus for Alumni Days, the Institute's traditional homecoming event which follows the May 31 commence ment. Class reunions will be held Saturday and Sunday preceeding the Monday program.

Members of the MIT community are invited to attend the Alumni Days events. There will be a charge for the Pops Concert, the buffet and the cocktail parties, but all other events are free.

Papers on a variety of subjects,
automotive industrial strategies, will be presented at a day-long session in Kresge Auditorium, Monday, June 3.
On the preceeding day, Sunday, June 2, a variety of events-including a parade of antique cars and autos of the future-are scheduled.

A highlight of the Sunday program will occur at $3: 30 \mathrm{pm}$ in Kresge Auditorium when Seymour A. Papert, Cecil and Ida Green Professor of Education, will dem Proftrate how MIT is using moder

Succeeds Skolnikoff Weiner Named Head Of Political Science

Myron Weiner, a professor of political science and a senior staff member at the Center for Internamember at the Center for interna-
tional Studies at MIT since 1965, tional Studies at MIT since 1965, has been named to head the MIT Department of Political Science. The appointment is effective July 1 .
The appointment was announced by Dr. Harold J. Hanham, Dean of the School of Humanities and Social Sicence. Humanities and Social Sicence.
Dr. Weiner succeeds Dr. Eugene B. Skolnikoff as department head. Dr. Skolnikoff will continue as head of the Center for International Studies and as a professor of political science.

Dean Hanham praised Dr. Skolnikoff for his "distinguished Skolnikoff for his distinguished
record of service to the Institute. record of service to the Institute.
We are most lucky that he will continue as director of the Center for International Studies."
Dr. Weiner, who has done extensive research on political change in developing countries, is currently engaged in research on the political consequences of migration in multi-ethnic societies. He is presently chairman of the Na tional Academy of Sciences Project on Population Policy in Developing Countries and he is a member of the American Academy of Arts and Sciences and the Council on Foreign Relations.
Much of Dr. Weiner's work has been concentrated in India and he has published a number of books on the country, including Politics of Scarcity, Party Politics in India, Party Building in a New
More Women in '64-'65

About 40 of the remaining candidates offered admission are expected to accept within the next week, Richardson said. A total of 1,000 places are available in the freshman class next fall ( 100 more than last year)
Despite a 20 percent increase in applications over a year ago, the yield of students expected to register from those accepted is "down slightly" Richardson said.
About 95 candidates now occupy places on a waiting list, which is traditionally activated when the Continued on page 2)

Nation: The Indian National Congress, Indian Voting Behavior and State Politics in India.

He is also editor or co-editor of several comparative studies in political development including


Professor Weiner
Political Parties and Political Development, Crises and Sequences of Political Development and Modernization: The Dynamics of Growth.
At MIT he chairs an interdepartmental Study Group on Migration and Development.

Continued on page 8)

## Training Section

Classes Listed
Registration will begin today (May 22) for three typing courses and a course in machine dictation to be offered by the Training Section of the Office of Personnel Development. Registrations will be accepted at E19-734 or by phone at 3-1912.
The typing courses are Typing 1 , Introduction to Technical Typing and Technical Typing.
The two-hour (one hour each day) machine dictation/transcription course is offered to supervisors and department heads who will use the equipment for dictation and to typists who will transcribe from the equipment.
Dictation courses are scheduled for Tuesday and Thursday, starting June 4 at 10am in E19-370. A more intensive course will be developed out of the short course.

## by Returning Alumni

technology to design radically dif ferent learning environments for children. Professor Papert, also a professor of applied mathematics, is co-director of the Artificial Intelligence Laboratory.
J. Herbert Hollomon, director of the Center for Policy Alternatives, and professor of engineering at MIT, will be the moderator for the June 3 morning session, which will review the societal implications of the auto in America
In the afternoon, Alfred A.H. Keil, Dean of the School of

Engineering and professor of ocean engineering at MIT, will head a session which will review changing economic and social constraints that have and will continue to affect the relationship between society and the auto
A complete list of speakers is included in the Institute Calendar Morning and afternoon sessions will be held in Kresge Auditorium. The morning session will begin at $8: 30$. Luncheon and presentation of class gifts will begin at 12:30pm in Rockwell Cage. Afternoon sessions will start at $2: 15 \mathrm{pm}$.

## Faculty Meeting Hears <br> Humanities Discussion

A motion regarding operating procedures of the committee overseeing the new Institute Requirement in the Humanities, Arts and Social Sciences was discussed by the Faculty at its monthly meeting Wednesday (May 15)
The motion was presented by Professor Salvador E. Luria. The motion requested that for each subject included in the distribution list the committee write a short statement explaining why the subject was approved and informing students and faculty members why the subject was of humanistic orientation. The motion was not passed.
A progress report of the Ad Hoc Committee on Grading was given by Professor Roy Kaplow of the Department of Metallurgy. Discussion of Professor Kaplow's
comments was deferred until publication of the committee's report later this year
Professor Arthur C. Smith of the Department of Electrical Engineering discussed the report of the Committee on Academic Performance, which he chairs, on the

## New Microprobe

Proves Useful
Research Tool
An automated electron micro probe, purchased last year by the Department of Earth and Planetary Sciences, is available for use by any member of the Institute community
An electron microprobe combines aspects of electron microscopy and x-ray fluorescence analysis to determine the chemical composition of minute volumes of matter. The microprobe has a wide variety of research applications. Geologists use it to analyze individual phases within rocks, biologists to study cell inclusions, and chemists to determine concentration changes across diffusion boundaries. In an unusual application of the probe an MIT professor of metallurgy recently analyzed delicate welds in ancient Peruvian jewelry
The probe focuses an electron beam on the polished surface of a sample, irradiating a region as small as three microns in diameter and five microns deep. Characteristic $x$-rays of each element present in the irradiated mass are emitted. The intensities of these x-rays are monitored by three separate x-ray spectro-
meters and counting trains. Each spectrometer can be set to coun only the x-ray photons corresponding to a particular element. All elements beyond beryllium on the periodic table can be analyzed by the microprobe
All normal operations of the microprobe are controlled by a PDP-11 computer. The computer directs such operations as specrometer peaking, x-ray counting, and data reduction. Within three minutes the automated probe can perform a 12 element quantitative analysis on a point and print out the corrected result.
There is a fixed charge of $\$ 15$ an hour for time actually spent using the probe. This charge also covers support services such as supervision of the operation, assistance with sample preparation and coating, and programming of special operating routines and data reduction procedures.
For more information contact Professor John Dickey (x3-1998) Dr. Alan Parkes (x3-3982), Ms. Roxanne Regan (x3-1907), or the laboratory (x3-1995).
subjects of negotiated withdrawals, early evening classes ( $5-7 \mathrm{pm}$ ) and the extendable five-week span for completion of an Incomplete grade. He also presented a motion on advanced standing examinations. The motion was passed.
Professors Elias P. Gyftopoulos and Thomas B. Sheridan led a discussion of proposed revisions to the MIT judicial process, as published in the May 15 issue of published in the May 15 issue of Tech Talk. President Wiesner expressed the hope that the
Statement of Rights and Reponsibilities would be modified so as to become applicable to the entire MIT community. Discussions will continue at this afternoon's meeting of the Faculty (see page 1) and into next fall
In other business, the slate of nominees for membership on the Faculty's standing committees was presented by Professor Robert Solow of the Department of Economics and a unanimous vote of approval followed.
A resolution on the death of Professor Arthur T. Ippen, Institute Professor Emeritus who died April 5, was presented by Professor Donald Harleman and the faculty rose for a moment of silence.
It was also announced that a Committee for the End of Spring Term would be established to handle last minute changes in the degree list for commencement on May 31.
Affirmative Action Plan Published

Mir's revised general Affirma ive Action Plan and 94 departmental plans have been submitted to the Boston Office of Civil Rights of the Department of Health, Education and Welfare.
The text of the general Affirmative Action Plan is included in this paper as a pull-out supplement. Copies of the departmental plans are on file in each departmental headquarters and may be consulted by any person interested.
The departmental Affirmative Action plans and the general plan were revised to respond to specific requests and suggestions made on the 1973 plan by the Office of Civil Rights, which found MIT in substantial compliance with federal legislation. The office of Civil Rights has acknowledged receipt of the 1974 plans and will respond urther after they have been reviewed.
Class of '78
admissions granted do not yield the prescribed fall enrollment. Members of the entering class will come from all 50 states and 28 foreign countries. Roughly 50 percent will be receiving some financial aid.

Many students accepted last year," Richardson said, "would not have been included in this year's admittance pool because of the marked increase in academic quality in this year's entering class."
The increase in applications to MIT he said, occurs at a time when the entering freshman classes at institutions of similar size are dwindling below estimated enrollments.
Of the students accepted by MIT, 188 were early acceptance candidates, who knew last December that they were admitted. Unlike the Ivy League schools offering an "if accepted-must attend" plan, MIT does not require a decision by the candidates before the May 1 reply date, which applies to all admittees.

## Alvene Williams to Head Own Business

Alvene Williams, administrative assistant in the MIT Community Fellows Program, will leave the academic world June 28 to become president of her own business.
Ms. Williams said the move is a result of an urban law seminar she recently took with William A. Davis, associate professor of law and urban studies. A discussion of edistribution of funds from he redistribution of funds from ne sector the purpose of developing capital in another motivated her, she said, to test the principle in her own professional secretarial service, based in Harvard Square
Soon after Ms. Williams came to MIT in 1966 she was hired to be administrative assistant to Professor Johnson, of political science, who was then also serving as director of the Roxbury economic development program, CIRCLE, Inc.
This off-campus assignment which extended from 1967 to 1970 , encouraged community members to translate self-established skills into positions of greater authority "Alvene learned the program's esson very well," Professor Johnson said.
In 1971, Ms. Williams joined the

and associate director Melvin Studies and Planning

Ms Williams' partners in her new business venture, which will provide typing, transcription and planning services 12 hours a day, 7 days a week, are Sandra Hender son, former vice president of the consulting firm MERIC, Inc. and Odette Bery, co-owner of the Turtle Restaurant in Cambridge and former manager of the Orson Welles Restaurant.
"I should like to spend my remaining free time teaching high school girls to expect just as much from their office careers," the ambitious new executive said.

## Pistol Team Wins

## National Title

MIT's pistol team capped off its best season ever with a National Team Championship
The Tech foursome of Capt. Karl
office staff of Vincent A. Fulmer Secretary of the Institute, and later that year became admin strative assistant to Profes or Frank Jones, director of the Community Fellows Program,

## Other Organizations Adopt

 INSITE Space Program
## By PATRICIA M. MARONI

 Staff WriterExpanding Rush-PresbyterianSt. Luke's Medical Center in one square block of urban Chicago space and justifying the number of parking spaces at Brown University to the satisfaction of the surrounding community are two recent applications of MIT's computer-based information system INSITE.
The Institutional Space Inventory Technique system (INSITE) was developed by Kreon L. Cyros, associate director of the MIT Planning Office after several years of research and testing. It now maintains an inventory of MIT's 120 buildings, totaling seven million gross square feet and over 20,000 distinct spaces on the 130 -acre campus.
In response to increasing requests from other universities and institutions to share MIT's program, an Office of Facilities Management Systems has been established within the Planning office to expand INSITE's existing group of users. Cyros will carry an additional responsibility as director of the new office.
At present Brown University, Syracuse University, the Harvard Medical School, the Charles S. Draper Laboratory, Inc., and the Rush-Presbyterian-St. Luke's Medical Center are members of a consortium of institutions which

## Pierson Wins

Women's Regatta
Gail Pierson, visiting associate professor at the Sloan School of Management, won the women's single sculls in 3:51.6 last Sunday (May 19) in the Spring Festival Regatta on the Merrimack River. It was the third year that Professor Pierson, an economist who rows for the Cambridge Boat Club, won the 1000 -meter event. She defeated Sally Harvey of Riverside Boat Club and Betsy Shaffer of the Cambridge Boat Club.
Next month, from June 14-16 she will compete in the national championships, in Oakland, Calif. The first eight finishers there will comprise the United States team that will compete in the World Championships in Lucerne, Switzrland, in August.
have contracted with MIT to use the INSITE system
"The fees received from consortium members will generate the future development required to keep the INSITE system current in light of continuing technological advances," Cyros said.
INSITE is unique in the way it enables users to form individualized space reports from prob-lem-oriented commands in simple English phrases, key words or conventional contractions. In addition to providing tables and charts of space inventory and utilization data by organization, building and room function, it produces MIT's physical facilities report to the annual Higher Education General Information Survey required by the Department of Health, Education and Welfare.
In a conventional sequential file, a simple request for information on one room may require a machine reading of an entire magnetic tape. INSITE uses direct access storage techniques that reduce the cost of keeping data in core storage and avoid a complete scanning operaton.
"Since 1970, when INSITE was first established," Cyros said, "declining budgets and increasing construction costs have made it increasingly critical to identify new ways of using existing physcal space to construct new facilities. As a result, the need for space accounting system is becoming imperative in many organizations."
increasingly critical to identify new ways of using existing physical space to construct new faciities. As a result, the need for a

## MIT to Join Architecture Consortium

The MIT School of Architecture and Planning and seven other eastern schools of architecture are joining in a study and action program to improve arch itectural education in the United States to meet the needs of the changing society.
The Andrew W. Mellon Foundation has awarded $\$ 286,500$ to the schools, to be known as the Consortium, for the implementation of the project, which will have its administrative headquarters at MIT.
MIT Provost Walter A. Rosenblith said, "This proposal, which aims at reforming architectural education on a national scale, is a project which is most welcome at MIT. I am pleased that the Mellon Foundation and the Deans of the Consortium have seen it appropriate to designate MIT as the host institution."
The proposal for the project was written by Dean William L. Porter of the MIT School of Architecture and Planning and the deans of the other participating schools. It is entitled "A Conceptual Framework for Study and Action to Reform Architectural Educa tion.
Four studies will be undertaken, one on each of the four primary educational objectives-to relate architectural education to society, to the profession, to the university, and to new knowledge.
The studies will be based on current conditions in
he schools of architecture, with special reference to ces of the Consortium schools and stimates of society's present and future needs.
A fifteen-month period, from June of 1974 to August of 1975 , has been set for conducting the studies.
A full-time study director will be appointed for each of the four studies. The board of directors will consist of the Deans of the Consortium and several other distinguished practitioners and educators.
The coordination of the studies will be managed jointly by Dean Porter and Dean Maurice Kilbridge of the Graduate School of Design at Harvard, and one of the four study directors.
Dean Porter, quoting the proposal, said, "The starting point of the proposed study is our collective recognition that architectural education is an underdeveloped area of the academic world." He said that architectural education "must be improved so that it can meet the challenges and opportunities of a changing society.
The Consortium schools, besides MIT and Harvard, are the Columbia School of Architecture, Cornell University College of Architecture, Art and Planning, Howard University School of Architecture and Planning, University of Pennsylvania School of Architecture, Princeton University School of Architecture and Urban Planning, and Yale University School of Architecture.

## 1,800 Expected to Attend Summer Session

Over 1,800 professional men and women who wish to keep pace with new developments in their fields are expected to attend the 1974 MIT Summer Session.
Included in this year's session, which will be held from June 4 to August 30, are 64 special one- and two-week programs from a variety of engineering, management and computer-related fields.
The programs will be taught by members of the MIT faculty and

Other special programs offered include "The Mighty Mini-A Close Look at Minicomputers and their Application to Real World
of Transportation Systems"; "Strategic Planning in the Energy Sector". "Nuclear Power Reactor Safety" and "Advances in Human Nutrition Knowledge.'

## New Health Sciences Fund <br> Will Support Graduate Study

teaching staff and outside visiting lecturers. The intensive day-long sessions, with some evening and Saturday meetings, carry no academic credit.
Professor James M. Austin, Director of the Summer Session, said that of the 1800 registrants, 10 percent are from outside the United States and about nine percent either attended or graduated from MIT. The average age of participants is 37 years.

The interest in programs is so diverse this year," he said, "that many academic departments will be represented by popular programs in terms of attendance."
One of the first two programs to be oversubscribed this year is being offered by the staff of the MIT Planning Office. The registration limit of 40-45 for "Facilities Management Systems and Inventory Techniques (INSITE) was filled almost six weeks prior to the Session's scheduled opening date.
Another first this year will be a series of programs on communication sponsored by the Office of Design Services. Jacqueline S. Casey, director of design services, will lecture on the design and

MIT has established a "Health Sciences Fund" to support faculty and graduate student research in the life sciences and biomedical engineering.
The fund will be under the direc tion of President Jerome B. Wies ner, Dean Irwin W. Sizer of the Graduate School and two CorporaGraduate School and two Corporation members, Dr. George
Thorn and Uncas A. Whitaker. Thorn and Uncas A. Whitaker.
For the academic year 1974-75 $\$ 40,000$ has been made available from the fund to support graduate students who are or will be doing research in this area.
Graduate students who wish to apply for a Health Sciences Fellowship should submit an application which includes a summarized research proposal to their department head or to a director of an interdisciplinary program. The nominations must be submitted to the Dean of the Graduate School before June 15, 1974 Awards of fellowships will be announced on July 1.
The fellowships will be for a 12 -month period and will pay full tuition and medical fees, plus a $\$ 3,600$ stipend.
Excellent progress in research,

## Shell and Launch Christened



Double christening ceremony at MIT's Harold Whitworth Pierce Boathouse on a sunny, but windy, day last Wednesday formally conferred names on an eight-oared racing shell and a coaching launch. Howard W. Johnson, chairman of the MIT Corporation, pours champagne over the bow of a shell named for him, and Mrs. Florence Jope christens launch in the name of her late husband, Ralph T. Jope. Mr. Jope, a member of the MIT class of 1928, was business manager for Technology Review from 1929 to 1965 and director of the Development Office from 1951 to 1960.
as reflected in annual reports, could bring about renewals of fellowships for a period of up to three years.
Dean Sizer, commenting on the new program, said:
"MIT is most grateful to receive this support for graduate students at a time when it is needed most. With the loss of several large federal fellowship programs during the past three years, it is essential to find new sources of support.
"With the help of the Development Office, the Graduate School has been successful this year in obtaining a number of fellowships from private industry, foundations and individuals. It is espe cially gratifying that some of these new fellowships have been designed for women and minority graduate students."

Tanker Collection Completed at Hart
A model of a giant ocean-going tanker has made port at MIT's Hart Nautical Museum, increas ing to nearly 90 years the span of time covered by the museum's model fleet of tankers.
The oldest ship represented in the display goes back to 1885
The new model, which brings the exhibit up to date, is of the Esso Gascone, a 250,000 -ton deadweight VLCC (Very Large Crude Carrier).
The model, a gift of the Donmarel Foundation, was built by C.M. Smeltzer Jr., of Matawan, N.J., from plans donated to the museum by Exxon International
Mr. Smeltzer had constructed four of the other models in the tanker fleet, which is exhibited in one of the corridor cases on the first floor of Building 5 .
The Esso Gascone and five sister ships were built by the A.J. "Weser" Shipyard in Bremen West Germany, from 1972 to 1974 She is 1,141 feet long over-alllonger than three football fieldsand can carry about 16 times the cargo of a standard World War I T2 tanker.

The model, built on a scale of $1 / 32$ inches per foot, is about three feet long.


Johan Akerman with the Little Iron Man

## Little Iron Man Trophy Caps Successful Fencing Season

By SALLY M. HAMILTON Staff Writer

It was a very good year for the 3-man MIT Fencing Team, a superb freshmen trio led by the exuberant Johan Akerman, 19, of Stockholm, Sweden.
The team's record of 35 wins in 36 collegiate meets was capped when they won the eastern foil team championship at the 77th annual Intercollegiate Fencing Association (IFA) meet in March.
Other members of the team are Richard W. Reimer, of Richmond Hill, N.Y. who won second place in the New England Fencing Tournament and Arlie G. Sterling, of Norfolk, Mass.
Winning the IFA team championship, the most prestigious fencing team title in the country was a first for MIT foilers and with it came the coveted "Little Iron Man" trophy, the oldest inter-collegiate athletic trophy in the country. Until this year the trophy, which was established in 1894, has been won almost continously for the past 40 years by teams at Columbia and New York Universities.

At the second day of the IFA meet, Akerman defeated five of the top foilers in the country to win the tournament's individual cham pionship.
Akerman was first introduced to fencing when he was seven, with some forceful coaxing by his cousin, Kerstin Palm, then the junior world champion. Of his firs lesson, Akerman said, "I hated it so much that I escaped by leaving through a second story window."

There is no sign of that inauspicious beginning now for as MIT Maestro Silvio Vitale says, "Johan lives fencing."

Akerman also won this year's New England Intercollegiate Foil Championship. Before coming to MIT he was the Scandinavian Junior Foil Champion and Middle Swedish Senior Epee Champion. In addition to participating in the team's regular schedule of meets, Akerman entered at least 10 outside competitions and would have fenced even more if tournament rules had permitted.
Akerman will live fencing even more in the coming year. He has been inducted into the Swedish Army for a year, where he will spend most of his time training with the best foilers in his country He plans to return to MIT in 1975 to fence and complete an engineering degree.

## More Charter <br> Trips Listed

The MIT Quarter Century Club recently announced its latest series of vacation trips for the MIT community.
Brochures for vacations in Switzerland (July 5 to 13) and the Costa del Sol, Spain (Aug. 11 to 19) have already been sent out. This is the first time that summe trips-which the Club has had many requests for-have been of fered. Initial returns have been very good.
Other upcoming trips are to Scotland (Sept. 12 to 19), Bucharest, Romania (Sept. 30 to Oct. 7), Rio de Janiero (Dec. 3 to 11) and Tokyo (Jan. 6 to 15).

For further information and to suggest destinations for future trips call Roely Meddens at x3-7914. Scotland and Romania brochures will be mailed in about a month.


May 22
through
June 2

## Events of Special Interest

Military Commissioning Exercises - Thurs, May 30, 11am, Kresge Auditorium.

Commencement Exercises - Fri, May 31, 10:30am, Rockwell Cage.
President's Reception - For graduates and their guests. Fri, May 31, 1 pm, West Campus.

1974 Alumni Days - This is not a complete schedule. For furthe details consult the Alumni Days brochure, which also contains registration forms for those events which require tickets for admission.

Sunday, June 2
Automobiles of the Past - See and ride in vintage cars. 1-7pm, Briggs Field.
Film Series - ABC Series - What About Tomorrow - Searching the Unknown; City of the Future; Facing the Consequences. 2-3:20pm Kresge Little Theatre.

A New Concept in Education - Seymour A. Papert, education \& pplied mathematics; co-director, Artificial Intelligence Lab 3:30-4:45pm, Kresge Auditorium.

Class Cocktail Parties - Cocktails at new fraternity houses, $5-6 \mathrm{pm}$ 405-407 Memorial Drive. Tickets required.

International Buffet - Sumptuous dinner from around the world, with an unlimited supply of draft beer. $5: 30-7: 30 \mathrm{pm}$, Stu Ctr Tickets required.

Tech Night at the Pops - Arthur Fiedler at his best. 8:30-10:30pm Symphony Hall. Buses leaving from front of Stu Ctr, 7pm, Ticket required, available Rm E19-437, x3-4876.

## Monday, June 3

Perspective: A historical look at the impact of the automobile on America.

The Dangerous Future - Elting E. Morison, Elizabeth and James R. Killian Professor, School of Humanities. 9-9:20am, Kresge Auditorium.

Changing Constraints: 9:30-11:30am, Kresge Auditorium. Participants: Automotive Fuels - Morris A. Adelman, economics Environment - Henry D. Jacoby, management. Congestion, Shortages and Equity - David Gordon Wilson, mechanical engineering. Safety - William Haddon, Jr, M.D., '49 president;
Insurance Institute for Highway Safety, Washington, DC. Question Insurance Institute for Highway Safety, Washington, DC. Question and answer period.
Future Options: A review of some of the alternate routes we're likely to take. $2: 30-5 \mathrm{pm}$, Kresge Auditorium. Alfred A.H. Keil, Dean of the School of Engineering; ocean engineering; moderatorParticipants: Technology and Design in the Future - John. B.
Heywood, mechanical engineering. Fred Bowditch, executive Heywood, environmental activities staff, General Motors. Public and Mass
Transportation - Daniel Roos, civil engineering. Government and Public Policy - Alan Altshuler, secretary of transportation \& Public Policy - Alan Altshuler, secretary of transportation \&
construction, Commonwealth of Massachusetts. Legislative and Legal - Loyd Norton Cutler, Wilmer, Cutler and Pickering, Legal - Loyd Norton Cutler, Wilmer, Cutler and Pickering,
Washington, DC. Industrial Strategies - James W. Ford, assistant controller, Ford Motor Finance Staff. Question and answer period.

Social Hour - 5:15-6:15pm, duPont Athletic Center. Tickets required.

## Seminars and Lectures

## Wednesday, May 22

COMPENDEX - On-line demonstration of the computerized version of Engineering Index, a new bibliographic data base recently available through NASIC. $2: 15 \mathrm{pm}$, Science Library. Info, NASIC Coordinating Office, Rm 10-400, $\times 3$-7746.
The Purpose of Privacy in Information Systems* - Jeffrey A. Meldman, G. Electrical Engineering Telecommunications Policy Planning and Research Seminar. 4pm, Rm 9-450.

Reliability of Slender Columns* - Rudiger Rackwitz, visiting engineer, Technical University of Munich. Civil Engineering Structures Division Seminar. 4pm, Rm 1-236.

## Friday, May 24

Plasma Containment in Cusp Geometries* - M. Levine, Airforce Cambridge Research Labs. RLE Plasma Dynamics Seminar. 4pm, Rm 36-261.

## Tuesday, May 28

Hydrodynamics of Solids* - Dr. P.D. Fleming, chemistry, Brown

University. Metallurgy \& Materials Science Polymer Science and Engineering Seminar. 3pm, Rm 4-231.
Wednesday, May 29
A Three Component Laser Interferometer for Measurement of Turbulent Flow - Joseph E. Rizzo, aero/astro, Southampton University. Mechanical Engineering Seminar. 4pm, Rm 3-343.

## Community Meetings

Women's Forum* - Final "formal" meeting of the year will look back on the year's activities over lunch, coffee and some special goodies. Tues, May 28, 12n, Rm 10-105.

## MIT Club Notes and Meetings

Classical Guitar Society - Classes, group or private. Thurs, $5-9 \mathrm{pm}$; Sat, $9 \mathrm{am}-12 \mathrm{n}$; Rm 1-132, 134, 136. New group class for beginners every month. Vo Ta Chuoc, x9633 Dorm.

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

Student Homophile League* - Meetings 1st \& 3rd Sun of each month, $4 \mathrm{pm}, \mathrm{Rm} 1-132$; next meeting Sun, June 2. Info, talk, help in coming out, call Hotline, 494-8227. Come out, come out, wherever you are!

## Wellesley Events

Agnes Abbot: A Retrospective Exhibition* - Includes 60 watercolor landscapes and several in oil. Thru Wed, June 5, Wellesley College Museum, Jewett Arts Center, Wellesley campus. Hours: Mon-Fri, 8:30am-5pm; Sat, 8:30am-12n, 1-5pm; Sun, 2-5pm. Free.
The Claude Lorrain Album* - Sixty drawings from the collection owned by Norton Simon, Inc. Museum of Art. Through Sat, June 8, Wellesley College Museum, Jewett Arts Center. Hours: Mon-Fri, 8:30am-5pm; Sat, 8:30am-12n, 1-5pm; Sun, 2-5pm.

## Social Events

End of Finals Week Rock Party* - Sponsored by the senior class. Fri, May 24, Stu Ctr Lobdell. Time will be announced during finals week.

## Movies

Charulata/The Lonely Wife - Film Society. Fri, May 24, 7:30pm, 9:30pm, Rm 6-120. Admission \$1
Abhiman* - SANGAM. Indian movie with subtitles. Sat, May 25, $6: 30_{1} \mathrm{~m}$, Rm 3-370. Admission 50 cents with ID.

Abhiman* -SANGAM. Indian film with subtitles. Sun, May 26, $3: 30 \mathrm{pm}$, Kresge Auditorium. Admission 50 cents with ID. Indian efreshments available.

2001 Space Odyssey* - Sponsored by senior class. Wed, May 29, Sala. Times will be announced during finals week.

Bullit - LSC. Firi, May 31, 7pm, 9:30pm, Rm 10-250. If its a hot night, Rm 26-100. Admission 50 cents.

Voyage to Italy - Film Society. Fri, May 31, 7:30pm, 9:30pm, Rm 6-120. Admission $\$ 1$.

Monkey Business - LSC. Sat, June 1, 7:30pm, 9:30pm, Rm 10-250. If it a hot night, Rm 26-100. Admission 50 cents.

## Music

Spring Revels* - Celebration of spring by a large company of dancers and musicians, with songs and dances drawn from English, Irish and American traditions. Directed by Jack and Carol Langstrass. Thurs, May 23, 8pm; Fri, May 24, 4pm, 8pm; Kresge Auditorium and Plaz2. Tickets: $\$ 3$ adults; $\$ 1.50$ children; $\$ 2$ MIT student, Kresge ticket office.

## Theatre

Androcles and the Lion* - MIT Community Players presents Bernard Shaw's play. Thurs-Sat, May 23-25, 8:30pm, Kresge Little Theatre. Tickets: $\$ 2.50$, Bldg 10 Lobby and at the door.

## Exhibitions

Photographs by MIT Students* - Exhibition of black and white prints. Thru Sat, June 1, Creative Photography Gallery. Hours: $12 \mathrm{n}-7 \mathrm{pm}$ weekdays, $12 \mathrm{n}-6 \mathrm{pm}$ Sat, Sun. Free.

Paintings from the Museo de Art, Ponce, Puerto Rico*- Organized by MIT Committee on the Visual Arts. Fri, May 17 -Sat, June 8, Hayden Gallery. Hours: Mon-Sat, 10am-4pm; closed Sun, holidays. Free.
Music Library Exhibit - Chinese musical instruments.
Hart Nautical Museum* - Permanent exhibit of rigged merchant and naval ship models, half models of yachts and engine models. Open daily in Bldg 5, 1st floor.

## Athletics

Maggie's Spring Exercise Marathon** - Beginning Mon, June 3, aily for 2 weeks, 5 hours of exercise per day: $7-9 \mathrm{am}, 12 \mathrm{n}-2 \mathrm{pm}$, $5-6 \mathrm{pm}$, duPont Athletic Ctr. Only those who have been exercising egularly, including running, for $11 / 2$ hours/day, should expect to participate.

## Announcements

Book and Clothing Drive for Charity* - Cleaning out your room for the summer? Bring your books, clothes to collection places in al dorms be

TCA Needs Summer Workers* - If you will be in the Cambridge area and would like to work on HoToGamit, Freshman Picturebook Course Evaluation or any other projects, stop by TCA, 4th fl Stu Ctr, and let us know when you are free and what interests you.

Child Care - For information on day care centers, nursery schools, family day care homes - where they are, how much they cost and drop by $\mathrm{Rm} 4-144$

## Dining Service

Thursday, May 23 - Lunch: tuna noodle casserole. Dinner: pork steak \& applesauce. Friday, May 24 - Lunch: baked codfish Dinner: shrimp creole over rice. Monday, May 27 - Lunch : slice chicken \& biscuit. Dinner: spaghetti \& meatballs. Tuesday, May 28 - Lunch: seafood newburg over toast. Dinner: sauteed beef liver \& onions. Winner: meatloaf \& gravy.

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 May 29 through June 9 to the Calendar Editor Room 5-111, Ext. 3-3279, before noon Friday, May 24.

## Reactor to Be Modified

MIT's Nuclear Research Reactor will be shut down Friday, May 24 for modifications to improve its scientific usefulness, it has been announced by officials in the Department of Nuclear Engineering.
The modifications, principally an improved core design, will begin on Tuesday, May 28 and take about four months. According to Co-Director of the MIT Reactor, Professor of Nuclear Engineering David D. Lanning, the objective of the modification is to improve the flux of neutrons from the reactor. Professor Lanning is in charge of reactor modifications, while operation of the reactor is under direction of Lincoln Clark, a research associate in the department.
These neutrons are used in scientific research and to bombard materials to produce radioisotopes for medical centers and firms in the Boston area. At present, said Professor Lanning, the flux of neutrons from the fission reaction is more dense at the center of the core, where radioisotopes are produced, than at the edges of the core where neutron beams are drawn off for use in scientific experiments.
The improved beam quality will be obtained by making the core more compact, increasing the neutron flux availble at the beam ports by three-fold. Other improvements in beam quality will be obtained by using light (ordinary) water as a coolant and moderator, and by employing heavy water as the primary neutron reflector.

No significant changes will be made in the reactor shielding, containment building, or control instrumentation. Because the facility will continue at the same 5 megawatt power level at which it has been operating since 1965, no modification of the heat exchangers, cooling towers, or other parts of the heat removal system are required. As in the past, the reactor will operate at a temperature of 100-130 degrees Fahrenheit and at atmospheric pressure.

A license application to upgrade the reactor was approved by the US Atomic Energy Commission in April, 1973. Shortly thereafter orders were placed for major components and for fuel for the new reactor. Since most of these components have been received or are scheduled for delivery, the decision was made to shut the reactor down and prepare for the modifications, Professor Lanning said.


The Department of Mechanical Engineering held a grand opening party for its new Student Lounge, May 13. The Lounge came to reality through the efforts of an ME Department student committee, and was designed by Mitchell Lewis Green, a junior in architecture.
The Lounge is one phase of a multi-phase effort by mechanical engineering to create a focal point of activities with which undergraduate, graduate, mechanical engineering and non-mechanical engineering students can identify.

# AFFIRMATIVE ACTION PLAN OF THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY 

March 1, 1974

OFFICE OF THE PRESIDENT

This Institute-wide Affirmative Action Plan has been prepared as an expression of MIT's commitment to the principle of equal opportunity in employment and in education and is in accordance with all Federal government regulations affecting equal opportunities in higher educational facilities as of January 1, 1974.

This Plan, the commitment it affirms, and the policies it proclaims have my full personal agreement and support.

$3 \omega$ iesnen

$\checkmark$ Jerome B. Wiesner

## Communication of the Plan

The substance of this Plan will be disseminated to the MIT community through publication in Tech Talk, the official Institute newspaper. Subsequent Institute policies and procedures developed either to meet goals outlined in this Plan or to address later provisions and amendments of Federal government regulations, will be disseminated to the Institute community through Tech Talk, and will be added to this Plan annually.
A reference copy of this Plan will be on file in each department, office and laboratory and in the Institute Information Center, Room 7-211. Copies of the total Plan, including each department's specific Affirmative Action Plan will be on file in the appropriate Personnel offices, in the Office of the Special Assistant for Minority Affairs, in the Office of the Special Assistant for Women and Work, and in the Office of the President and Chancellor
Additional information on the dissemination of the Plan internally to the community and externally to the community and public at large can be found in Appendix F

PERSONS DIRECTLY RESPONSIBLE FOR OVERSEEING MIT'S AFFIRMATIVE ACTION PLAN

The President and Chancellor have designated to the following persons the responsibility for monitoring the progress of MIT's Affirmative Action programs. All inquiries in reference to this Plan should be directed to the appropriate person listed below.

MIT CAMPUS
John M. Wynne
Ext. 3-4942
3-4943

Patricia A. Garrison
Ext. 3-1512
3-1519
INCOLN
LINCOLN LABORATORY
John Dargin
Ext. 1817407

Vice President, Administration and Personnel and the Institute's Equal Employment Opportunity Officer-overall Equal Opportunity Coordinator and official liaison with all appropriate Federal and State agencies Assistant to the Equal Employment Opportunity Officer.
portunity Coordinator for Lincoln Laboratory-reports directly to Laboratory Director.
Additional Assistance Can Be Obtained From the Following Persons:

Mary P. Rowe
Ext. 3-5921

Ext. 3-4846
Special Assistant for Women and Work in the Office of the President and Chancellor-Coordinator of equal oppor tunity in Employment and Education for Women.
Special Assistant to the President and Chancellor for Minority Affairs-Coordinator of equal opportunity in Employment and Education for Minorities.
Appendix ( $G$ ) outlines the responsibility for implementation of the Affirmative Action Plan in more detail and clarifies the decision making process in the employment area.

## I. INTRODUCTION

As a major educational institution, a large-scale employer, and an influence on our society through its students, its alumni, and its employees, the Institute stands committed to the principle of equality of opportunity in employment and in education.
In its most elementary and comprehensive form, our adherence to the concept of equality of opportunity requires that we strive toward a condition in which considerations of race, sex, national origin, and religion are irrelevant as determinants of the access an individual has to opportunities for education, for employment, for achievement, and for personal fulfillment. Rather, the controlling factors in all such matters must be individual ability, interest, and merit.
The Institute's posture with respect to the principle of equality of opportunity in this community was expressed in the Report of the President and Chancellor for the 1971-72 academic year:

MIT, together with other institutions in this society, must rethink and recast the structure of opportunity which we afford those who spend time with us-opportunity for individual satisfaction and self-fulfillment, opportunity for employment and subsequent advancement. All who study here and work here stand to benefit from greater attention to these basic human needs. Persons employed at the Institute require ready access to opportunities for advancement, as well as greater attention to their needs for personal and career development. Those who study here deserve an education which enriches the essential lifelong process of growth and educational self-renewal and places a premium on self-sufficiency and intellectual independence.
While these goals pertain to all members of the MIT community, at this moment in time we have a special responsibility to expand opportunities for members of minority groups and women at all levels of the Institute. We must not stand aside from the society as it struggles to consolidate the opportunities for a decent life that now exist. Indeed, we should be innovative and creative in our handling of these difficult problems with the hope that, in so doing, we will point the way for others,
as well as enriching our own environment for all members of this community. We must put special emphasis on placing in significant positions at all levels competent women and members of minority groups with whom young people may identify professionally and personally. Our record of achievement in the past year has been significant but falls short of the standard that we have set for ourselves. We are taking steps to improve our means for meeting our pledge to the Federal government and, even more importantly, to ourselves.
At the present time women and members of some minority ${ }^{1}$ groups are underrepresented in many categories of employment and in most student categories. This underrepresentation has resulted from the history of American society, which was reflected in past Institute practices which, until very recently, have been at best neutral with respect to this underrepresentation and, at worst, discriminatory with respect to minorities and women.
Our present and future course in these matters, which goes beyond nondiscrimination, i.e., the elimination of all policies and practices that work to the disadvantage of individuals on the basis of race, sex, national origin, or religion, is based on the concept of Affirmative Action.
The principle of Affirmative Action requires the Institute to determine if it has met its responsibilities to recruit, admit, employ, promote, and reward women and minorities to a degree consistent with their availability and merit, whether or not any failure to do so can be traced to specific discriminatory policies or actions. Where women and minorities are underrepresented at MIT in the student and employment ranks, the Institute will recruit and employ them in accordance with their increasing availability. The premise of this commitment is that the corrosive effects of systematic exclusion, inattention, and overt discrimination in the past cannot be remedied in appropriate ways and in a reasonable time by a posture of neutrality with respect to race and sex. Affirmative action is necessary to avoid the perpetuation of the inequities that are our heritage from these exclusionary and discriminatory practices of the past.
While the Institute is obliged, as a major Federal contractor, to develop and sustain a program of Affirmative Action, our commitment to these matters transcends legal or contractual requirements. We undertake these actions and adopt these policies not because we are required to, but because it is right and proper that we do so.

## II. MIT AFFIRMATIVE ACTION POLICY

The Institute's Affirmative Action program is in tended to expand our efforts to guarantee equality of opportunity in employment and in education and to reduce underrepresentation and underutilization of minorities and women at MIT. For all Institute categories of employment, our objectives are to achieve a representation of women and minorities that is at least in proportion to their current availability and to provide new opportunities for career development which both stimulate and respond to their changing interests and aspirations. Similarly, for all of the Institute's educational programs, our

[^0]objectives are both to achieve representations of minorities and women in the student body which reflect their current availability and interests and to encourage larger proportions of these groups to seek careers for which the Institute's educational resources are designed to prepare them.
In accordance with these overall objectives, numerical goals and timetables for employment at the Institute have been set. 2

Achievement of these goals and attainment of the longer-range objectives require adoption of the following principles:

1. All categories of employment at the Institute having fewer minorities and women than would reasonably be expected on the basis of their availability in the work force must be identified. These imbalances must be reduced by vigorous and systematic recruitment efforts. Where appropriate and feasible, job training and professional development efforts will be undertaken. These requirements apply to academic departments (including faculty and academic staff categories), laboratories, and all administrative and support activities.
It is important to note that many unreasonable limitations and inequitable situations in employment are rooted in occupational segregation and in the stereotyping of roles in our society. Thus, equality of opportunity requires that we make equally accessible to all persons job categories that have been preponderantly occupied by women and/or minorities.
2. All employees will be encouraged to make the fullest use of their skills and talents by participating in educational and career development opportunities and by taking advantage of opportunities for promotion and transfer consistent with both the needs of the Institute and the with both the needs of the Institute and the individual's ability and aspirations. Special efforts will be made to ensure that women and minorities are aware both of this principle and of specific opportunities that may be of inerest.
3. Equal compensation, benefits, and support will be provided without regard to race, sex, national origin, or religion to all staff and employees of equal merit in positions of equivalent responsibility.
4. Access to educational programs, financial assistance, and other services and facilities will be provided to students in a manner that does not discriminate against women and minority students.
5. It will be our goal to increase the numbers of women and members of minority groups within our undergraduate and graduate student bodies. This goal can be attained only by a vigorous program to recruit potential applicants and to increase the interests in, preparations for, and availabilities of women and minorities for careers in science and technology. While ultimate success will result in substantial changes in admission patterns, our immediate efforts must concentrate on enlarging the pool of qualified women and minority applicants from which we admit students.
6. Selections among candidates for employment and among student applicants must reflect both continuing attention to individual merit and quality and a recognition that narrow interpretation of qualifications or credentials has worked to the disadvantage of women and minorities. In other words, the Institute's employment practices and its admission policies must emphasize individual merit, performance, and potential in ways that reflect the fact that limited prior opportunity, social discrimination, and enforced segregation influence a person's record of achievement.
7. Procurement and purchasing practices must ensure maximum opportunity for the participation of minority and female vendors in the provision of services and materials and for the employment of minority contractors and construction workers in the construction or renovation of Institute facilities, either on or off campus. In this regard, each contractor
8. The specific employment objectives are detailed in the individual Plans of the Institute's organizational units which are listed in Appendix A. These goals have been projected for July 1974 and July 1975 and the aggregation of the individual department goals is show in Appendix H .
who seeks MIT business is expected to have and to follow an Affirmative Action program that is in accord with Federal and state regulations.
The primary responsibility for adherence to these principles, and for the establishment of an atmosphere in which the evolving concept of Affirmative Action is accepted and supported, rests with supervisors at all levels and with every person having administrative responsibility within the Institute.
Overall monitoring, auditing, and staff coordination of the Institute Affirmative Action program has been assigned to the Vice President, Administration and Personnel who has been designated the Institute Equal Employment Opportunity Officer as of July 1, 1973 and who has the responsibilities outlined in the Federal Contract Compliance Regulations.
In the long run, our objective as an institution is to change in ways that will achieve true equality of opportunity in employment and in education and which, thereby, will obviate the need for specific programs of affirmative action.

## III. AFFIRMATIVE ACTION

 FOR ACADEMIC STAFF
## A. Aims and Plan of Action

At the present time, women and minorities are underrepresented in most academic positions within the Institute, particularly in faculty positions, both tenured and untenured. Our commitment to a policy of Affirmative Action requires that we make every effort-and that we show substantial progress over time-in the following directions. First, we must increase the number of minorities and women on our Faculty and academic staff. This increase must be consistent with departmental needs for teaching and research talent and consistent with the needs for development of existing and/or new professional fields and programs. Second, MIT must seek to broaden the pool of available candidates for each position on the Faculty and academic staff by recruiting and educating minority and women students (see Section V), as well as by developing shorter-range programs of career orientation and professional development. In particular, our efforts must be designed to encourage and to facilitate the movement of promising women and minority candidates into the fields of science and engineering and the applications of science and technology to human and social problems. The academic fields related to science and technology are of particular concern to us because MIT is committed to leadership in these fields, in which the present imbalance in representation of minorities and women is large.
In addition to our efforts to increase the numbers of qualified women and minorities, we are committed to supporting those who are now on our Faculty and academic staff by providing for them the opportunities for promotion and professiona growth that will in turn increase their representa tion in the senior ranks of the academic professions.
In short, our program for the Faculty and aca demic staff is a maximum, result-oriented effort to increase the number of women and minorities and to create an atmosphere of support, encouragement, and congeniality in which all faculty and academic staff may thrive professionally and personally.
The following course of action is intended to achieve the Institute's goals and meet existing problems in this area:

Each academic department will identify the extent to which women and minorities are underutilized in each professional rank, by means of a utilization analysis ${ }^{3}$ of the depart-
3. According to the Federal guidelines for Affirmative Action programs, "underutilization is defined as having fewer minorities and women in a particular job classification than would reasonably be expected by their availability." The utilization analysis, which is a required part of the Plan, is intended to show representation of women and minorities in comparison with relevant "catchment" or recruitment "pools" for faculty and academic staff positions. The utilization analysis should estimate the proportions of women and minorities available at the appropriate skill levels both within and without the Institute. It is the purpose of this analysis to show clearly those areas where women and/or minorities are underrepresented, together with the reasons for underrepresentation.
ment's faculty and academic staff. In academic areas where there is underutilization of women and minorities, vigorous and systematic efforts will be undertaken to identify and to recruit women and minority candidates.
2. Each department will establish, bi-annually beginning in July 1973 numerical goals and timetables as guidelines for its progress in recruiting and hiring women and minorities for academic positions for the next two years. Appendix H includes statistical summary sheets showing the representation of minorities and women at the Institute as of December 31, 1973 and goals for July 1974 and July 1975 aggregated from the individual goals of each department, laboratory and center projected in April 1973.
3. The departments will seek to increase the pool of potential candidates in their areas by vigorous and systematic recruitment of women and minority graduate students.
To implement this program, departments will follow the specific set of procedures outlined in Appendix E-1, Academic Departmental Procedures for Affirmative Action.

## B. Responsibility for Implementation

Responsibility for meeting departmental goals and timetables rests with each department head. It will be expected, however, that all members of the academic staff will cooperate and support these efforts, in terms of both their supervisory roles and their participation on various Institute committees.
Responsibility for the assurance of good faith ef forts belongs to the academic Deans and the Academic Appointments Subgroup of the Academic Council which considers serious search efforts with regard to women and minority candidates in weekly reviews of proposed academic appointments.
The Institute's Equal Employment Opportunity (EEO) Officer and the Special Assistants for Women and Work and for Minority Affairs will play leading roles in the development, coordination, and monitoring of all Affirmative Action programs. They will assist department heads in the preparation and implementation of specific plans to ensure the effectiveness and continuity of the Institute Plan within each department unit. In addition, department heads will monitor progress on a quarterly basis and will submit an annual evaluation report to the Institute's EEO Officer.

To assure good communication and visibility, each department head (or director of a research center or laboratory) will act as departmental EEO Representative. If a department head chooses to delegate some of the responsibility in this area, he or she may appoint a member of the department as EEO Representative. This person will assist the department head-working with members of the department, the appropriate Dean or senior officer, the EEO Officer and the Special Assistants for Women and Work and for Minority Affairs to implement and monitor both the academic and non-academic policies and procedures that are contained in the Institute's Affirmative Action Plan, as well as the department's Affirmative Action Plan.

EEO departmental Representatives for the 1973/74 year are listed in departmental plans and with the EEO Officer and the Special Assistants for Minority Affairs and for Women and Work.

The specific responsibilities of the departmental EEO Representative (whether or not he or she is the department head) will be as follows:

1. to establish specific methods for identifying the underutilization of skills and talents of women and minority staff and employees within the department and to encourage both their participation in educational and career development programs and their taking advantage of opportunities for promotion and transfer, consistent with their individual abilities and aspirations and with the needs of the Institute;
2. to seek the help of everyone in the department, particularly women and minorities, in identifying problem areas related to the goals of Affirmative Action (including possible problems with attitudes, atmosphere, etc.) and in referring qualified minority and women candidates for both academic and non-academic positions;
3. to develop a serious search strategy, including an up-to-date list of contacts, for identifying women and minority applicants in career fields appropriate to the department's needs;
4. to maintain a file on minority and women applicants and potential candidates for academic positions within the department;
5. to undertake a careful review of departmental employment criteria relating to merit and to make certain that all job requirements are specifically necessary for the category under consideration (e.g., whether certain degrees are necessary, whether "requisite" skills are actually utilized, and whether on-the-job training could be substituted for certain requirements);
6. to review the criteria for departmental hiring, retention, promotion, and tenure as actually implemented to ensure that procedures are in compliance with the Higher Education Act of 1972 and HEW Guidelines; ${ }^{4}$
7. to disseminate the latest Institute policies and procedures on Equal Employment Opportunity to all members of the department, both professional and non-professional;
8. to develop strategies for increasing the available pool of candidates for academic positions, such as actively recruiting women and minorities for graduate programs and postdoctoral training;
9. to conduct quarterly reviews of progress, and, if necessary, to take steps for (or recommend) re-evaluation and corrective action; and
10. to develop within the department specific procedures for reviewing alleged complaints of discrimination consistent with the Institute's complaint policy which is now in operation.

## IV. AFFIRMATIVE ACTION FOR NON-ACADEMIC EMPLOYMENT

## A. Aims and Plan of Action

Women and minorities are underrepresented in many non-academic positions at the Institute. Furthermore, the Institute recognizes that many inequitable situations in employment are rooted in occupational segregation and in stereotyping of roles in our society. These persistent problems have resulted in widely held perceptions by many minority and women employees (and prospective employees) that job responsibilities and opportunities for advancement are seriously limited, and that individual skills and talents will be inadequately recognized and rewarded. Accordingly, given the Institute's commitment to equal opportunity in all employment areas, the Affirmative Action Plan for non-academic employment has a double responsibility: first, to correct the present underrepresentation and underutilization of women and minorities; and, second, to reverse prevalent feelings of frustration and low expectations for change on the part of many valuable and talented employees.

The recent reorganization of services in the Personnel Office is intended-in large measure-to alleviate this problem. Specifically, personnel of ficers have been assigned to each department, of fice, and laboratory with full responsibility for al personnel matters-including assistance in af firmative action-at all levels of non-academic employment.

In view of both the problems and aims described above, the following course of action has been es tablished:

1. Within each non-academic area (administrative unit, office, department) of MIT, the imbalance in representation of minorities and women vis-a-vis other (white male) employees will be identified and documented.
2. Each department will establish bi-annually beginning in July 1973, specific numerical goals and timetables for the next two years in an effort to correct imbalances, and specific methods will be developed to facilitate achievement of the goals.
Appendix H includes statistical summary sheets showing the representation of minor ities and women at the Institute as of Decem ber 31, 1973 and goals for July 1974 and July 1975 aggregated from the individual goals of each department, laboratory and center in April 1973.
3. Vigorous and systematic recruitment of minorities and women, both inside and out side the Institute, will be undertaken
4. Job training, career counseling, and professional development programs will be offered where appropriate and feasible.
5. All employees will be informed of the policies,
goais, and procedures with respect to non discrimination outlined in the Institute's Affirmative Action Plan. Special efforts will be made to ensure that women and minorities are aware of specific opportunities for promo tion, transfer, and training that may be of interest to them
6. Steps will be taken to sensitize supervisors to both subtle and overt forms of discrimination and to inform them in detail about the Affirmative Action program, both in terms of legal requirements and of MIT's particular commitments.
7. The Institute will make efforts in the direction of improving access by all persons to job categories which have traditionally been preponderantly occupied by women and/or minorities.
Specific affirmative action policies for non-academic employment are detailed in Appendix E-2 In addition, procedural instructions to implement the policy considerations in the plan have been developed by the Personnel Office and are available for review.

## B. Responsibility for Implementation

Responsibility for meeting the objectives in this area rests with the department head or the director of each office, center, or laboratory. For certain staff positions, the responsibility for good faith efforts is vested in the Provost or in the Vice President responsible for the specific organizational unit and in the Staff Appointments Subgroup of the Academic Council which considers the serious search effort in weekly reviews of non-academic staff appointments.

For the recruitment, referral, and hiring of candidates in non-academic categories, there is a sharing of responsibility between the departmental leadership and the Personnel Office. Specifically, in order to enable each department to meet its equal opportunity goals, the Personnel Office is responsible for providing minority and women applicants according to their availability. It is the responsibility of individual departments to supply the Personnel Office with basic, essential job re quirements for each available position in sufficient time to allow for a serious search to produce "qualified" 5 minority and women candidates either from within the Institute or from external recruitment sources
An annual review and analysis of all employment categories will be undertaken by the EEO Officer and the Assistants for Women and Work and for Minority Affairs to monitor progress toward full representation of minority and women employees at MIT. Minority and women referrals and transfer requests from each department will be included in this analysis. This data will be supplied by the Personnel Office in cooperation with each of the departments, laboratories, offices, and centers.
The EEO Officer and the Assistants for Women and Work and for Minority Affairs will play the same roles in developing, coordinating, and monitoring departmental affirmative action programs as described in Section III, part B.
The head of each administrative unit (office or department), or his designee, will be appointed as Equal Employment Opportunity (EEO) Representative and will have specific responsibilities as outlined for academic EEO Representatives in Section III, part B.

## V. AFFIRMATIVE ACTION FOR EDUCATIONAL OPPORTUNITY

The purpose of this section is to describe MIT's commitment to increasing the numbers of women and minority group members in our undergraduate and graduate student body through a vigorous and systematic program of recruitment. The plans and procedures set forth in this section have also been written to conform with Title VI of the Civil Rights Act of 1964 and the Equal Educational Opportunity Act of 1972.

## A. Aims and Plan of Action

At the present time, women and members of some minority groups are underrepresented in most student categories at MIT. It is our policy to reduce these imbalances by increasing the interests in, preparation for, and availabilities of women and minorities for careers in science and technology. While ultimate success will result in
substantial changes in admission patterns, our immediate efforts must concentrate on enlarging the pool of qualified women and minority applicants from which we admit students.
It is also our objective to remove educational, social, and financial barriers which have discouraged many women and minority students from taking advantage of educational opportunities offered by the Institute.

On another level, the Institute and each of its academic departments are aware that most professional opportunities for women and minorities in science and engineering require graduate degrees, and, hence, the number of minorities and women with advanced degrees must be greatly increased to help increase their representation at MIT, at other universities, and in business and industry.

In view of these objectives, the Institute has established the following plan of action:

1. Access to educational programs, financial assistance, and other services and facilities will continue to be provided to students in a manner that does not discriminate against women and minority students.
2. Minorities and women often feel isolated academically and socially at MIT both because of their small numbers and because of cultural and/or sex role stereotypes. To address this problem, the Institute will continue to provide special support both formally, through the Dean of Student Affairs Office and the Office of the Dean of the Graduate School, and informally, by encouraging minority and women faculty, staff, and students to serve as advisors on academic and social matters.
3. The Institute will continue to provide special academic support services, where appropriate, to ensure that the needs of students with special problems are met.
Implementation policies and procedures in the student-related areas-admissions, financial assistance, student support services, student activities and housing, student placement, and graduate student support-are detailed in Appendix E-3.

## B. Responsibility for Implementation

Responsibility for implementation of the Affirmative Action programs and procedures in the student-related areas rests with each office director or Dean and the standing review committees in the areas mentioned above.
Each administrative unit with responsibility for various aspects of the educational and student affairs areas defined above will review its particular policies and procedures according to the Affirmative Action Plan and will develop an implementation plan incorporating specific goals which will be reviewed and approved by the appropriate policy committee at MIT.
On a yearly basis, each office will review its plan and will prepare an annual report which will outline and analyze both efforts and progress made toward meeting Institute goals and Federal regulations. This annual report, including any proposed changes in policies or procedures, will be submitted to the Office of the Equal Employment Opportunity Officer by the end of each academic year and will be reviewed by the EEO Officer and the Assistants for Women and Work and for Minority Affairs.

## VI. AFFIRMATIVE ACTION IN CONSTRUCTION, <br> VENDING AND PROCUREMENT

## A. Aims and Plan of Action

Over the past five years, MIT has become a leader in promoting minority group participation in Institute-related construction and vending enterprises. To maintain its leadership position in this area and to continue in compliance with the Federal and state regulations governing construction and vending, the Institute is committed to the following course of action:

1. Existing procedures will continue to be employed, and new procedures will be developed to secure maximum participation of minority vendors in Institute purchasing and minority contractors and construction workers in new
[^1]Affirmative Action Plan, March 1, 1974, Page 3
construction or renovation, both on and off campus.
2. An effort will also be made to develop appropriate policies to address the growing problem of discrimination against women in these areas.
3. It is the Institute's policy to give its full support to local community agencies, such as the Contractors Association of Boston, who are working to improve utilization of minority contractors.
In particular, MIT's Affirmative Action program in construction contains the following provisions:
a) An equal employment opportunity clause will be written into all renovation and new construction contracts.
b) The Institute, through the department involved, will require contractors, negotiating or bidding on work, to be in compliance with Executive Orders 11246 and 11375 before contracts are awarded.
c) A description of the plan for minority contractor utilization, including subcontractors, will be required as a component of the bid procedure.
d) During the actual construction, each prime contractor will submit a weekly statement to the appropriate resident engineer outlining the work force composition and the use of minorities by his or her organization both directly and through subcontracting.
e) The Equal Opportunity Construction Representative will visit construction sites weekly to review and report on Affirmative Action compliance.
With regard to vending contracts the following provisions will apply:
a) The Equal Opportunity clause will appear on all purchase orders.
b) A listing of suppliers, purchasing agents, and purchasing associations having Affirmative Action programs will be compiled.
c) A listing of minority and women suppliers, purchasing agents, and purchasing associations will be compiled.
d) These lists will be used by the EEO Officer and the Assistants for Women and Work and for Minority Affiars to maximize opportunities for minority and women vendors and to see that all vendors are aware of MIT's Affirmative Action requirements in order to improve their opportunities to bid for Institute contracts.
e) At the time of bid presentation, vendors will be required to provide certification of compliance with Federal and state guidelines.
f) MIT's Purchasing Council will review progress annually in the utilization of minority and women suppliers and, subsequently, will make appropriate changes in procedures.

## B. Responsibility for Implementation

With respect to construction contracts, the Director of Physical Plant will be responsible for making sure that the provisions stated above are carried out during all phases of the planning and actual construction of each project. Reports of each project will be forwarded to the EEO Officer and the Assistants for Women and Work and for Minority Affairs. The Equal Employment Opportunity Officer will be responsible for auditing the construction program efforts and for recommending changes whenever necessary.
With respect to vending contracts, it is the responsibility of the Purchasing Office to identify minority and women businesses among potential suppliers and to require the compliance of all suppliers with Executive Orders 11246 and 11375.

## APPENDIX A

List of Departments, Offices, Centers and Laboratories having Affirmative Action Plans Office of President, Chancellor, and Vice President (including Assistants, ASPG)

Institute Information Services
MIT Press
Dean for Student Affairs
Athletics
Information Processing Services
Information Processing Center
Program Development Office
Office of Administrative Information Systems Dean of Graduate School Office

Office of Provost (including Education Division,
Urban Systems Lab., Lowell Institute, Institute
Professors, Cancer Research Center, ROTC)
Artificial Intelligence Laboratory
Cambridge Project
Center for Advanced Visual Studies
Center for International Studies
Committee on the Visual Arts
Health Sciences and Technology Division
Joint Center for Urban Studies
Libraries
Neurosciences Research Program
Project MAC
Sea Grant Project
Summer Session
Office of the Vice President for Research
Center for Materials Science and Engineering
Center for Space Research
Energy Laboratory
Laboratory for Nuclear Science
National Magnet Laboratory
Research Laboratory of Electronics
Lincoln Laboratory
Office of the Vice President, Administration and Personnel

Admissions
Career Planning \& Placement
Personnel
Planning Office
Student Financial Aid Office
Office of Treasurer, Vice Presidents
Audit Division
Budget Office
Comptroller
Lincoln Fiscal Office
Office of Sponsored Programs
Purchasing
Treasurer's Office
Office of Vice President, Operations (including Endicott House)

Campus Patrol
Graphic Arts
Housing and Food Services
Physical Plant
Safety Office
Office of Vice President (Wadleigh)
Arteriosclerosis Center
Medical Department
Registrar
Office of Vice President, Resource Development
Industrial Liaison Office
MIT Associates
Resource Development
Secretary of the Institute
Office of the Dean of Architecture and Planning Architecture
Urban Studies \& Planning
Office of the Dean of Engineering
Aeronautics \& Astronautics
Chemical Engineering
Civil Engineering
Electrical Engineering
Mechanical Engineering
Metallurgy \& Materials Science
Nuclear Engineering
Ocean Engineering
Center for Advanced Engineering Studies
Center for Policy Alternatives
Office of the Dean of Humanities and Social Science Economics
Foreign Literatures \& Linguistics
Humanities
Philosophy
Political Science Psychology
Sloan School of Management
Operations Research Center
Office of the Dean of Science
Biology
Chemistry
Clinical Research Center
Earth \& Planetary Science
Mathematics
Meteorology
Nutrition \& Food Sciences
Physics
Alumni Association
Faculty Club

## APPENDIX B

This appendix is an organizational chart of the Massachusetts Institute of Technology and is included in copies of the Institute Plan on file in the locations listed in the Preface.

## APPENDIX C-1

Equal Opportunity Committee
The Equal Opportunity Committee, a broadly representative Committee of the Institute con-
cerned especially with equal opportunity in em ployment and education, is appointed by the President of the Institute. In his choice of persons to be appointed to the membership, the President seeks to assure the equitable representation of protected class members on the Committee. The Special Assistant for Minority Affairs, the Special Assistant for Women and Work, and the Equal Employment Opportunity Officer are members of the Committee, ex-officio. The latter officer has a special relationship with the Committee, given his responsibilities as Vice President, Administration and Personnel. He will bring to the Committee reports of progress in Affirmative Action efforts, problems arising in the implementation of the Affirmative Action Plan and will review with the Committee proposals for changes in policy or procedure relating to Affirmative Action including comment on proposals originating within the Committee itself.
The authority and scope of the Committee is comparable to that of other Presidentiallyappointed Institute committees in that it assists the President in maintaining cognizance over the program assigned to it, with authority to obtain such information as necessary to keep itself informed as to the effectiveness of the program. In assessing effectiveness, the Committee has the responsibility for initiating improvements, including making recommendations to the President and the Academic Council or to the Faculty for changes in policy or procedure to make the program more effective. The Committee may request such information from appropriate Institute sources as necessary for it to judge the need for changes in policies or procedures or the merits of proposed changes.
In all these respects, the Committee's role is comparable to that of other Presidentiallyappointed committees. The Committee will consist of 24 members drawn from the Faculty, the research and administrative staff, other employees, and the student body. The President will designate the Chairman, and the Committee will meet at the Chairman's call. The Chairman and members of the Equal Opportunity Committee can be obtained from the Institute Catalogue, the annual Presidential Committee composition in Tech Talk or from the EEO Officer or the Special Assistants for Minority Affairs and for Women and Work.

## APPENDIX C-2

Academic Council
The Academic Council is the senior policymaking group of the Institute within the administration, composed of the President, Chancellor and Provost, the Deans and Vice Presidents, Director of Libraries and Chairman of the Faculty. The Aca emic Council reviews major policy issues, budgetary levels and priorities, significant organization changes, major appointments and plans and programs involving issues of the nature and direction of the Institute. From time to time, it also reviews the progress and status of ongoing Institute programs. The Affirmative Action Program is one of these. The status and progress of the Affirmative Action program and proposals for significant changes in policy or procedure to increase its effectiveness, from whatever source, will be subject to the review and final approval of the Academic Council.
For purposes of its consideration of appoint ments, the Academic Council contains two (overlapping) subgroups, the Academic Appointments Subgroup and the Staff Appointments Subgroup. The Affirmative Action responsibility of these groups is to receive requests for authorization to make offers of appointment-to faculty positions in the case of the Academic Appointments Subgroup and to Administrative and Research Staff positions in the case of the Staff Appointments Subgroup. They examine the evidence provided by the Department Head regarding the serious search for qualified minority and women candidates which have been conducted by the department, how the appointment relates to the Affirmative Action Plan of the department and either authorize or withhold authority from the Department Head to make the offer of appointment. The members of the Academic Council, including the Academic Appointments and Staff Appointments Subgroups, are so designated because of the particular position they hold within the Institute. The Vice President, Administration and Personnel who holds the additional responsibility of the Institute's Equal Employment Opportunity Officer, is a member of the Academic Council and of the two appointment subgroups. As such, he has the opportunity and responsibility to keep the Council informed on the progress of the Affirmative Action Program, and to bring to the Council recommendations for policy or
procedural improvements which are of the level or scope to require the Council's approval.

## APPENDIX D-1

## Added or Revised Faculty Policies

The following revisions and restatements of faculty policies and procedures were adopted as of July 6, 1972, in accordance with Federal equal employment opportunity regulations, and will be included in the revised edition of Policies and Procedures, the Institute guide for staff members:

1. An Equal Employment Opportunity statement was added to the revised Policies and Procedures.
2. Sections 2.20 and 2.61 of Policies and Procedures were revised to reflect:
a) modification of continuous service and age requirements with respect to tenure decisions;
b) additional leave of absence without penalty for child-bearing and child-rearing; and
c) a new anti-nepotism policy (see below).
"The Institute reaffirms its policy to base appointments and promotions on qualifications and performance.
"In keeping with this policy members of the same family, including husband and wife, are eligible for employment as faculty members as they have been eligible for positions within the other job categories. However, a supervisoremployee relationship shall not prevail in these instances at the time of employment or thereafter, nor shall one member of the family relationship assume for the other the role of advocate or judge with respect to conditions of employment or promotion.
"Where members of the same family are recommended to work for the same supervisor, the arrangement shall be approved in advance by the President and Chancellor. This change in regulations emphasizes the criterion of merit in all Institute appointments and promotions." This policy, while written specifically for faculty members, applies also for other categories of employment.

## APPENDIX D-2

Procedure for Grievance
Any person employed ${ }^{6}$ at MIT who believes that the Institute's stated policy of non-discrimination has been violated or that they have been treated unjustly for any reason should have access to a clear means of seeking redress. Such persons should be encouraged to communicate, either in writing or in person, with the Assistant for Minority Affairs or the Special Assistant for Women and Work. Either will initiate an inquiry into all the facts relevant to the complaint and will attempt to resolve the matter to the satisfaction of both the aggrieved individual and the person or organization against which the complaint has been brought, recommending a final decision in each instance to the Chancellor.
This process will be held confidential to the extent that the aggrieved person wishes it. It is hoped in most instances that any person who feels aggrieved will have sought to resolve his or her complaint with the appropriate persons within the department, including the department head, and, in the case of other than academic staff, with the assistance of the appropriate personnel officer before bringing the complaint to the attention of the Assistant for Minority Affairs or the Special Assistant for Women and Work.

## APPENDIX D-3

Serious Search Policy for Faculty and Other Academic Staff, Incorporated December 10, 1971 The extension of the Affirmative Action Plan for Equal Employment Opportunity issued by President Howard W. Johnson in May, 1971, requires the following policy in the appointment of women and minority group members to faculty and other academic staff appointments:
"Prior to making any new academic staff appointments each year, department heads are expected to demonstrate to the Equal Opportunity Task Force for Faculty and Staff that a serious search for qualified women and minority candidates has been made."
To make this policy more effective and to bring
6. This procedure is not intended to apply to employees who are represented by a labor union. Collective bargaining agreements applying to these employees irclude grievance and arbitration procedures and equal opportunity provisions.
responsibility exercised by the Deans of the Schools into the process, changes have been made in the operation of the process from time to time. The following information, in the form of a letter, will accompany each recommendation for an appointment and will be forwarded by the department head to his or her academic Dean for the three faculty ranks (including visiting faculty) and instructors:

1. Information relating to Department Plan
a) The number of women and minority group members in the department and the goals for the next two years.
b) The number of women and minority group members in faculty ranks and the goals for the next two years.
c) If the goals have not been met, the expected opportunities for additional appointments which will still remain to meet the goals.
d) Any other information which would help to see the proposed appointment in the context of the plan.

## 2. Search related to this appointment

a brief description of the search process for the particular appointment being proposed.
The Dean, if satisfied that the search has been satisfactory, will discuss the proposed appointment and nature of the search with the Academic Appointments Subgroup of the Academic Council.

## APPENDIX D-4

## Serious Search Policy for Staff Appointments

 Incorporated July 15, 1972Prior to making any offer of appointment to a person outside the Institute for a full-time Research staff, 7 administrative staff, library staff, or medical staff position with a term of one year or more, the department or laboratory head is required to demonstrate that a serious search for qualified women and minority candidates has been made.
To provide the required assurance of a serious search, it has been suggested that a letter accompanying each recommendation for an offer of appointment be forwarded by the department or laboratory head to the appropriate academic Dean or Vice President (or to the Provost in the case of interdepartmental laboratories and centers reporting to him), containing the following information:

1. Search Procedure-the methods used to search for candidates for the position being filled and any information known about the size of the pool of qualified women and minority candidates for the position.
2. Evaluation of Candidates-the number of women and minority candidates developed as a result of the search and the means used to evaluate them, the results of interviews, whether any offers were made to women or minority candidates, the nature of the offer and the response.
3. Information relating to the department Plan a) the number of women and minority group members in the department and the goals for the next two years
b) the number of women and minority group members in the applicable staff rank and the goals for the next two years
c) if the goals have not been met, the expected opportunities for additional appointments which will still remain to meet the goals
d) any other information which would help to see the proposed appointment in the context of the Plan
The Dean, Vice President, or the Provost, if satisfied that the search has been satisfactory, will discuss the proposed appointment and nature of the search with the Staff Appointments Subgroup of the Academic Council.
Recruitment for Research (DSR) and administrative staff positions is often carried out either exclusively by the Personnel Office or jointly with the department offering the position. In such instances, the search documentation by the department should include an account of efforts to recruit women and minority applicants through the Personnel Office. Additional information on search procedures may be obtained from the Office of Personnel Services.
4. Certain research appointments that are immediate post-doctoral appointments requiring highly specialized knowledge and limited to 2 years or less are reviewed on an individual basis by the appropriate Dean or Vice President, prior to offer of appointment and by the appropriate Subgroup quarterly.

## APPENDIX D-5

## Maternity Leave Policy

The following policy regarding maternity leave will apply to personnel on the hourly, biweekly, exempt, administrative, and sponsored research staff payrolls.

## 1. Leave of Absence

Regular full-time or part-time ( $50 \%$ or more of normal work week) employees who have completed their probationary periods of employment are eligible for maternity leaves, regardless of marital status, subject to the conditions below:
a) Regular Leave: A leave of eight weeks, without pay, will be granted provided the employee gives reasonable notice (normally two weeks) and indicates intention to return to work. The employee's job, or a job of equivalent classification and pay, will be restored by the department or laboratory at the completion of the leave unless the position has been eliminated by reduction in force or operational change under circumstances applying equally to other similar jobs in the department. If the former position has been so affected, efforts will be made to find other suitable employment, first in the department concerned and, secondly, within the Institute as a whole.
All benefits may be kept in force, at the option of the employee, provided this is arranged in advance for payment of the normal benefit deductions.
b) Extended Leave: Leaves without pay of more than eight weeks may be granted at the discretion of the department concerned, for periods up to but not exceeding 26 weeks. Approval of such extended leave carries with it a commitment by the department to restore the same or an equivalent job at the end of the leave period. Benefits will not be continued beyond the eightweeks period provided under the regular leave policy unless an exception is requested in writing by the Department Head and approved by the Provost, Dean or Vice President concerned and by the Personnel Office.
2. Use of Sick Leave for Child Bearing

A woman who has been granted maternity leave will be allowed to apply her available sick leave to a period of ten days beginning with the day she enters the hospital for the purpose of child birth. Additional sick leave may be authorized if she remains disabled after this period because of a serious complication resulting from the birth. Employees who request additional sick leave will be required to furnish medical evidence as to the nature and extent of the disability involved. A check for any eligible sick leave will not be issued until the employee returns to work.

## APPENDIX E-1

## Academic Departmental Procedures for

 Affirmative ActionEach academic department, center, or laboratory has developed its own Affirmative Action Plan for academic positions, consistent with the Institute goals and the procedures outlined below:

1. Each department will continue to set goals and timetables for the appointment of minorities and women in academic positions. These goals will be based on an analysis of the present and projected pool of candidates and on departmental needs and be set every two years.
2. Each department head will periodically inform all faculty and staff in the department of the policies, procedures, goals, and progress of the department's Affirmative Action Plan.
3. Annually, between June and August, each department will review and evaluate its plan in depth to determine the progress made toward achieving its goals. Problem areas will be identified, and the plan will be updated in terms of specific correctional action.
4. In seeking to fill academic positions, every effort will be made to recruit in such a way that women and minorities will have adequate opportunity to be considered. (Specifically, the practice currently in use by some depart-ments-that of identifying a qualified candidate, then finding a position for that candi-date-will be encouraged.)

Also, each academic department, with its School, will compile and continuously update a list of women and minorities who are potential candidates, including candidates from among MIT alumni, students, and current em ployees, as well as candidates identified through communication with professional societies, graduate schools predominantly black and women's institutions, and other appropri ate sources. This search should include the use of professional journals and other media, as well as educational search organizations and professional organizations that reach minorities and women in academic fields appropriate to the programs available at the Institute. The use of exchange programs and summer institutes will be explored in an ef fort to widen the search beyond traditional channels.
5. The Institute employment policies and practices shall not prohibit the simultaneous em ployment of two members of the same family
6. There will be full opportunity for staff appoint ments, including tenured appointments on the faculty, for persons who may be able to devote only part of their time to their academic or staff duties during their child-rearing years.

## APPENDIX E-2

## Affirmative Action Procedures for

## Non-Academic Employment

Each organizational unit at the Institute has developed its own Affirmative Action Plan, which will be consistent with the following policies and procedures:

1. Each organizational unit will continue to set goals and timetables for the employment of minorities and women in each non-academic job classification. These goals will be based on an analysis of the present and projected number of qualified and qualifiable minorities and women in MIT's potential recruitment area, as well as on MIT's projected employ ment needs and be set every two years.
2. Each department will review its plan in depth and will evaluate the progress made toward reaching its goals on a yearly basis (between June and August, as described in Appendix E-1, item 3).
3. In seeking to fill positions, vigorous and systematic efforts will be made to ensure that women and minorities have adequate opportunity to be considered, based on the following recruitment and hiring procedures
a) Records will be maintained in the Personnel Office of the receipt and disposition of all applications, and a summary will be forwarded to the EEO Officer and the Special Assistants for Women and Work and for Minority Affairs on a quarterly basis.
b) At all major locations where interviews are conducted, notices shall be displayed that MIT is an "Equal Opportunity Em ployer," as prescribed by law.
c) Employment advertisements have and will continue to be run regularly in publications with wide circulation to minorities and women. An ongoing evaluation of the effectiveness of these ads will be made by the Personnel Office. It will be a standard procedure to use the phrase "An Equal Opportunity Employer" in all advertise ments and job postings. Whenever adver tisements are placed in non-minority publications, the phrase "We are Actively Seeking Minority and Women Applicants' shall be used in the text or the ad.
d) In those areas where there is underrepresentation of minorities and women because of a history or pattern of exclusion and/or discrimination, preference in the applicant referral and selection process will be given to minority or women applicants if two candidates are equally qualified according to the concept of merit expressed in Section II, item 6.8
e) Procedures have been instituted, and will be periodically reviewed, to ensure that minorities and women (as well as other employees) are considered for promotion or upgrading before a position is filled from the outside.
4. To be monitored by the Personnel Office on the campus and at Lincoin Laboratory.
5. Posting and bidding requirements for unionized employees will be as specified in union con tracts.
nated to the MIT community through Tech Talk and other means, as appropriate. Employees will be continuously encouraged, through both departmental support and individual initiative, to investigate and enroll in any Institute or off-campus programs that are related to the employee's career development.

## APPENDIX E-3

Student Related Affirmative Action Procedures

1. Admissions

In 1968 special efforts to recruit minorities, particularly Blacks, were begun at MIT. These efforts will continue and will be augmented by special efforts to recruit women. 10
a) All persons involved in the process of reviewing applications will be kept aware of MIT's equal opportunity policies regarding admissions.
b) Admissions information and other official publications sent to prospective students, high-school counselors, and others will tinue to reflect and emphasize the Institute's equal opportunity policy.
c) Special admissions pamphlets and brochures will continue to be produced and distributed to assist in the recruitment of minority students.
d) Admissions criteria for minority students will be reviewed periodically to help ensure that no minority applicant who has the potential for academic success at MIT is refused admission.
e) The selection teams reviewing applications will continue to include minority and women faculty and staff.
f) The Admissions Office, the MIT Alumni Office and the Educational Council, and other groups and offices engaged in recruiting students will continue to make special efforts to locate and recruit minority and women students; continuing efforts will be made to increase the number of women and minority Educational Counselors.
g) Minority and women prospective students will be counseled on the full range of opportunities at MIT, particularly those fields in which they have been conspicuously underrepresented.
h) The Institute will continue, when feasible, to invite prospective minority and women students from high schools near MIT to the campus for first-hand familiarization.
i) Minority and women students at MIT will continue to aid the Institute in recruiting women and minority prospective students through personal contacts and, where ap propriate, through visits to their hometown high schools.
j) A Task Force on Educational Opportunity for Minorities, which was established in 1968 to develop new programs for the recruitment, admission and support of minority students at both the graduate and undergraduate levels, will continue to function.
k) In 1972 a Committee on the Needs of Women Students, convened by the Dean for Student Affairs, submitted a report on the status of women students at MIT. Though the Committee has since disbanded, attention will continue to be given to the implementation of policies and procedures recommended by that report.

1) MIT will continue to support a Talent Search Program in Cambridge and to maintain an Upward Bound Program in cooperation with Wellesley College.
m) MIT's recruitment efforts with respect to minority students will include an intensive search for prospective students who meet MIT's normal admissions criteria, as well as those who have potential but who need additional academic preparation (such as that provided by Project Interphase).
n) A committee of women students, with the help of the Dean for Student Affairs Office, has prepared a booklet describing life at MIT for women, which will be used to aid in recruiting prospective women students.
2. Financial Assistance
a) All services provided by the Financial Aid Office are available to every student without regard to race or sex. Strong efforts
3. MIT has been coeducational since 1872 and has enrolled minorities, including Black Americans, since 1897.
will be made to ensure that there are on the staff persons, including minorities and women, sensitive to the special needs and circumstances of minority and women students.
b) Financial assistance to all students, undergraduate and graduate, will continue to be provided in such a manner as not to discriminate against applicants on the basis of race or sex. All eligible minority and women students are encouraged to participate in scholarship, loan, and work-study programs
4. Student Support Services
a) The Institute will continue to encourage minority and women faculty, staff, and upperclassmen to help provide supportive services for minority and women students by serving as freshmen advisors, tutors, and informal resource personnel.
b) Although all services in the Dean for Student Affairs Office are available without regard to race or sex, strong efforts will be made to ensure that there are on the staff persons, including minorities and women, sensitive to the special needs and circumstances of minority and women students.
c) An Assistant Dean for Student Affairs will continue to serve, in part, as an advocate for the needs of undergraduate women.
d) The Institute will continue its intensive efforts, through such programs as Project Interphase, to make educational opportunities available to those minority group members (and others) whose academic preparation differs somewhat from MIT's usual admission criteria. Such programs will be reviewed on an annual basis to help ensure that they are meeting the students' expressed needs. Project Interphase includes: 1) search and selection procedures directed toward bringing such people to MIT; 2) special introductory academic programs, including counseling, during the summer preceding the freshman year; and 3) special arrangements for financial assistance, as required.
5. Student Activities and Housing
a) Rooms or apartments in Institute-supported housing are made available to all students in a non-discriminatory manner. There is no restriction on admission of women based on available campus housing.
b) Landlords participating in the Institute's off-campus housing program must submit a non-discriminatory pledge issued by the Massachusetts Commission Against Discrimination before their offerings may be listed with the Community Housing Service. Any realtor who refuses to sign the pledge or who has a just cause complaint issued against him or her will be ineligible to have his or her rentals listed in the office files. Complaints presented to the Housing Office will be turned over to the Massachusetts Commission Against Discrimination for appropriate action.
c) Though the Institute encourages all of its students to participate in the wide range of social and cultural activities sponsored by the Institute, special efforts will continue to be made to help ensure full participation in Institute life by minorities and women.
d) All social clubs and fraternities supported by the Institute will be required to submit a written non-discrimination pledge to the Office of the Dean for Student Affairs.
e) The Institute will encourage women students to participate fully in athletic activities of their choice.
f) The Athletic Department has appointed a Director of Women's Athletics (increasing the number of full-time female instructors to two) and recently published a booklet entitled "Athletics for Women at MIT."
g) The use of MIT athletic facilities will continue to be made equally available to all members of the MIT community, regardless of race or sex.
h) The Institute will continue its policy of not recruiting any student because of his or her athletic capabilities.
6. Student Placement

It is the policy of the Placement Office to ensure not only the equitable treatment of graduating minority and women students in finding employment, but also to help ensure that employers using the services of the Placement Office recruit graduating students for all positions in their company without regard to race or sex.
a) Each employer seeking to hire MIT gradu ates is requested to:
i. provide proof that the organization is an equal opportunity employer as de fined by Executive Order 11246;
ii. whenever possible, send minority and/or women recruiters who are fa miliar with the employer's priorities and commitments with respect to equal opportunity; and
iii. hire undergraduate minority and women students for summer internship programs when possible.
b) Each company or business representative inquiring about MIT graduates will continue to be apprised of MIT's equal opportunity placement procedures.
c) Companies are encouraged to distribute literature that expresses their commitment to equal opportunity for minorities and women in all of their job categories.
d) The Placement Office will continue to work with the Graduate School Office, the EEO Officer, the Special Assistants for Women and Work and for Minority Affairs and the Personnel Office of the Institute to keep minority and women graduates informed of career opportunities at MIT and at Lincoln Laboratory.
e) The monthly schedule of visiting company recruiters will be circulated to academic and administrative offices and posted on bulletin boards in areas frequented by minority and women students.

## 6. Graduate Student Support

In cooperation with the Graduate School Office and the Committee on Graduate School Policy
a) All academic departments offering advanced degrees will be encouraged to re cruit minority group members and/or women to the faculty from their graduate programs and will be expected to monitor continuously their progress. Departments should appoint such students to positions as research assistants and teaching assistants and should make their policy known to all of their faculty members.
b) Present admissions and financial aid policies will be reviewed and modified, where appropriate, to be sure that they do not discriminate against women applicants with children.
c) All information on grants, loans, scholarships, and fellowships will be posted in a manner accessible to all inquiring students.

## APPENDIX F

## Dissemination of Affirmative Action Plan

The preface to the Institute Affirmative Action Plan outlines the major dissemination of the Plan through publication in Tech Talk. Additionally a reference copy of the plan is available in each Institute office. Offices with special responsibilities regarding the Plan (i.e., Administration and Personnel, office of Women and Work, office of Minority Affairs, Information Office) will have copies available for general distribution upon request.

Each department at the Institute has listed in its own departmental plan the method of dissemination to be used in informing persons in the department about the plan. Each department, center and laboratory at the Institute had their plan reviewed by members of the Institute administration including suggestions for dissemination of the plan to all employees. These major review meetings will be followed by periodic reviews through the efforts of the EEO Officer and the Special Assistants for Minority Affairs and for Women and Work.
The intent and substance of the plan has been discussed extensively with members of the Academic, Faculty and Administrative Councils and is a periodic agenda item for these groups.

The Manager of Union Relations in the Office of Personnel Relations and the Assistant to the EEO are engaged in a series of individual meetings with union officials to inform them of Institute policy with regard to Affirmative Action. The collective bargaining agreements with the major unions representing employees at MIT will expire on July 1, 1974. Negotiations for new agreements will commence in the Spring of 1974 and the issue of a nondiscrimination clause in the agreement and review for any possible discriminatory aspects will be raised at that time.
All documents relating to policy instruction or guidance will include a statement of policy regarding Affirmative Action condensed, where appropriate, from the Institute Affirmative Action Plan.

This policy has already been incorporated in the Secretary's Handbook and will be included in the Institute Policies and Procedures Manual and the Supervisor's Manual when revised. Revisions of these handbooks should be accomplished in the next fiscal year.
All recruitment sources receive a Position Available Listing which includes all non-academic openings at the Institute. The introduction to this list is reproduced below and indicates the Institute commitment to Affirmative Action. The majority of the recruitment sources specialize in the placement of women and minority candidates. (The total list of recruitment sources is available for review at the MIT Personnel Office). These sources are continually reviewed for commitment and degree of success in our Affirmative Action efforts.
"Enclosed is the new, complete listing of all non-academic employment opportunities currently available on the MIT campus. You will note an inclusion of many high-level administrative and research staff positions, as well as the clerical and support positions ordinarily listed. Similar listings will be sent to you weekly. We ask that you share them with your colleagues and branch offices.
This list has been circulated throughout the MIT community for at least a week before it reaches you. This is in keeping with our Institute policy for making all career development opportunities available first to our own employees. Consequently, when you have interested candidates to refer to positions listed, please call the Personnel Office at $253-4251$ to verify the vacancies and to arrange appointments for your applicants.
Concurrent with our responsibilities to our present employees is our deep and serious commitment to affirmative action in the employment of minorities and women. We look to the support of you and your services to help us achieve our goals.'
Section VI of the Affirmative Action Plan describes the policy for construction contracts, vending and procurement. In addition a letter is being sent to our entire list of active suppliers (approximately 5000 ) advising them of our Affirmative Action Program and stating the action required of them as an MIT supplier. The Purchasing Office will soon have available for review, a list of current suppliers and their statement of understanding of our commitment to Affirmative Action.

## APPENDIX G

## Responsibility for Affirmative Action <br> Plan Implementation

The President and the Chancellor have designated the responsibility for monitoring the progress of MIT's Affirmative Action Program, to the persons listed in the preface of the Plan. Additionally, there is a common responsibility of many members of the Institute community in implementing the Affirmative Action Program, particularly in the employment area. The following narrative elaborates on the levels of authority at the Institute, shown in the organization chart in Appendix B, as they relate to employment decisions.

## 1. Non-Academic Employment

## General Authority

a) Academic or administrative department heads, laboratory or center directors.
Hiring authority for non-academic positions rests with the heads of the $\mathbf{9 0}$ some academic and administrative departments, laboratories and centers. This authority includes the hiring of administrative, exempt, research (DSR) staff, secretarial/clerical, hourly and union employees.
b) Personnel Office

The Personnel Office has authority for initial interviewing, screening and referral of candidates to Institute supervisors for all categories of employment mentioned above. Nine (9) Personnel Officers and two (2) Personnel Assistants refer applicants for positions available. Personnel Officers in the interviewing role will process documentation on employment only if requirements of law and policies of the Institute have been met.
c) Dean or Vice President in Charge of Area The concurrence of the Dean or Vice President having the responsibility for the specific unit doing the hiring is required for all "additional" appointments. This concurrence is not required for routine re-
placement resulting from turnover
Special Authority
a) Staff Appointment Subgroup of the Aca demic Council
Approval for the administrative and Re search (DSR) Staff categories of nonacademic employment rests with this subgroup if a full-time appointment is to be made to a non-minority or male from out side the Institute. Such approval is based upon a review of the department's docu mentation of serious search for women and minority candidates to fill the position (See Appendix D-4 of the Affirmative Action Plan.)
b) Executive Committee of the Corporation The Executive Committee of the MIT Cor poration has certain responsibilities re garding appointments of Research (DSR) Staff and Administrative Staff appointments. This group has final approval on al staff employment of persons whose salary exceeds stipulated salary levels.
2. Faculty Employment Authority

## General Authority

a) Academic Department Heads

The effective authority for appointing Faculty members, (Professors, Associate or Assistant Professors) rests with the Department Head in each department, often in consultation with other members of the faculty in the department, and with the concurrence of the Dean of the School Since the procedures differ by department, the details are left to the individual departmental Affirmative Action Plan. The appointment of Professors and Associate Professors further requires the approval of the Academic Appointments Subgroup of the Academic Council.
Special Authority
a) Academic Appointments Subgroup of the Academic Council
As a special procedure, concurrence of this
group regarding the adequacy of the search for minority or women candidates prior to an offer of a full-time appointment to any of the three ranks of Professor (including Visiting) or to Instructor. (See Appendix D-3 of the Institute Affirmative Action Plan.)
b) Executive Committee of the Corporation The Executive Committee of the Corporation has certain responsibilities regarding appointments of Faculty. This group has final approval on the appointment of all Institute Professors and Professors as well as appointment of all ranks of faculty whose salaries exceed a stipulated amount.
3. Academic Appointments (other than Faculty) General Authority
a) Academic Department Heads, Laboratory and Center Directors
Appointment authority for Academic Appointments such as Research Associate, Postdoctoral fellow, Technical Assistant, etc. rests with the head of the academic department, laboratory or center in which the appointment is being made. Because of procedural differences in appointment process, the details must be left to individual departmental Plans. These appointments require the concurrence, as appropriate, of the Provost, the Vice President for Research or the Academic Dean of the School.
Special Authority
a) Staff Appointments Subgroup of the Academic Council
Approval for certain categories of Academic appointments (other than faculty) rests with this group in terms of Affirmative Action objectives. The "serious search" process outlined in Appendix D-4 of the Institute Affirmative Action Plan includes such academic staff categories as Administrative Officer, Administrative

Assistant, Librarian and Medical Staff member
b) President/Provost and/or Vice President for Research
The appointment of Senior Research Asso ciates and Senior Research Scientists re quires the concurrence of the President. In the case of appointments of other academic staff in the various research laboratories and centers, the concurrence of the appropriate senior office, either the Provost or the Vice President, Research is required.
4. Accountability for Affirmative Action Policy Implementation in Employment
A process of review for possible violations of the Institute policy of non-discrimination is described in Appendix D-2 of the Affirmative Action Plan. Additionally, Appendix E-2 specifies a procedure to be used for any failure to adhere to EEO policies and procedures in non-academic hiring, speci fically, "if the Personnel interviewer suspects noncompliance with the Affirmative Action Plan, the matter will be reviewed with the Personnel Services Director who will resolve the matter with the department head before final action is taken."
MIT has no formalized "disciplinary pro cedures" for failure to adhere to any Institute policies and procedures. Supervisors are expected to adhere to all policies, however, and when violated, appropriate action is taken through normal channels of supervision. Input on problems of supervision come from many sources; employees, colleagues, other offices, Personnel Office, etc. Action on improper supervision or failure to adhere to EEO policy rests with the department head and/or the responsible senior officer. The same policy will apply for failure to adhere to EEO policy and procedures.

## APPENDIX H

Statistical summary of MIT Representation of Minorities and Women as of December 31, 1973 and Goals projected for July 1974 and for July 1975

MIT Reports to Office of Civil Rights HEW



| (Institute) $\left.\begin{array}{c}\text { MIT Employment Goals for July, 1975 }\end{array}\right]$ (Projections Aggregated from Department Goals set in April, 1973) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Minority* |  |  |  |  |  |  |  |  |  |  | Tot. Other | Sex |  |  |  |  |
|  | Total | \% | Am. Ind. | \% | Black | \% | Orient. | \% | Span. | \% | Tot. Min. | \% |  | \% | Female | \% | Male | \% |
| Faculty | 1004 | 100 |  |  | 31 | 3 | 27 | 3 | 7 | - | 65 | 6 | 939 | 94 | 69 | 7 | 935 | 93 |
| Other Acad. Staff | 1090 | 100 | 2 | - | 53 | 5 | 37 | 3 | 10 | 1 | 102 | 9 | 988 | 91 | 281 | 26 | 809 | 74 |
| Admin. Staff | 443 | 100 | . | - | 31 | 7 | 6 | 1 | 3 | . | 40 | 9 | 403 | 91 | 131 | 30 | 312 | 70 |
| Spon. Res. Staff | 1390 | 100 | 1 | - | 35 | 3 | 44 | 3 | 13 | - | 93 | 7 | 1297 | 93 | 189 | 14 | 1201 | 86 |
| Exempt | 617 | 100 | . | - | 37 | 6 | 3 | - | 4 | - | 44 | 7 | 573 | 93 | 156 | 25 | 461 | 75 |
| Biweekly | 1849 | 100 | 2 | - | 209 | 11 | 29 | 2 | 39 | 2 | 279 | 15 | 1570 | 85 | 1569 | 85 | 280 | 15 |
| Hourly | 1822 | 100 | - | . | 202 | 11 | 13. | - | 35 | 2 | 250 | 14 | 1572 | 86 | 201 | 11 | 1621 | 89 |
| Total | 8215 | 100 | 5 | - | 598 | 7 | 159 | 2 | 111 | 1 | 873 | 11 | 7342 | 89 | 2596 | 32 | 5619 | 68 |

(Campus Only)
MIT Employment as of December 31, 1973

|  | Minority* |  |  |  |  |  |  |  |  |  |  |  | Tot. Other |  | Sex |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total | \% | Am. Ind. | \% | Black | \% | Orient. | \% | Span. | \% | $\begin{aligned} & \text { Tot. } \\ & \text { Min. } \end{aligned}$ | \% |  | \% | Female | \% | Male | \% |
| Faculty | 946 | 100 | - | . | 15 | 2 | 40 | 4 | 7 | 1 | 62 | 7 | 884 | 93 | 45 | 5 | 901 | 95 |
| Other Acad. Staff | 1126 | 100 | 1 | - | 25 | 2 | 86 | 8 | 27 | 2 | 139 | 12 | 987 | 88 | 240 | 21 | 886 | 79 |
| Admin. Staff | 419 | 100 | 1 | - | 16 | 4 | 5 | 1 | 2 | - | 24 | 6 | 395 | 94 | 116 | 28 | 303 | 72 |
| Spon. Res. Staff | 659 | 100 | - | - | 10 | 1 | 34 | 5 | 5 | 1 | 49 | 7 | 610 | 93 | 133 | 20 | 526 | 80 |
| Exempt | 322 | 100 | - |  | 20 | 6 | 3 | 1 | 1 | - | 24 | 7 | 298 | 93 | 107 | 33 | 215 | 67 |
| Biweekly | 1618 | 100 | 3 |  | 139 | 9 | 33 | 2 | 31 | 2 | 206 | 13 | 1412 | 87 | 1329 | 82 | 289 | 18 |
| Hourly | 1204 | 100 |  |  | 136 | 11 | 4 | 1 | 13 | 1 | 153 | 13 | 1051 | 87 | 179 | 15 | 102 | 85 |
| Other | 11 | 100 | , | - | 1 | - | - | - | 1 | 9 | 2 | 18 | 9 | 82 | 5 | 45 |  | 55 |
| Total | 6305 | 100 | 5 | - | 362 | 6 | 205 | 3 | 87 | 1 | 659 | 10 | 5646 | 90 | 2154 | 34 | 4151 | 66 |

(Lincoln Lab.) MIT Employment as of December 31, 1973


## Martha Donahue Named AFROTC Unit Commander

Martha Donahue of Milton, Mass., will soon become the first woman at MIT to have 40 Air Force ROTC cadets marching around duPont Athletic Center at her command.
The same week that the junior in management liberated her town's militia by being the first woman to


## Cadet Martha Donahue

join, she was also named cadet corps commander by Air Force ROTC Director LT. Col. Victor B. Goodrich. She is the first woman in the history of ROTC at MIT to hold the position of authority.
Miss Donahue says her reasons for joining ROTC had little to do with "intentionally breaking down male/female sterotypes."
"My promotion from flight commander to cadet corps commander," she said, "will give me organizational and administrative responsibility in a job earlier than could ordinarily be expected in the

## Grades Needed

Members of the teaching staff were urged recently to comply "with the spirit as well as the letter' of a faculty resolution requiring that spring term grades be submitted to the Registrar as early as possible but no later than 4pm Friday, May 24.
In a letter to the Instructing Staff, President Jerome B. Wiesner and Professor Elias P. Gyftopoulos, chairman of the faculty, called for early submission of grades so that the faculty can avoid injustices and errors in awarding degrees because of the tight schedule at the end of this term.

## 'Nova' Features

## Faculty Member

"Fusion-the Energy Promise" is the title of a science show with narration and commentary by MIT Professor of Nuclear Engineering David J. Rose, to be shown this Saturday, May 25, on WGBHTV, Channel 2, at 6pm
The program, one segment of the BBC-WGBH-produced television sciences series "Nova" was first shown nationally on the Public Broadcasting Network on Sunday, May 19, and repeated Monday, May 20.
In the program, which traces the growth of research on thermonuclear fusion as an energy source, Professor Rose tells of the historical development of the process and its international nature.

## Chamber Concert

The Chamber Music Society will give a concert of works by Mozart and Schumann, 3:30pm, Friday, May 24 in the Music Library.
management field."
Last summer at Tyndall Air Force Base in Florida, where male cadets outnumbered women by four to one, Miss Donahue was required to hold control of a jet fighter plane and "go first" in a simulated parachute jump training session as part of her ROTC junior summer camp program.
After her commissioning as second lieutenant next year, she hopes to be assigned to Patrick Air Force Base, also in Florida, to work in research and development management.
Other offices Miss Donahue has held since she joined ROTC as a freshman include executive officer of the Company C-12 Pershing Rifle Association, information officer for the cadet corps, commander of the Arnold Air Society at MIT and commander of the now defunct Angel Flight society for Air Force women. She was promoted to staff sergeant in her sophomore year
Miss Donahue, who is the oldest of six, claims she inherited her "ability to make up her mind" from her father, an alumnus of MIT's Class of 1944 and a member of Course XV, like his daughter.
An active participant in Milton town politics, Miss Donahue was recently elected town meeting manager but lost by one vote in a recount. Her friends' analysis of her campaigning effort, she said, was similar to their reaction when she wears her Air Force uniform to class:
"You've got guts, Martha," they tell her.

## NCAA Invites <br> Baseball Team

The MIT varsity baseball team, winner of 15 of its 22 regularseason games, has been invited to compete in the National Collegiate Athletic Association's regional Division II tournament which begins Thursday, May 23, at Princeton University in New Jersey
MIT, fresh from its best season in history, will oppose New Haven College in the double-elimination tournament. Other schools in the regional competition are CW Post College, Ithaca College, Adelphi University and Montclair State College
The winner of the regional tournament will go to the national championships which will be held from June 1-5 at MacMurray College, Jacksonville, Ill.
The MIT team, coached by Francis C. O'Brien Jr., included victories over Boston College, Northeastern and Tufts in its 15-7 season.
The team's leading hitter is Dave Tirrell, the second-baseman. A feature story in the May 15 issue of the Boston Globe referred to Tirrell as "MIT's mighty macer" and recalled the astonishment of Coach O'Brien when Tirrell first reported for practice three years ago. He then stood 5 feet 4 and weighted 125 pounds.
"Now he's a 5-8, 150-pounder and he's our leading hitter with a .388 average. You name it and he does it," the Globe quoted Coach O'Brien.

## Kepes to Speak

Gyorgy Kepes, director of the Center for Advanced Visual Studies will speak with Rudolf Arnheim, professor of the psychology of art at Harvard on the topic "Are the Arts Alienated from Society?" 8 pm , Wednesday, May 22 at the First Parish Church in Cambridge, 3 Church Street, Cam bridge. The forum is open to the public, free of charge.

## Fellow at CAVS

## Norwegian Artist Carl Nesjar To Execute Picasso Sculpture

## By WILLIAM T. STRUBLE

 Staff WriterOne of the late Pablo Picasso's great sculp tures-a nude bather heretofore clothed in relative obscurity as a cardboard model-will come to life this summer at the hands of Carl Nesjar, Nor wegian artist and fellow at the MIT Center for Advanced Visual Studies.
Sometime in August, Nesjar will go to Chicago to begin work on "The Bather," a 30 -foot-high con struction of reinforced prepacked concrete that Nesjar will engrave by sandblasting
It will be the 17th concrete sculpture executed for Picasso by Nesjar, who introduced Picasso to the technique in 1956 and who, because of his faithfulness to Picasso's designs, was given ex clusive rights to carry out Picasso's works in this medium.
"The Bather" will grace a pool in a woodland setting specially constructed for it in Gould Center, a $\$ 30$ million commercial and recreational development covering 40 acres in the Rolling Mea dows section of Chicago's northwest suburbs.
For the project, Nesjar will bring two mouldmaking specialists from Norway and will import some 20 tons of black granite aggregate from a quarry just outside his hometown of Larvik in Southeast Norway. After the mould is filled with aggregate, a silicate and aluminum concrete blend will be pumped in from below. Once the concrete has hardened, Nesjar will go to work with his sandblasting hose.
The difficult work has both physical and artistic perils, according to Nesjar. The sand jet at a pressure of about 100 pounds could, in a slip, cut off a hand if unprotected. Blowback of the sand scratches and blurs goggles, which must be changed in from 10 to 25 minutes. And, because the sand stream cuts quickly, it must be carefully controlled to avoid errors in design.
"The Bather" is one of a series of sculptures that Picasso evolved from an oil painting he composed as a set of variations based on Manet's "Dejeuner sur l'Herbe." Four of the figures, for which Picasso specified park settings, are in the garden of the Museum of Modern Art in Stockholm. For many years "The Bather" resided as a


In its winter mode, the glow of a lighted yearround fountain by Carl Nesjar shows the way for passersby on a somber evening in Norway. The fountain, 25 feet high, is at the Norwegian Agricultural University near Oslo. ${ }^{\circ}$ by Carl Nesjar.
model in Denmark's museum of modern art, the Louisiana Museum, near Copenhagen, for lack of funds to execute it.
After "The Bather" is completed, Nesjar will begin work on a 10 -story-high Picasso abstraction, "Head of A Woman," for the campus of the University of South Florida, in Tampa, if a fund-raising drive there is successful. Because of its size that project has already required lengthy consul-


Drawing from the Chicago Tribune indicates size and setting of Picasso sculpture to be executed by Carl Nesjar in Chicago's Rolling Meadow's section.


Picasso and Nesjar together at Notre Dame de Vie, Mougins, France, in 1962.
tation between artist and engineer, balancing the demands of aesthetics against the dictates of structure.

For example, to achieve adequate wind bracing, the Florida piece will incorporate a sevenstory solid steel beam 12 by 12 inches embedded three stories into the concrete foundation.
At MIT, Nesjar is working on his own projectslarge and intricate "ice fountains," or "yearround fountains,"-some lighted-that vary in form, mood and texture with the seasons. One of them is intended for the same park in Rolling Meadows.

Nesjar is also a photographer, principally of abstractions found in nature, whose work has been acquired by other artists and museums.
Although Norwegian, Nesjar is completely at ease in the English-speaking world with a total fluency acquired largely in his youth when his father was supervising engineer for the construction of, among other things, the tower of the Chrysler building in New York City. -

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## CLASSIFIED ADS

Ads are limited to one per person per issue and may not be repeated in accompanied by full name and Insti ute extension. Only Institute exten sions may be listed. Members of the may submit who have no extensions the Tech Talk office, Room 5-111, and resenting Institute identification. Ads lll ads before noon, Friday, May 24.

## For Sale, Etc

Tires, 2, E78x 15 ( $7.35 \times 15$ ), prac nw,
$\$ 10$ firm. John Golis, $\times 182-183-201$ Bed F1 Facil.
Graduating, furn: dbl bed, $\$ 40$; $\$ 25$; desk, $\$ 10$; shag rug, odd shape, orig $9 \times 12, \$ 15$. Gary, x 3-1639.

Scott 300-C fm rcvr, 35/35 rms, \$150 or best;
kryptonite
Schwinn
lock, $\quad \begin{gathered}5 \\ \$ 7.50 \text {. spd, }\end{gathered}$ Miracord 50 H Mk II trntbl, exc cond, Collier baby carriage/carbed/stroller, lk w, \$25, Lee,

Marine trans, Paragon mdl JP1D, best over $\$ 10$; Bar marine Willy's wtrcooled
xh maniford, best over $\$ 6$. Call, 321-1893, aft 5:30pm.
EPI 100's, \$60ea; xtra long full sz F 3 spd bikes, 2 , $\$ 35 /$ ea; ' 71 cabin
tent, 10x11, v little use, Sears price $\$ 85.49, \$ 45$. x $3-2720$.
Parfait glasses, 8, b nw, $\$ 6.50$. Mrs.
Bishop, $868-9066$,
Tennis rckt, Wilson T-2000, almost nw, 4.8 grip, med wt, $\$ 25$. Alan,
$963-6909$.

Nw Volvo tire, $185 \times 15$, mtd ' 68 wh,
Chickering spinet piano, $\$ 500$ or best. obin, x 8-4566 Draper.

Martha's Vineyard, Gay Head, home ites, wd \& open land, w/brook \& tone walls, exc view Elizabeth Is. Dr. M 3 spd Eng-made bike, gd cond, ask
$\$ 40$. Vicki, x 3 -4849. Med-Ital $B R$
$\$ 500$
set
sel
incl matt,
yr old, Sofa, conv to bed; mtch rocking chr; hutch, gd storage; sharp looking furn B nw Remington 600 super hand-held dryer, \$10. Liz, x 3-6162.
Contemp lamps, 2, $261 / 2^{\prime \prime}$ hi, lk nw x8-4061 Draper.

Regrig/frzr, 2 dr, cprtne, $12 \mathrm{cu} \mathrm{ft}$,
Dresser, \$15; bkshlv, \$6. Don, x 8-1282

Scuba equip: backpak, gd cond, \$15; Dacor 400 regulator, yr, exc cond,
$\$ 80 ; 1 / \mathbf{a}^{\prime \prime}$ wetsuit, $1 \mathrm{~g}, \mathrm{gd}$ cond, $\$ 60$. Ed Franks, $742-3151 \times 265$, aft 3 pm .

Dbl bed w/hdbrd, dresser, chest, Med style, gd qual, exc cond, Mike,

Kenwood KW-5066 tape deck, 3 hds, 19 tapes, $\$ 100$; Master work compact amfm tuner w/trntbl, 28 " sp krs, $\$ 20$;
bkcse w/World Bk Encyc, $\$ 5$; asst bkese w/World Bk Encyc, \$5; asst

Zuckerman harpsichord, gd playable cond, as is, unfinished exterior, easily
transp, $\$ 200$ firm. Virginia, $\times 3-1810$. Unitron MKD-A150 microscope, 10 X
widefield eyepc, $4 \mathrm{X}, 40 \mathrm{X}, 100 \mathrm{X}$ oil widefield eyepc, $4 \mathrm{X}, 40 \mathrm{X}, 100 \mathrm{X}$ oil immersion acces, all papers, $\$ 150$. Ed or Tom, x3-6155.
Office desk, $\$ 25$; metal top dining tbl, Siscomem

Mtd tires, (2) $65 \times 15$, less 1.5 K ,
$\$ 18 / \mathrm{ea}$. Bill,
$\overline{\text { Page 6, Tech Talk, May 22, } 1974}$

HP-35 w/security cradle, perf co Guitar, nrly nw, $\$ 20$; shop cart, gd cond, \$3. Chan, 491-0636.
Free (almost) $\mathbf{3 , 0 0 0}$ damaged plastic rcrd jackets, no gd for rerds, glue they used wl damage rerd, if have another
use for them, take them. Bruce, use for them, tak
$734-8462$, evgs best.
Port adjust TV stand, shlf, $\$ 10 ;$ mag rack w/3 tiers, $\$ 7 ; 6$ drwr wht/gold
dresser, well made, v gd cond, $\$ 35$; nd wd grain formica tbl top, no legs $\$ 7$; uphol chr, nds arm rest, \$7. Call,

Armchrs, $\$ 10 \& \$ 5 ; 2$ coffee tbls, $\$ 5$; Cancrete 731 -5347.

Upright piano, in tune, $\$ 60$; refrig,
50 ; $\$ 50$; other furn, cheap, moving out. Call, 628-3194.
Moving, must sell washer \& dryer, 3 yrs, exc
Draper.
Oxford 10 spd touring bike, $\$ 75$ or est. Al, $x 5873$ Linc
Playboy mag: 3 issues ' 55 , compl
56 -' $^{\prime} 60$, many others. $566^{\prime} 60$, many others. E. Davis,
x 3 -2934.

B nw Pentax super multi-coated lenses, 135 mm telephoto, 35 mm wide angle,
w/cases, $50 \%$ list pr. Eddie, 266-8138.

Darkrm: compl Bogen 66A enlarger, Darkrm: compl Bogen 66A enlarger,
(3) $5 \times 7$ trays, (3) $8 \times 10$ trays, safelite, print dryer, more $\$ 100$; Dynaco PAT-4
preamp, $\$ 60$ TEAC AN-40 Dolby, gd preamp, $\$ 60$ TEAC AN-40.
shape, $\$ 25$. Dave, 782-3539.
Poker playing computer program,
BASIC, $\$ 2.50$. Paul, $323-7289$
Scuba equip: safety vest, fins (8-91/2),
boot, weight belt, mask \& snorkel,
knife, exc cond, all $\$ 35$, sell set; fish knife, exc cond, all $\$ 35$, sell set; fish
reel, Shakespeare Baitcasting, level reel, Shakespeare Baitcast
wind, GC, $\$ 5$. Jim x $3-7828$.

Desk, $\$ 20 ; 2$ desk chrs, $\$ 10 /$ ea; dbl ed, matt \& spr, $\$ 15 ;$; dresser, $\$ 15 ;$ ski
oots, 2 pr m sz
en boots, $2 \underset{\text { pr }}{ } \mathrm{m}$ sz 9 , plastic, $\$ 20 / \mathrm{ea}$.
Dave, $\mathrm{x} 3-3724$.

Nikkormat FTN body, nw, latest mdl w/wrnty, $\$ 170$; Tamron lens, 35 mm f $\$ 200$. Aldrich, x $3-5360$
Corkbrd on plywd, $71 / 2 \times 4, \$ 17$; drapes, sprd, trav rod, $\$ 25$; sneakers, sz $101 / 2$, nw, $\$ 3.50$; navy oxfords, sz $10, \$ 6$; sm
aquariums, cheap; stereo phono, nds aquariums, cheap; stereo phono, nds
ransformer, $\$ 13$. Richard, x $3-3161$.

Reel-to-reel tape deck, 5 yrs, Ampex $1260 \mathrm{w} / 90$ tapes, $\$ 140$. Thomas,
$494-0235$.

Tires, Delta 140 super prem, $t$-less, B78-13, prac nw, $\$ 12$ or best/ea, or set 4. Ted, x3-3782.

Red/blk tweed carpet, lk nw, $\$ 35$ or best; Zenith 4 spd stereo phono, amfm,
dehones, $\$ 125$; over 60 class rerds, $\$ 50$; Ger-made violin, 2 bows, case, $\$ 150$. Richard, $\times 3-6028$, aft 1 pm .

Port washer/spin dryer combo, Hoover, $\$ 50$. x 3 -6653.

Set medical instruments, cheap.
Nw drapes, 3 pr red brocade, pleated,
Ast hseplants, 50 cents \& up, some large; also beaut $m$ Ger Shep nds qt large; also beaut $m$ Ger Shep nds qt
cntry home. Wed, $12 \mathrm{n}-2 \mathrm{pm}$, Rm
$13-3078$, x $3-6893$.

Snows, 3, must sell immed, used less seas, exc cond, $735-14 ; \mathrm{lg}$ coffee perc,
32 cup, b nw, nvr used; both cheap. Mami, 547-3907.

Mpl chest drwrs, \$20; hollywd bed,
Miranda Sensorex SLR, 50/1.4 $2 /$ case, acces, $\$ 100$; auto Miranda $28 / 2.8$ lens w/case, haze fltr, $\$ 50$; lens shade, $\$ 40$;
2 X teleconverter $2 \mathrm{X}+3 \mathrm{X} . \$ 10, \$ 15$; other acces; all exc cond, pkg price $\$ 200$. Tom, x8-1510 Draper.
Sears port washer/dryer set, $11 / 2 \mathrm{yrs}$, hook to K faucet, nds no dryer vent, lg
8 lb load, exc cond, vertical rack, ideal apt or sm hse, $\$ 150 /$ set. Suzy or Len, x3-1788.

Must move, 2 beaut handmade bkcses; chrome pole lamp; dbl bed matt;
bench; hot tray; other sm items, nego. bench; hot tray;
Susan, $\times 3-1671$

Util trlr, 1 whl, universal bumper hitch, spare susp, $\$ 80$. $x 5869$ Linc.
Bkcse, $\$ 40$; crib \& matt, nw $\$ 100$, ask \$30; wl rug, \$8; G78-14 stud snows, 1 seas, \$25; mirror, \$5. Call, 494-9336.
Phillips 10 spd bike, comparable to
Raleigh Rerd, gd cond, rides well $\$ 55$. Tony, 247-8124.

## Vehicles

61 Chevy Imp, gd cond, only $60 \mathrm{~K}, 2$
tires, $\$ 250$ or 20 best

63 Mercedes Benz 220, exc mech \& $\$ 650 \times 3-3367$.
65 Merc sta wgn, runs well, gd transp, incl snows
$268-4203$.

66 Falcon, $6 \mathrm{cyl}, 200 \mathrm{cu}$ in, 2 dr , std,
running but nds work, any reas offer running but nds work, any reas offer.
Dennis, $\mathrm{x} 8-3333$ Draper.
66 Dodge Coronet, auto, r, p st, gd
run cond, best. Soon, $x 7637$ Linc.
66 Merc Comet conv, yel, gd body \& int, nw parts: mstr cyl, top, valve job but nds work, great for car buff, $\$ 170$ hego, x3-6596, 10am-3:30pm.
'66 Volvo 122 S, B18D eng, $24+\mathrm{mpg}$, body exc cond, nw paint, 7 gd tires
incl snows, nds some eng work, forced to sell, ask \$425. x 3-6229.
67 Volvo $122 \mathrm{~S}, 70 \mathrm{~K}$, amfm runs 1 k op, $\$ 950$. 3 -3194
$67 \mathrm{Ply}, \mathrm{ac} p$ st \& br, 4 gd tires, 2 snows, $60 \mathrm{~K}, 14.5 \mathrm{mpg}$, exc cond, must 494-8446.
68 Pontiac, v gd cond, exc run cond,
68 VW bug, exc run cond, ac, nw br,
nds body work, 2 snows, $\$ 350$. David,
69 VW beetle, exc cond, std, nw tires,
r, gas heater, $\$ 950 ; 4000 \mathrm{BTU}$ ac, $\$ 60$. r, gas heater, $\$$

69 Austin America, runs great, dent rt fender. Call, $628-0742 \mathrm{aft} 9 \mathrm{pm}$, or Ive msg Guillermo, Rm 7-331

69 Cortina wgn, 70 K , many nw parts, 2 snows, gd gas mileage, some dents,
$\$ 800$ or best. Michael Kirson, x3-4843.

70 Olds Cutlass Supr, 2 dr conv, sm 8 cyl, p st, auto, rear tint glass, exc mpg,
$\$ 1,750$ or reas offer. x $3-4257$.

71 VW sqbk, $40 \mathrm{~K}, 28 \mathrm{mpg}$, exc cond,
71 Fiat 840 Spyder conv, 32 K , amfm Blaupaunk, Abarth exh, exc cond, orig owner, Michelins, luggage rack,
$\$ 1,750$ or best. Call, $429-4107$.

72 Pinto sta wgn, brn, roof rack, 30 K ,
w tires, ask $\$ 1,900$. Don, x 7606 Linc.
73 VW superbeetle, semi-auto, 12 K , used every day, some body damage,

71 Honda 750 cc , has sissybar, pad, crash bar, chain inlock, 2 hlmts,
Wixom faring, lots more, $\$ 1,595$. Guy, $\times 5597$ Linc.
73 Honda CB350, gold, beaut cond, 3.5 K, \$975. Rod, $247-8048$.

73 Honda 350, nw March, 350 mi, $\$ 1,000$. Rod, $\times 5879$ Linc.
73 Honda CB350, gold, exc cond, many xtras, \$995. Call, 247-4198, aft

Why not ride mtrcycl to sch? Eco
ransp is yours w/'68 Lambretta, perf many nw parts, ready to ride, $\$ 190$. 8751 Dorm, morns.

## Housing

All, sub $6 / 1$ or $15 \mathrm{w} /$ Sept opt, bright,
comf 2 BR , furn, etc, $\$ 200$, omf $2{ }^{2}$ BR, furn, etc, $\$ 200$. Mel,

All, 2 \& 3 BR apts, w/pkg, nr bus Cent $\mathrm{Sq}, \$ 200, \$ 250$; W Newton, sgl home, gd loc, exc cond, 2 car gar, $\$ 39,000$. J.
Lee, $\mathbf{x} 8-4567$ Draper.

Arl Hts, brick 4 BR hse, $11 / 2 \mathrm{~B}$, gar,
unfurn, nr T, $9 / 1 / 74-8 / 31 / 74, \$ 380+$ $\mathrm{h} \&$ util. Call, $643-3739,7-9 \mathrm{pm}$.

Belmont, 5 rm apt, avail July or Aug,
Bos, Beac St nr Mass Ave, just over Bos, Beac St nr Mass Ave, just over
Harv Bridge, sub w/opt, Ig BR, qt bldg, Harv Bridge, sub w/opt, g BR , qt bldg,
some furn avail, $\$ 185 \mathrm{incl} \mathrm{h}$. Janet, x-5230.
Bos, Marlboro nr Mass Ave, 2 BR, B, eat-in-K, LR, well kept bldg, gd loc, $\underset{266-8346}{\text { avail } 7 / 1, \$ 260 \text { incl h, h water. Call, }}$

Bos, Park Dr, 2 BR avail $6 / 1 \mathrm{w} / \mathrm{opt}$, Ig enuf 3 people, med B, Kette, ww, gd
IndIrd, $\$ 265$ incl util. 267-4481.

Bklne, nicely furn apt, sum sub for
visit prof, 6/1-9/15. x3-5658.
Bkine nt T \& BU, 3rd fl priv hse w/sep ent, lovely nbrhd, $1 \mathrm{~g} \mathrm{LR}, 2 \mathrm{BR}$, sm mod K , bkist rm, B, storage, pkg, cln, incl hsehold gds $\$ 300$. 3 bec furn

BkIne, nr Coolidge Crnr, compl furn 2 BR, frpl, ac, TV, all appl, qt nbrhd,
off-st pkg, avail $7 / 1, \$ 200$ incl util. Ed
or Steve, x $3-1691$. or Steve, x 3-1691.

Bkine off Comm Ave, 2 rm , furn, $\$ 140$
art furn avail $6 / 7-9 / 1$. x $3-4433$, Camb, sum sub Cent Sq area, Grn St, 2 BR, ac, ww, disp,
Call, $492-1693$.

Camb, BR, 5 blks Cent Sq, nr T, stores, MIT, ww, tile B, cab K, avail 6/1,\$175

Camb, Cent Sq, sum sub June-Aug, 2 rms, $\$ 175$ incl h. Robert May, Camb, effic $5 \mathrm{~min} \mathrm{H} \mathrm{Sq}, \mathrm{ww}, \mathrm{ac}$, dw, vail $6 / 1, \$ 195$ incl h. Cathy, x $3-5797$. Cambport, sum sub w/opt, ig hse, LR,
DR, nw K, B, 5 BR, rent nego. Call. 547-8929.
Camb, off Prtr Sq, MIT affil nr MIT, mod, $\lg 2 \mathrm{BR}$, ac, ww, dw, avail 6/1,
$\$ 250$ incl h. Call, $628-4454$.

Camb, $15 \quad$ min $\quad \underset{\text { walk MIT, sub }}{15}$ 6/10-12/31, 2 BR, LR, DR, K, study, or cp1 pref, $\$ 185+$ util. Dolores

Camb, Tang Hall, BR apt, avail 6/1 w/opt, $\$ 86$. Steve, 494-9248.
Chestnut Hill, 4 BR fac home, avail July, Aug at cost; for sale; antique Bklne, x 3 -4923.
pswich, 6 rm 200 yr old hse, entry setting, free access Crane's beach, avail

Jam PI, 2 rm apt, furn, B, priv ent, nr T, qt area, gd for visit prof
ncl util. Nancy, x $3-4433$.

Dennisport, 2 BR cottage, slps 4 , carpet, heat, porch, short walk priv ch, shops, family only, $8 / 17-8 / 31$, 175/wk. Call, 872-0566, 6-8pm
Lex, caretaker's cottage on estate, LR w/beam ceil, frpl,
w/gazebo, garage, avail
$7 / 1$,
$8 R$ util. Call, 862-5591.
Newton, sum sub 5 min Thruway, 6 rms, patio, $\lg$ yard, off st pkg, d\&d,
cent ac, washer \& dryer, swim, tennis, olf nrby, $\$ 300$. Call, 965-2118.
Nwtnville, 3 BR, avail $7 / 1,2$ nd fl 2 fam hse, $v$ conv stores \& sch, family
only, $\$ 245$. Call, $267-2672$. nly, \$245. Call, 267-2672.

Som, 50 Craigie St, BR restricted MIT married cpls, avail anytime. Call, 731-4473.
Som, nr Porter Sq, dw, ww, stove, refrig, ac, avail immed, rent incl h.

Som, 2 BR lux apt, sub 6/1-9/1, 15 min walk MIT, ww, 2 ac, dw off-st pkg,

Som, sum sub $6 / 1-9 / 1, B R, 5 \mathrm{~min}$ Harv, fully furn, nw bldg, $1 / 4 /$ blk bus,
fite pkg, $\$ 190$. Call, Upton, 2 BR hse, exc cond, beaut view, frpl, screen porch, lots privacy, nod K \& B, 1+ acres, corale, barn, toolshed, 2 fenced grdns, 35 mi Bos
Mass Pike, low taxes, $\quad \$ 35,000$.

Wellesley, off Rt 9 , 2nd fl , roomy K w/pntry, mod B, 5 other rms, bk yrd,
pkg, nr T, $\$ 300+$ util. Call, 237-2309 $\mathrm{pkg}, \mathrm{nr} \mathrm{T}$,
anytime.
Cape Cod, Centerville, 3 BR hse on lake, wl rent M-F basis, start $6 / 3,10$, or 17 for $\$ 100$ or $7 / 8$ for $\$ 125$. Gary, x8-1484 Draper.

Hull, Nantasket, 5 rm hse, outside shower, $\lg$ porch w/water view, $\lg$ LR
$\mathrm{w} / \mathrm{frpl}$, all elec appl, furn, off-st pkg $130 / \mathrm{wk}$ or $\$ 1,200 / \mathrm{seas}$, July-Aug $140 / \mathrm{wk}$. Call, $335-8422$.

Yarmouthport, Cape, yr and hse avail /16-7/31, 7 rms, 3 BR, 2 B, nr bch, $\$ 800 / \mathrm{mo}$. Priscilla, x 7865 Linc.
Sum sub w/opt, 2 rm apt, $\mathrm{lg} \mathrm{K}, 5 \mathrm{~min}$ \$ 52.50 , other $\$ 60$ unfurn 3-7646.

Sum sub 2 BR apt, Coolidge Crnr, fully furn, June-Sept, $\$ 230$ incl h. David,

Stoddard, NH, 2 lkfront cottages, secluded on 9 mi Highland Lake, frpl, elec stove, refrig, h-c water, porches, rowboats, piers, priv bch, 90 mi ( 2 hrs )
Bos. Call, $843-2279$.

Maine, 5 BR 300' on sm lake nr Bethel, no elec, $\$ 120 / \mathrm{wk}$ in Aug, min 2 wks . all, 332-0767.

Sum rental, hse on Lake Memphemagog, 4 hrs away on Candian hortage, $\$ 180 / \mathrm{wk}$ incl all util. x 3 -2742.
Vt , well equip modernized old hse, 6 Brdn, $\$ 550$. x $3-4771$ winterized, planted

UCLA, apt minutes from campus, spac Charming renovated Fr farmhse, 4 db Charming renovated Fr farmhse, 4 dbl
BR, comf furn, all conv incl dw, washer, hilltop loc, 20 min dwntwn Geneva \& Univ, avail 3 mos-3 yrs,
photos avail, $\$ 500$. Write: Skala, 13 Avenue Des, Phalenes, 1050 Brussels, Belgium.

## Animals

AKC mini blk $f$ poodle nds gd home, 6
AKC mini schnauzer pups. Jim, x8-3458 Draper
Free kittens, 2 blk, 2 multicolored, 10 Free kittens,
wks, play ful, people oriented, litter
trained. Call, $492-3591$.

Fine young cats, 2 , nd nw home rgently, marmalade \& blk neutered m . Jim, x3-1926.
siamese, 2 yrs , $\$ 15$ (3) $1 / 2$ siamese kittens, $\$ 5 / \mathrm{ea}$; raised w/chldrn, other pets, exc te
x $8-2861$, Draper

## Lost and Found

Found: Money, identify container \& amt to recl

Found: tckts, claim by identifying.

## Wanted

Hse or lg apt, rent or sub $74-75 \mathrm{acad}$
yr , for 5 grad \& undergrad stu, Iking for suburb loc nr T, pref furn. Paul,
rmmate, own rm in furn apt, ac, 2 pools, 5 min BC, avail $6 / 1-8 / 31, \$ 135$. Xtra graduation tickets. Doug,
$3-7193$. Insane people, into plants, music, people, psychic exper N , share 3 BR Camb apt, $\$ 90$ + util. Donna, x8-1231 Draper.
Child Care Program nds donations of hldrn's furn, toys, books, games, m 4-144 .

Rmmates, 2 BR avail in 3 BR 20th fl Tang Hall. Call, 494-0254, or housing

Visit prof \& wife nd sm furn hse or apt 1/1-12/31 no chldrn, reas commute distance MIT. x 3 -7077.

M rmmate, Lex hse, furn, must have Grad tckt, 1, wl pay $\$ 5-\$ 10$. $\times 5808$ Linc.

Daley, x3-3406.
Trir hitch \& cart for compact car.
Rmmate, own rm in 4 BR hse, avail $6 / 1-9 / 1$, nr BU Bridge, Stop \& Shop, 7.50. Call, 491-1364.

Foreign stu wl buy xtra graduation ckts for relatives from abroad. Adil,
$\times 3-7213$.

M or f rmmate, own BR in 4 BR hse, nr
H SG, qt safe street, encl bkyrd, pkg,
Rmmate, own lg rm in 2 BR Kenmore Sa apt, 15 min walk MIT, ww, d\&d, ac, Call, $536-9530$, aft 6 pm .
multi-spd bike, 26 "plus. $\times 8-2479$ Draper.
Rider to west coast, beg June, split gas,
Mature, respon grad stu(s) to work as
bartenders, 1 or more evgs/wk, $4-8 \mathrm{pm}$,
start $6 / 3$ Muddy Charles Pub.
x3-2195.
Rmmate, sum sub w/opt, own Ig BR in 70 firn 4 BRapt, Cent Sq, LR, B, mod K,

Help! Desperately nd place to live this um, wl hse or apt sit. Reliable, respon, traight grad stu, wt take exc care of ome, some rent possible, ref provided.


## Positions Available

and businesses. Keep payroll and other records; attend meetings when required; write and address invitations
for Institute events. Excellent typing and shorthand skills required. Knowledge of the Institute desirable. Discre-
tion, honesty and tact essential to deal tion, honesty and tact essential to deal
with confidential matters and to work in a private home. 25 hour work week; mid-day schedule preferred. A
after $8 / 15 / 74.74-315-\mathrm{R} \mathrm{(5/8)}$.

Secretary IV or Senior Secretary $V$ to the Director of a new Special Labora-
ory will assist in all aspects of
developing the new lab; organize the Director's schedule and set up the yping and shorthand required. Ability o organize, establish priorities important. 40 hour work week. $74-368-\mathrm{R}$
$(5 / 1)$.
ecretary IV or Senior Secretary V for
Vice President in the office of the resident and Chancellor will handle a Arrange and coordinate complicated appointment and meeting schedules; people and offices of the Institute. Excellent typing, shorthand, organizaEnal skills and command of language re essential; ability to anticipate,
ecognize and organize priorities and ork as part of a team, resourcefulness tion, tact, and good judgment impor-
tant. $371 / 2$ hour work week. $74-343-\mathrm{R}$

Secretary IV in the Music Office,
Humanities Department will handle a variety of secretarial duties; coordinate class schedules and class materials; accounts; take and transcribe notes for
he section. Typing and shorthand kills; ability to work with musicians, and ability to work independently mportant. 74-456-R (5/22).
ecretary IV in Chemical Engineering Headquarters will handle secretarial
duties for the Department Head anid Administrative Assistant. Ability to
stablish priorities and to work with a minimum of supervision essential. Excellent typing, shorthand and
organizational skills required. Familiarity with MIT
$74-444-\mathrm{R}(5 / 22)$.

Secretary IV in the Center for
nternational Studies will handle International Studies will handle
standard secretarial duties for a new program on nutrition planning and ments and maintain communication tional skills and good typing required. Shorthand preferred. 74-443-A (5/22). Secretary $I V$ in Mathematics will
handle all general secretarial duties; ype correspondence, class notes, cripts; maintain mailing lists; will also do some filing and dictaphone work. ence in technical typing required.
bility to work under pressure with careful attention to detail important.

Secretary IV will perform general
secretarial
duties for the Director of secretarial duties for the Director of
the Neuroscience Research Program. Transcribe from tapes, schedule
appointments; compile and type special reports. May also do some
library and bibliographic research on echnical topics. A good educational
background, strong secretarial skills required; shorthand desirable. Library research skills, ability to interact
effectively with staff and foreign and omestic visitors important. $74-565-\mathrm{R}$
$(5 / 22)$. Secretary IV to the Executive Officer
of Chemical Engineering will handle general secretarial duties; maintain
petty cash account; make travel petty cash account; make travel
rrangements; receive visitors. Good typing, shorthand, and dictaphone
skills required; previous experience (MIT preferred) or secretarial
schooling; ability to work independently, maturity
74-398-R (5/8).

Secretary IV in Meteorology will assist
with administrative duties and perform with administrative duties and perform Officer of a large research program in physical oceanography. Handle routine
office duties, type correspondence, arrange meetings for program participants from all over the world. Ability pants from all over the world. Ability with 60 scientists on a regular basis.
Good office skills important; interest physical oceanography desirable.
$74-379-\mathrm{R}(5 / 1)$.

## Secretary IV to the purchasing staff of

 Type purchase orders, correspondence; maintain records, Will also be respon-sible for processing articles for publica-
with
invo
repri
vith publishing firms Reconcile
noices eprints; maintain files and records of lent typing, organizational ability, independent judgment, initiative re-
quired. Library and/or cataloguing xperience highly desirable 74-362-R

Secretary IV to the Institute Secretary budget accounting, file maintenance; ain communications and smooth relaions with top level offices of the Institute. Excellent secretarial skills,
ability to organize and to use discre-
tion required. Knowledge of MIT desirable. 74-332-R (4/24).
he Council for the Ants Staff $V$ for the Council for the Arts Staff and the activities; do considerable office activities; do considerable typing.
Excellent typing and organizational
skills required; ability to work against skills required; ability to work against
deadlines essential; shorthand and deadlines essential; shorthand and
knowledge of MIT are desirable. 371/2
hour work week; $9-5: 30.74-300-\mathrm{R}$ hour wor
$(4 / 10)$.

Secretary IV in the office of the Institute Secretary for Charitable Trusts will monitor the office budget, travel; type correspondence and proposals from dictaphone and handwitten copy; set up and maintain files, other sources inside and outside MIT. May occasionally conduct research on charitable trusts and foundations. professionalism essential. Previous

Secretary IV to the Administrative Officer of Chemical Engineering will handle general secretarial duties; mainain contract, grant, personnel records; functions. Good typing, shorthand, dictaphone and organizational skills required. Maturity, tact, ability to anticipate problems desirable. May occasion
$(4 / 10)$.

Secretary IV for a professor in Earth nd Planetary Sciences will handle all administrative chores, some library research and editing. Excellent typing
(some technical); shorthand preferred. (some technical); shorthand preferred.
Editorial and organizational skills important. 74-8-R (1/9).

Secretary III-IV will handle a variety of Graduate School Office. Type the spondence, financial aid awards, reports; schedule meeting and appoint-
ments for Deans; answer inquiries regarding procedures and fellowships. schooling required; good ty ping, shortedge of MIT helpful. 74-420-R (5/15).

Secretary III will provide secretarial Chemical Engineering. Perform office Chemical Engineering. Perform office
reception duties; maintain records; ype class material, reports, technical manuscripts, research proposals. Good typing essential (technical typing experience preferred); organizational skills, ability to use the dictaphone and to 4-445-R (5/22).
Secretary III in the Humanities Library
will handle general secretarial duties will handle general secretarial duties
for the library; maintain payroll records; participate in interlibrary bibliographic searching. Speed and accuracy in typing required; ability to experience helpful. 74-441-R ( $5 / 22$ ).

Secretary III in Foreign Literatures and inguistics will type Russian, French tencils; catalogue departmental library, perform other general duties. oood typing essential; good knowledge of Russian and one other foreign
language, preferably French required. 4-442-R (5/22).

Astronautics will assist the Under Astronautics will assist the Underion and various other office duties; type correspondence and technical
reports for two professors. Good
command of English, ability to organize and work with details required. 74-433-R (5/22).

Secretary III in Urban Studies and Planning will type manuscripts, correspondence, reports, class notes; maintravel. Excellent typing and previous ecretarial experience required. 74-446-R (5/22).

Secretary III in the Philosophy Department headquarters will type manuscripts and correspondence; act as
headquarters receptionist; order textbooks and supplies; maintain student records. Good typing essential; shorthand helpful. Previous secretarial
experience desired. 74-421-R (5/15).

bibliographies; type and edit reports,
catalog cards, correspondence; monitor catalog cards, correspondence; monitor
accounts. Good typing, organizational
skills required; library experience necessary; cataloging
helpful. $74-365-\mathrm{R}(5 / 1)$.
Senior Clerk III-IV in the Comp-
troller's Accounting Office will be
responsible for complete control of the responsible for complete control of the
Journal Voucher System; maintain batch controls and edit input; create magnetic tapes for computer pro-
cessing. Individual must be good with figures; previous experience with com-
puter printout, familiarity with (5/15).

Secretary $I I I$ in Earth and Planetary Sciences will assist with general secretarial duties for a professor and
research group and handle all office duties for another staff member. typing load (technical typing helpful), arrange committee meetings. Ability to handle details essential. 74-321-R

Secretary III to an Industrial Liaison Officer will assist with the Institute publication distribution, symposia and
faculty travel, research for briefings, handle all other general secretarial duties. Good shorthand preferred;
typing skills necessary $74-100-\mathrm{R}(2 / 6)$

Secretary 111 in Chemical Engineering
will type quizzes, reports, technical manuscripts, proposals for three assoc te professors. Will arrange appointments, file, act as receptionist for the typing experience preferred. Prompt, dependable, able to accept supervision
and follow through on details and follow th
$74-162-R(2 / 20)$.
Administrative Assistant $V$ in the Harvard-MIT Program in Heal
Science and Technology will work with the Executive and Business Officers in a wide range of administrative and secretarial duties. Excellent adminisAbative and secretarial skills required. Ability to work independently, rience essential. Familiarity with an academic environmient, accounting procedures and technical typing desirable. Maturity and discretion required. 37 or

## Administrative Assistant $V$ in Earth

 and Planetary Sciences will perform administrative tasks for a group ofoceanography professors; coordinate with the Woods Hole Oceanographic
Institution and several MIT departInstitution and several MIT depart-
ments on the administration of the joint degree programs; act as liaison monitor accounts and budgets. Institute experience desirable; ability to
anticipate problems, work indepenanticipate problems, work indepen-
dently and make administrative decisions required. 74-561-R (5/22).

Technical Assistant $V$ in the Develop ment Office will be involved in fund
raising activities. Analyze and process raising activies. Analyze and proces vhilanthropic foundations; maintain central records; identify and write evaluations of prospects; coordinate typing or an assistant. Accurate ability to establish priorities and work with deadlines essential. 74-328-A

Senior Library Assistant IV in the Humanities Library will process and technical report checklist. Supervise the maintenance of the microfilm library-users in finding Ability to organize own work efficiently, instruct and supervise students; accurate typing, capacity for detail required. Library experience valuable.

Library General Assistant III or Sr. Library Assistant IV will be responsible Rotch Library: inventory, shelving, overdue notice procedures, searches,
records and statistics. Supervise and records and statistics. Supervise and
schedule assistants in desk and library schedule assistants in desk and library
procedures. Responsible individual with good judgment, organizational skills required; previous experience skills required; previous
helpful. 74-451-R (5/22).
Library General Assistant III in the
Engineering Library will stock books Engineering Library will stock books
and shelf-read on the seventh floor of the library; will also assist at the circulation desk as needed. This position requires a steady careful worker
and the ability to communicate with members of the MIT community.

Library General Assistant III in the Engineering Library will maintain reference, reserve, journal, theses, and technical report collection; conduct searches for missing books; distributes mail; assists at circulation desk when
needed. Ability to work with details coordinate own workload essential.

## coordinate $74-450-\mathrm{R}$ $(5 / 22)$

Senior Library Assistant
perform general library duties for the Sea Grant Program Marine Resource Information Center. Answer reference
questions; research topics, compile

Technical Typist III-IV Part-time in
Mechanical Engineering will handle Mechanical Engineering will handle
variety of typing: reports, class notes variety of typing: reports, class notes,
proposals, some correspondence,
Excellent typing required; ability to technical typing preferred. Good answering phones. 25 hour work week flexible. 74-389-A (5/8).
Senior Clerk III will handle reception duties for the Student Accounts Office
and assist the Counselors in servicin student financial requirements, type
correspondence, participate in the correspondence, participate in the
review of accounts and statements. Accurate typing, maturity and tact,
ability to work in a very busy office required. $74-449-\mathrm{R}(5 / 22)$.
 Senior Clerk $I I I$ in Medical will handle
reception duties at the first floor
reception desk. Answer phones, reception desk. Answer phone

## variety responsib

 individual with previou with the public needed. Light typing required. $37 / 1 /$ hour work week/$8: 30-5: 00 .(5 / 8) ; 74-430-R(5 / 8)$.

Senior Clerk III in the Comptroller's Accounting Office Travel Section will
type reimbursement checks; check type reimbursement checks; check
batch exists; answer questions on travel problems. Accurate typing, ability to
communicate clearly on the phone important. 74-397-R (5/8).

Senior Clerk $I I$ in the Microreproduc tion Laboratory (libraries) will proces copies; type invoices, work orders; prepare statements for the Accounting
Office. Ability to assist customers over the phone and in person is essential accurate typing skills required; book keeping
$(5 / 15)$.
Senior Clerk $1 I I$ in the Credit Union will type all daily withdrawal checks verify member's savings balance
summarize daily disbursements; maintain files; handle telephone inquiries Business background helpful; accurat typing and ability to work with figures essential. 74-432-R (5/15).
Account Payable Clerk II or III in the comptroller's Accounting Office wil invoices; audit vendor invoices; perform various other procedures; ability
to work with figures important. Profi-$74-381-\mathrm{R}(5 / 1)$. 74-38
Jr. Diet Aide II in Nutrition and Food Science will prepare special diets for
consumption by human experimental subjects under the direction of th Dietician or Senior Diet Aide. High school graduate with some experience
in handling foods preferred. 74-358-R (5/1).

Senior Offset Pressman - at Graphic Arts will do one, two and four color
process printing; expose and develop plates, mix inks; operate and maintain press and associated equipment to tone registration. May guide and train other operators. Graduation from high school or its equivalent and a minimum required. 40 hears aplicable experience required.
$74-351-\mathrm{R}$
$(5 / 15)$

2nd Class Engineer must have a Mass second class Engineer's license or
higher. Individual must be willing to work on any shift. 73-182-R (11/24).
Reactor Operator Trainee IV in Nuclear Engineering will serve as shif operator on the MIT Reactor afte tion. Two years of technical college education or its equivalent background operators' licensing. Knowledge electronic circuits would be helpful Ability to work under pressure o week. 74-560-R (5/22).

Senior Stock Clerk in Graphic Arts will perform all stock room functions


## Weiner Named

Dr. Weiner was awarded his B.A. by the City College of New York in 1951 and his M.A. and Ph.D. by Princeton University in 1953 and 1955, respectively.

He joined MIT in 1961 after serving as an instructor in politics at Princeton, and then as an assis tant professor in the Political Science Department at the University of Chicago.

Since 1953 he has done extensive field research in India under grants from the Fulbright Program, the Ford Foundation, the Social Science Research Council, the Guggenheim Memorial Foundation, the Rockefeller Foundation and the National Institutes of Health. During 1966-67 he was in Paris and the Balkans under grants from the Carnegie Corpora tion and the Social Scienc Research Council, conducting re search on political participation and national integration in the pre-war Balkans.

He was the recipient in 1968 of the Watumull Prize in the History of India from the American Historical Association for his book Party Building in a New Nation. the Advisory Panel of the Bureau of Near Eastern and South Asian


[^0]:    1. The term "minority" used in this Plan refers to Black Americans, Indian Americans, Oriental Americans, and Spanish-surnamed Americans.
[^1]:    5. Defined in terms of merit as described in Section II, item 6.
