

July 25, 1973 Volume 18 Number 3

NATIONAL AUTHORITY PROPOSED

# US Energy Problem Called National Emergency—Now

energy problem constitutes a present national emergency-not merely the threat of some future crisis—has proposed a plan that would meet the emergency by 1985 through heavy use of coal, the construction of underground nuclear power plants and a reduction in the growth rate of energy consumption.

Carroll L. Wilson, a professor in the Sloan School of Management, "miracle" sources of

An MIT professor, declaring the energy-nuclear fusion, hydrogen broken down by nuclear methods, solar energy, and others-"will contribute nothing by 1985 nor be substantially operative before roughly the year 2000, if then. And we simply cannot wait that long," Professor Wilson said.

"We need to take the kind of action we traditionally take only in the face of a national emergency, and that is exactly what we are facing," he said.

Professor Wilson's view that a

national emergency is upon usoutlined in the quarterly review, Foreign Affairs-differs sharply from the view of the Nixon administration as expressed by the President in his energy policy statement of June 29. In that statement Mr. Nixon said the country faces "a serious energy problem" that could become "a genuine energy crisis in the foreseeable future" unless swift action is

Professor Wilson, 62, general

manager of the Atomic Energy Commission from 1947 to 1951, says the most critical aspects of the current energy emergency are the perilous dependence of the United States upon Middle East oil and the "enormous foreign-exchange drain" that dependence will entail "by the late 1970s alone."

Citing "recent 'symbolic' interruptions" by some Middle East nations in protest against US policy toward Israel, Professor

Wilson said: "Although we will have to live through a period ofsubstantial reliance on Middle East oil it is hardly an acceptable national policy to leave the emerging situation in this highly unsatisfactory state. There are simply too many cumulative problems and dangers involved.'

Two parallel strategies-the Decade Program, containing the goals to be reached by 1985, and the Emergency Program, de-

(Continued on page 2)

# **Objective: More Women Students**

Women at MIT want more women at MIT, so the women students have collaborated on a 32-page recruiting booklet to be mailed to some 10,000 high school seniors.

The just-published booklet is the latest in a series of steps taken by MIT admissions officers and women students to encourage more women to attend MIT. The booklet is also one of several commemorations of the hundredth anniversary of the 1873 graduation of the first women from MIT, Ellen Swallow Richards.

The number of women attending MIT has doubled in the past five years, largely because of the Institute's increased ability to accommodate them residentially. Approximately 500 women will be enrolled as undergraduates in the 1973-74 academic year.

Part of the increase in numbers, the authors said, is because "The appeal of an education in science and technology is greater now. Active participation in our world now relies heavily on at least understanding the forces of science and technology.

The booklet will be distributed this summer to 10,000 girls who have completed the Preliminary Scholastic Aptitude Tests with scores of 65 and above in mathematics and 50 and above in the verbal test. The recipients were selected through the Student Search Service of the Educational Testing Service.

Also to receive the booklet are some 1,000 MIT educational counselors throughout the world.

The booklet was initiated by the MIT Association for Women Students.



Depicting life at MIT are, above, Yolanta H. Geisler of Queens Village, N.Y. and Albert L. Oliver, Jr. of Philadelphia, both freshmen; above right, Catherine A. Lu, a freshman from Tallahassee, Fla.; right, Carol Dees, a junior in urban studies and planning from Buffalo, N.Y.; far right, Dr. Holly Heine, an instructor in biology.







# MIT Affirmative Action Plan Accepted by HEW

MIT's affirmative action plan for guaranteeing equality of opportunity in employment and education has been found "acceptable and in substantial compliance" with federal regulations, President Jerome B. Wiesner was notified on Friday.

John G. Bynoe, regional civil rights director of the Department of Health, Education and Welfare's Office of Civil Rights, handed Dr. Wiesner a letter saying that the MIT plan "evidences a sincere and demonstrable good faith on the part of the Institute.

"In some aspects," Mr. Bynoe said in the letter, "the Institute has gone byond minimum standards of compliance and should be commended for this effort and the commitment to positive affirmative action development which it demonstrates."

At the meeting in Dr. Wiesner's office, Mr. Bynoe said that the MIT staff and department heads "deserve a lot of praise for putting the plan together."

"We'll be able to help a lot of universities as a result of what you've done," he said.

Dr. Wiesner said that while the "planning part is done, the hard part is yet to come."

Others at the meeting included John M. Wynne, vice president for administration and personnel and MIT equal employment opportunity officer; James J. Culliton, assistant to Mr. Wynne and director of personnel services for the Institute; and Dr. Leon Trilling, professor of aeronautics and astronautics and chairman of the MIT Equal Opportunity Committee.

The Institute is conducting a search for a special assistant for minority affairs in the office of the President and Chancellor, to replace James C. Allison, Jr., who has been granted leave from MIT to pursue advanced study at the Harvard Graduate School of Education.

Dear President Wiesner:

The Office for Civil Rights has determined that the affirmative action plan of the Massachusetts Institute of Technology, dated April 6, 1973, is acceptable and in substantial compliance with Executive Order 11246, as

The document evidenced a sincere and demonstrable good faith effort on the part of the Institute. In some aspects the Institute has gone beyond minimum standards of compliance and should be commended for this effort and the commitment to positive affirmative action development which it has demonstrated. The Massachusetts Institute of Technology is the first institution of higher education in Region I to develop a comprehensive program which included individual departmental pro-

The remainder of the letter is organized into two parts. The first part will address areas of the Institute-wide plan which require further clarification or amplification, or additional documentation. The various departmental plans will be discussed in the second part. In our evaluation of the departmental plans we have identified those areas needing clarification which are common to a significant number of plans. For your guidance in modifying these we will point out those plans which we consider to be the best examples of affirmative action commitment.

# Part One. Institute-wide Affirmative Action Plan

For purposes of clarity and coherence in analysis and evaluation this office has determined that the regulations which implement Executive Order 11246, as amended, suggest that an acceptable affirmative action plan should

(Continued on page 8)

The MIT affirmative action plan, dated April 6, 1973, was printed in full in a Tech Talk supplement on April 11. It describes the Institute's program for guaranteeing equality of opportunity in employment and education as well as for reducing under-representation and underutilization of minorities and women.

The plan states:

"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."

Government regulations require colleges and universities to develop acceptable affirmative action programs in order to qualify for certain federal contracts.

Mr. Bynoe's letter to President Wiesner was in two parts: The first dealt with areas of the Institute-wide plan that require additional clarification, amplification or documentation; the second evaluated individual department plans.

The letter said that MIT, which included 87 departmental plans in its over-all program, "was the first school of higher education in Region 1 (the six New England states) to develop a completely departmentalized pro-

"Our review of these plans revealed a wide range of effort with most programs meeting a minimum standard of acceptability," it said.

Each department will receive the part of the letter dealing with the departmental programs and also the specific critique of its own program.

# 10-Year National Energy Authority Proposed for US

(Continued from page 1) signed to meet the serious problems that will continue to arise until then-have been proposed by Professor Wilson.

The Emergency Program calls for additional refinery construction, at least one superport and building additional tankers-proposals which Professor Wilson admits "inevitably would not be wholly consistent" with the Decade Program.

"The painful fact is that some part of total refinery capacity, and as much as half of the planned superport capacity, will become obsolete or surplus as we carry out the shift to coal and the reduction in the proportion of our energy needs supplied by oil imports. When a problem has been neglected as long as we have ignored or misjudged the energy situation, the short-term requirements may not mesh with the requirements for the medium and longer termand so it is in this case. We have to fix the roof and build a new house at the same time."

Funding for such short-lived programs and for other elements of Professor Wilson's plan would be provided by a National Energy Finance Corporation.

Professor Wilson proposes that the corporation operate under a National Energy Authority. The authority, whose life would be limited to 10 years, would have the power to override obstacles to land acquisition, siting, environmental impact-in short, power to overcome many of the problems stalling energy development today.

#### The Elihu Root Lectures

"A Plan for Energy Independence" was outlined by Carroll L. Wilson, a professor in the Sloan School of Management, in the course of delivering the Elihu Root Lectures at the Council on Foreign Relations.

The Root lectures provide an opportunity for a distinguished member of the council to develop his ideas on a foreign policy issue. The lectures are usually published in book form. The full text of the lecture can be found in the July issue of Foreign Affairs.

The Wilson plan has been praised in the World Environment Newsletter of the International Institute for Environmental Affairs as "the most realistic and persuasive program we have seen." Speaking of Mr. Wilson, the newsletter says:

"His credentials are exceptional... Above all in this context, he is an environmentalist who was primarily responsible for the stillauthoritative SCEP report (Study of Critical Environmental Problems, 1970) and the subsequent Study of Man's Impact on Climate...Thus his call for tought measures takes full account of the possible impact on the environment."

Mr. Wilson, a professor at MIT since 1961, has been a member of the United Nations Advisory Committee on the Application of Science and Technology to Development and the US member to the Committee for Scientific Research of the Organization for Economic Cooperation and Development.

The objectives of the Wilson plan would be to achieve by 1985 "independence of the United States from critical reliance on imports of energy in any form-defining critical reliance as anything more than ten percent of our needs," and to keep energy costs below \$1 per million British Thermal Units.

"Looking at all the technological possibilities...it is my conclusion that the best sources of energy that can be greatly expanded in this time frame, at reasonable cost and with an impact on resources and on the environment that we can bear, are nuclear fission and the production of gas from coal through gasification-a process which produces from coal a clean, all-purpose and readily transportable gaseous fuel," Professor Wilson said.

Nuclear plants, if they are to provide ten percent of the nation's power needs by 1985 as proposed by Professor Wilson, will have to meet growing public demands for improved human and environmental safety.

"The determined opposition of states and localities and citizen action groups, plus rising caution by the Atomic Energy Commission, has stretched out to ten years the interval between application for a plant permit and bringing the plant 'on line' at an economic power level," Professor Wilson

To overcome objections—and to shorten the time required to bring nuclear plants on line-Professor Wilson suggests building new plants 500 or more feet underground and cooling them with water from surface towers that would recycle and cool the hot water many plants now are discharging into streams and larger bodies of water, risking environmental damage.

The keystone of Professor Wilson's proposal is the restriction of oil to transportation needs, withdrawing it from other energy uses such as heating.

If oil imports are kept to ten percent of energy requirements by 1985 and the energy growth rate is held to three percent, oil's role in the total energy picture would drop from the currently projected 47 percent to about 30 percent.

"Thirty percent is roughly the proportion of our energy that now goes to transportation, especially automotive uses..." Professor Wilson said. "It will take work to keep our transportation uses down to this proportion, for they are now expanding faster than total energy consumption and this tendency will be accentuated by lowered efficiency due to tighter emission controls...This is a harsh measure, but an indispensible one..."

At the same time, Professor Wilson said, the country should begin planning now to meet as much as 75 percent of its energy needs by the year 2000 from coal. There are ample reserves to accomplish this, he said.

Although Professor Wilson's plan to slow the rate of energy consumption will have some beneficial ecological effects, the environment may be set back in

"Up to now we have behaved as if we had the luxury to have the best of both worlds," Professor Wilson said. "We have not made the tough choices. Now the energy emergency makes us choose, and the choices are few. Some environmental prices must be paid: one or more oil superports off the East coast, and added refineries (however pure) inland; the Alaska pipeline with residual risks that even the safest design and procedures cannot avoid; much increased offshore oil development, and much increased coal mining largely from surface sources-which even with the best possible measures would tend for a time to deface the particular

"I do not minimize these costs, but feel them keenly as one who has been active for several years in the scientific effort in support of international and environment measures. In each case, the trade-off has been weighed, and it seems to me that the gain outweighs the loss."

# National Program...or Nationalistic?

"A Plan for Energy Independence" is, says its author, "a national program for the United Sates, calculated on the basis of particular American resources and American needs."

But is the plan also "nationalistic," asks Carroll Wilson? Would it affect others negatively? "Does it mean an increase in American autarky, fortifying the tendency other countries now see for the United States to take care of its own needs and let the rest of the world go hang?"

The answer: A "resounding no," says Mr. Wilson.

"This is the most obvious if we look at the relations between the United States and the other major industrialized countries, which are also the major consumers of energy...Western Europe and Japan are inescapably dependent, far more than the United States and far longer into both past and future, on imported oil and gas; if the United States becomes a vastly increased buyer of both, the effect can only be, at best, friction, and, at worst, price wars and preemptive deals that would cut at the very roots of cooperation between the United States, Europe and Japan. This danger is indeed already visible, and it will take a good deal of statesmanship to avoid it as things stand now; by 1980 or 1985, on present trends, the seeds of strife could be byond control."

Mr. Wilson points out that since Japan and most of Europe have no alternative comparable to what coal can be for America, a determined effort by the United States to reduce dependence on oil

And such a reduction, he adds, would not mean that oil-producing countries would be hurt. "To prolong the life of these (oil) reserves and to space out the income of the producers can mean a net benefit to most of the producing countries. Their prices will rise in any event in the years to come, but the present prospect of runaway increases in production cannot be attractive compared to a more orderly expansion that prolongs their assets."

In conclusion, Mr. Wilson says: "On any rational look at the production and consumption of energy all over the world, the United States represents not only a statistical discrepancy and target for the role of villain (six percent consuming 33 percent, and getting greater), but a potential disruptive force in almost every market day by day; only if this is brought under control can the United States play any responsible role in the effort that may have to be undertaken within the next decade, or at least by the end of the century-to balance and distribute world energy supplies much more fairly and reasonably than nature or men have ever done to, date. For unless we do this there is scant hope for human progress and peace in the long run."

# Visiting Professors Appointed to Faculty

Four visiting professors and one mercial science from the Univisiting associate professor have been named to the faculties of the Sloan School of Management, the Department of Mechanical Engineering and the Department of Urban Studies and Planning.

Wilbur G. Lewellen, a professor at the Krannert Graduate School of Industrial Administration at Purdue University, has been appointed visiting professor of management, effective September 1, for nine months. Dr. Lewellen received the SB degree from Pennsylvania State University in 1938. He received an MS degree in 1961 and a PhD in 1967, both from the Sloan School of Management.

Hans H. Weber, a professor at the University of Gottingen in Berlin, has been appointed visiting professor of management, effective September 1, for a year. Dr. Weber received a diploma of comversity of Mannheim in 1957 and a doctorate degree from the University of Saarland in 1965.

Harvey M. Wagner, a professor at Yale University, has been appointed a part-time visiting professor of management, effective February 1, 1974, for four months. Dr. Wagner received a BS in 1953 and MS in 1954, both from Stanford University, and a doctorate in 1960 from MIT.

Giuliana C. Tesoro, of the MIT Department of Mechanical Engineering, has been appointed parttime visiting professor effective this month for a year. Dr. Tesoro completed her undergraduate education in Italy. She received a PhD from Yale in 1943. She came to MIT in 1972 as a senior research associate in mechanical engi-

# 6 New Hertz Fellows Plan Graduate Studies at MIT

Six undergraduate students who received the coveted Hertz Foundation Graduate Fellowships plan to do graduate work at MIT. Three of the students also received their undergraduate degrees at MIT.

The fellowships, awarded by the John and Fannie Hertz Foundation, include an annual stipend of \$5,300 plus full tuition. The program is designed to stimulate interest in

engineering and the physical sciences.

Twenty-eight fellowship winners were selected from 315 applicants in a nationwide competition. The fellowships can be held at only 14 specified graduate schools in the US. MIT and Stanford led in fellowship awards with six each.

Winners who will use their fellowships at MIT are: Manoug N.

received his undergraduate degree at MIT; Arthur B. Ellis, of Hialeah, Fla., from the California Institute of Technology; John E. Keesee, of Phillipsburg, Ka., from the US Air Force Academy; Donald R. Ponikvar, of Willowick, Ohio, from the US Military Academy; James G. Richman, of Sunnyvale, Calif., a graduate student at MIT; and John E. Thomas, Ansour, of Forest Hills, NY, who of Oyster Bay, NY, of MIT.

Hubert E. Jones, of the Department of Urban Studies and Planning, has been appointed visiting associate professor, effective September 1, for nine months. Mr. Jones, formerly a community fellow and lecturer in the department received a BA from City College of New York and an MA in social work from Boston Univer-

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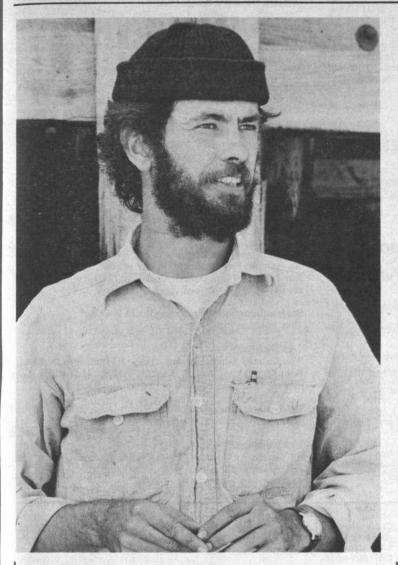
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Please address all news and comment to the editorial office, Room 5-111, Ext.



# Skipper Fegley to Pilot Research Vessel Schrock

The search for a skipper of the R. R. Schrock has ended with the addition of Captain Fred C. Fegley to the MIT staff.

Mr. Fegley will guide the 50-foot diesel research vessel on the waters of Boston Harbor and Massachusetts Bay—as far as 15 miles out to sea and 50 miles up and down the coast of Massachusetts—as MIT graduate students collect research data in connection with environmental studies.

Previously, the new captain of the Schrock changed his job with the seasons.

During winters for the last four years he worked for the Deans Office at Boston University as assistant director of residents. In the spring and fall he delivered boats up and down the coast of New England, to Florida and to the Bahamas. Summers he worked as an independent boat operator out of Woods Hole, taking out yachts and occasional work boats.

The Schrock had been without a captain for a few months, and found one when Mr. Fegley heard of the opening through the grapevine at Woods Hole.

The 30-year-old Captain Fegley, a graduate of C. W. Post College in Greenvale, N.Y., is living at Woods Hole, but he and his wife Sharon, are planning to move to the Boston area soon. Mr. Fegley grew up in Marblehead, where he spent much of his time "hanging around the water" and became interested in boating. He had no real professional aspirations, he said, but added, "Here I am."

Captain Fegley said that there's work to be done on the Schrock. "She's not looking very pretty," he said, explaining that the boat will probably go to the yard this fall for a going over.

Few people at MIT realize that the Institute maintains a small fleet consisting of the Schrock (named for Robert R. Schrock, retired head of the Earth and Planetary Sciences Department), and two Whalers, all docked at Lewis Wharf at Atlantic Avenue in Roston

The boats are under the supervision of Delbar P. Keily, associate professor of meteorology, who retired this summer after 36 years at MIT. He wants the MIT community to know that the facility, including ample storage space and the boats, is available to any department for environmental studies in such areas as fishing, marine pollution and maritime resources.

Professor Keily said, "We'd like to see more departments and laboratories at MIT working or planning to work on oceanographic problems using the *Schrock* since it is such an accessible and effective facility."

Overnight trips are not uncommon and the Schrock can remain out for several days. Some of the students who use the Schrock for close-in-to-shore research also do deep-sea research from other craft at Woods Hole, the oceanographic institution at Falmouth with which MIT has a co-operative education program. However, the accessibility of the Schrock's docking quarters makes it ideal for work in local waters.

The MIT vessel, acquired in 1966, is equipped with two diesel electronic generators that provide ample power for any electronic research equipment that might be needed on board.

The Schrock also carries up-to-date navigation devices such as radar, loran and acoustic sounders, plus two winches for lowering small or moderate size underwater instruments down-to 200 feet or



Captain Fred C. Fegley (left), new skipper of the R. R. Schrock, is shown above on deck of the MIT craft at Lewis Wharf preparing for an outing on New England waters where Institute graduate students.

will study the circulation patterns of Massachusetts Bay, as well as new oceanographic instrumentation—the principle research projects being carried out on board the Schrock.

## SEPTEMBER SYMPOSIUM

# Food Scientist Mercer Receives 11th Underwood-Prescott Award

An American food scientist has been selected to receive the 11th Underwood-Prescott Memorial Award at MIT for his contributions to food processing technology.

Walter A. Mercer, vice president of the National Canners Association and director of the association's Western Research Laboratory at Berkeley, Calif., was cited for his research on problems affecting the food canning industry and studies relating to the quality and conservation of water resources.

The award and an honorarium will be presented by MIT on Sept. 25 at a luncheon at the Faculty

Club. George C. Seybolt, president of the Wm. Underwood Co., Watertown, Mass., and Dr. Walter A. Rosenblith, MIT provost, will participate in the program.

Following the luncheon, Mr. Mercer will head a panel at a symposium in Kresge Auditorium on "Ecology, the Environment and the Food Industry: New Horizons and Hazards in Resource Management."

The symposium will focus on management of water supply, protein supply and utilization of by-products.

Other panelists will be Evan F. Binkerd, vice president and di-

rector of research for the Armour Food Company, Oak Brook, Ill.; Dr. Robert J. Dimler, area director of the United States Department of Agriculture's Northern Regional Research Laboratory, Peoria, Ill.; and Dr. Robert S. Timmins, president of Abcor, Inc., Cambridge, Mass.

More than 300 food scientists, food industry executives and students are expected to attend the luncheon and symposium.

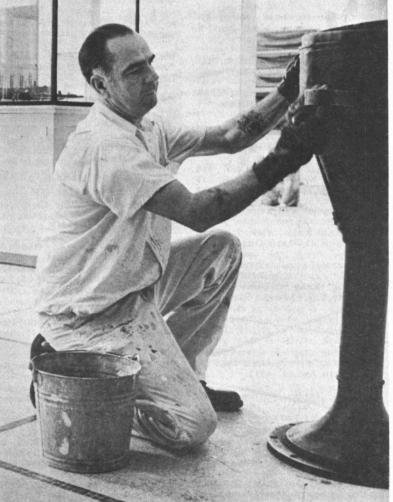
Mr. Mercer was selected for the 1973 Underwood-Prescott Award by an MIT Department of Nutrition and Food Science faculty committee headed by Dr. Samuel A. Goldblith, associate department head.

The committee said the award was made to Mr. Mercer "in recognition of your contributions to the field of food science with particular reference to canning in general and conservation of water supplies in particular."

This will be the 11th year in which outstanding food scientists from throughout the world have delivered lectures in Boston.

The award and lectureship are in memory of William Lyman Underwood, grandson of William Underwood, who founded the Wm. Underwood Co. in Boston, 1822, and Dr. Samuel Cate Prescott, the first dean of the School of Science.

In one of the very first industryuniversity research partnerships, they were the first to establish, in 1895, that spoilage in canned foods was due to bacteria, and they developed the temperature and time guides necessary to destroy the spore-forming organisms responsible for the spoilage.

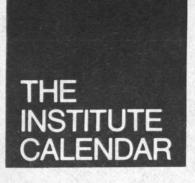


SHIP SHAPE—The Hart Nautical Museum is open and ship shape again as Joe Martell, of Woburn, a member of the Institute's painting crew, gives the binnacle (a ship's compass stand) a polish. The museum has been closed for a month while the walls and exhibit cases were painted.

## Concert Cancelled

The last program in the July concert series, the Festival of Summertime Chamber Music, scheduled for Tuesday, July 31, has been cancelled.

The cancelled program will be replaced with a free concert by students in the MIT String Ensemble on Monday, July 30 at 8pm in Kresge Auditorium.



# July 25 through August 3

## Seminars and Lectures

Thursday, July 26

Police Civil Service Selection Procedure: Comparison of Ethnic Groups

Dr. Jan Chaiken, RAND Institute, NYC. Operations Research Center, Innovative Resource Planning Project Seminar. 11am, Rm 24-307

# **Community Meetings**

Women's Forum

Meetings and discussions. Mondays, 12n, Great Court, if raining – Bush Room, 10-105.

Course Evaluation\*\*

Sponsored by TCA & SCEP. Come and help out. For info, call Robert, 494-8889 evgs, or lve msg at TCA, W20-450, x3-4885.

# MIT Club Notes and Meetings

Sat, July 25, 7:30pm, Kresge Little Theater. Free.

Bridge Club

7:30pm, W20-400.

MIT Divine Light Club\*

ACBL Duplicate Bridge. Thurs, 6pm, Stu Ctr Rm 473. IMP-scored team games, (similar to rubber bridge scoring). Call Jeff, x3-5285 or 864-5571.

Summer meetings cancelled. First meeting in fall: Wed, Sept 19,

Disciples of 15 year old perfect master Guru Maharaj Ji present concert & program on his spiritual knowledge of inner perfection.

Chinese Choral Society\*\*\*

Singing, every Sun, 3-6pm, W20-473.

MIT Chinese Student's Club\*

CSC softball practice, every Sat, 2pm, Briggs Field. Refreshments. All are welcome.

Classical Guitar Society

Classes, group or private. Mon & Thurs, 5-8pm; Sat, 8am-12n; Rm 1-132, 134, 136. Vo Ta Han, 494-8353.

Goiu Karate Club\*

Open to the Cambridge Community. Mon, Thurs, 7-9pm Stu Ctr Rm 407. Call 253-2018.

Hobby Shor

Mon-Thurs, summer term, 12n-5pm, Rm W31-031. Fees: \$10/term for students; \$15/term for community. Call x3-4343.

Kung Fu Club\*\*

Northern Praying Mantis. Tues, Thurs, 7-9pm, T-Club Lounge. For info, H.C. Wong, 876-5071.

Rugby Club\*\*
Informal practice sessions: almost every Tues, Thurs, 5:30p la Briggs Field.

Tues, 6pm, Student Center Rm 473. Call Jeff, x3-5285

Science Fiction Society\* Fri, 6pm, Rm W20-421.

MIT/DL Duplicate Bridge Club\*\*

Every Mon & Thurs, 5-6pm, W20-461.

Scuba Club\*\*\*

864-5571.

Outing Club\*

Compressor hours, Mon & Fri, 4-6pm, Alumni Pool.

Strategic Games Society

Come try some of our games: Star Lord, Emperor of China, Feud & Acquire. Sat, 1pm-1am, Walker 50-318.

Student Homophile League

No summer meetings. MIT gay phone, 492-7871, is acting Sun-Thurs, 8-11pm, (most nights aft 12m), for counseling, sociactivity info, help in "coming out," rapping.

Student Information Processing Board Meeting\* Mon, 7:30pm, Rm 39-200.

Tech Squares\*

Western style square dancing. Tues, 8-11pm, Sala de Puerto Rio Beginners dances: Aug 7, Aug 21, 8-11pm, in the Sala. Come an join us. Admission: \$1, first time free.

Tiddlywinks Association\*

Tues, 7-11pm, Student Center Rm 407.

MIT Wheelman\*\*\*

All aspects of bicycles and bicycling discussed, events planne advice and help given. Thurs, 7:30pm, Rm 1-203. Call Harr x3-2384.

# CLASSIFIED ADS

Ads are limited to one per person per issue and may not be repeated in successive issues. All ads must be accompanied by full name and Institute extension. Only Institute extensions may be listed. Members of the community who have no extensions may submit ads by coming in person to the Tech Talk office, Room 5-111, and presenting Institute identification. Ads may be telephoned to Ext. 3-3270 or mailed to room 5-105. Please submit all ads before noon, Friday, July 27.

## For Sale, Etc.

Rug, braided, 8½'x11½', red, gr, blk. Call, x3-2032.

Guitar, Martin D-18, w/case, v gd cond. Call, x8-4048Draper.

Bike, boys, Rollfast, 10spd, used 10hrs, \$50. John L, x8-3528Draper.

Tires, Uniroyal, 4F 78x14, belt, blk w, used less 200mi, \$80. Jack, x8-3528Draper.

Ovens, 2, GE, built-in, st steel, w/sep controls; entr top range, st steel, all \$225. Gene, x7787Linc.

Sew mach, Singer, tch&sew, deluxe, exc cond, \$75; gate leg tbl, antique, mahog, 3' tall, \$35. Debie, x3-4871.

BR set, 8pc, incl bkcase hdbrd, 2nite tbl, triple dr w/mirror, 2 bach chsts w/vanity, ask \$115. Gary, x7755Linc.

BR set, 6pc, mahog, fr, \$70; cedar trunk, \$35; baby crib, w/matt, 30x54, \$20; humid, was \$10, 6mos old, \$5; iron, was \$16, \$8. Ho, 442-5877.

Swap S&H for Top Value stamps, or TV for S&H. Jones, x3-3404.

Furn, rugs, stereo, clothes, refrig, beds, etc, moving. Call, 646-7785.

K set, mpl, oval tbl w/formica top, 2lves, 2capt chrs, 2mate chrs, exc cond, \$75. Fran, x3-3221.

Playboy mags, '66-'71, 30-40 issues, must sell, 30 cents ea. Bob, x8-2826Draper.

Bike, mens, Fleetwing, 10spd, dk gr, Shimano Derailleur, 24", Sears pnctr-proof inner tubes, nw fr tire, less 10mos, \$65. Henry, 547-4836aft 6pm.

Bed, tw, \$20; sofabed, \$15; K tbl, formica, w/4chrs, \$25. Janie, x3-4912.

Florida vac "offer": 5dys, 4nts, Miami Bch, Ft Laud, or Ft Myers, \$20. Call, x3-6467.

ADC 25 crtrdg, hi qual, 2mos, \$35. Call, x3-5626.

Draft tbl, \$40; draft tbl, hmmade, w/stool, \$15; persian rug, imit, 6x9, \$28; bamboo wndw shade, 4'w, \$5; Knmore fan, exc cond, \$18. Kathy, x3-4873.

Hubcaps, 4, 13"; Royal 10 desk typwrtr, Xmod, 50-60yrs; training whls, bike, 4sets; best reas. Mack, x444Linc.

Pool filter, cartridge, Coleco, %hp, used 10hrs, too sm for my 18' pool, was \$70, now \$35. Dick, x5597Linc.

Stereo: Sony TC-630 tape rec, was \$500, now \$300, less yr old, w/12 tapes; RCA compact sys, am/fm, turntbl, spkrs, was \$275, now \$125. Call, 244-6409.

Dbl bed, lk nw, \$40; tbl, mahog, lg seats 6, \$40; stereo cmpnts: Kenwood tp dk, Gerard 958 trntbl, Dynaco stereo 80, PAT4, best. Marshall, 494-9069.

Camera, Argus, 35mm, case, flash att, hrdly used, \$15. Bob, x3-3887.

Bed, dbl, w/box spr, mahog fr & hdbrd, best. Margie, x3-2507.

Bike, Columbia, mens, 10spd, \$70; Phillips 3spd frame, br & gears, no whls, \$10. Bob, x3-5043.

Bike, Motobecane L14, mens, 21", touring, bl, best. Anita, x3-2049.

Car top carrier, canvas, zip, lt bl, \$35 firm. Call, x7565Linc aft 3:30pm.

VW parts: rf rack; nw running brd, drivers side, bug; '66 points; '69 sq bk discs. Marty, x8-3621 Draper.

Baby crib, \$10; bike, child, 20", \$10; bike, child, w/trn whls, \$12; fan, \$5; baby car st, \$7; rugs, 2, \$10, \$15; blankets, 4, \$2.50-\$3; pillows, \$1.50; dishes; pots; etc. Call, 646-8858.

Bowling ball & bag, AMF, 16lb, \$12. Mr, Sutton, x8-2826 Draper.

Scott stereo; squash racket; bl D/R sofa; Castro convert; teak DR tbl; 9x12 bl-gr rug; Kirby vacuum clnr; sew mach, etc. Call, x3-1632.

Refrig, Indesit, exc cond, \$60 or best; door mirror, new, \$4. Sylvia, x3-3716.

Tbl, DR, lg, wint top, 5chrs, \$80; chr, high back, \$10; parsons tbl, 1pc, plastic, \$10. John, x3-4713.

Pool tbl, Jordan Luxury, 8', nw, 13levellers, w/2cue sticks, balls, triangle, chalk, dust cover, \$100. Call, x5309 Linc.

Windows, dbl hung, 2:32x40; dbl unit, 63x40; toilets, 2; \$5ea. Alan, x3-4284.

Tennis racket, Dunlop Maxply, gut str, sz4½m, nr new, too heavy for me, \$25. Marjorie, x3-3623.

Tennis dresses, sz 14: culotte, \$4.99; dotted swis w/match cover-up skirt, Streeter & Quarles, \$11.99. Pat, x3-3329.

Sew mach, Singer, old but exc cond, console, wint cab, some attach, \$25; Structo elec kettle grill, 18", infinite temp control w/pso off, hinged lid, w/lava rocks, hickory chips, 120v, orig \$79.95, used few times, \$30. Audrey, x3-4837.

Tires, 5, driven 50mi, Toyota, 165x13, \$10ea. Lou, x7885Linc.

Indian imports: brass chess set, \$50; brass & wd decoration pces, \$1-\$10; silk & cotton dresses, shirts, etc, \$2-\$40; leather bags, belts, etc, \$2-\$20; jewelry, \$.50-\$5.00. Naren, x8-1530Draper.

Electronic muse box, \$149; Zenith port stereo, am-fm, w/50classical records, \$199. Richard, x3-6028aft.

Ladder, extension, 12', nw, \$10; spreader, \$3; elec heater, \$5; bar-b-q; rakes; snow shov; brooms. Call, x3-5330.

stand, 2filters, 2heaters, 2hoods (1 florescent), \$40. Bill, x8-2588Draper.

Aquariums, 2, 10gal, all glass, dbl

AC, Whrlpl, 8500 BTU, csement wndw, yr old, exc cond, was \$210, ask \$130. Eric, x3-7210aft 1pm.

Rug, Bokhara (Persian), semi-antique, 3'5"x6'4", exc cond, \$200. Dave, 547-3414.

AC, Airtemp, 5000BTU, v gd cond, \$60. Mort, x7517Linc.

Washer & dryer, Sears Kenmore, 700series, 3yrs, wh, \$250both or best. Call. 944-6128.

Player piano, Starck, gd cond, must sell now, \$175. Call, 237-0460.

Radio, am-fm, \$15; sm tbl, \$3; handmde bkcase & counter, cost of wd, \$20ea. Pete, x3-5272.

Bug zapper, 2'hi, 14"diam, 15w blk lite, new, \$60. Guy, x5597Linc.

Moving, msic hsehold gds, baby furn, bkcse, etc. Call, x3-5693.

Sgl bed, 2yrs, exc cond, orig \$130, now \$50 or best; bkcses, 2, lg, wd, \$5ea; desk, wd, lg, 3drwr, w/chr, \$20; rug, orng, br, 10x12, rubber bk, \$40; sm broiler oven, \$10. Bob, x8-3395Draper.

Tape recorder, AIWA, port, 2spd, 7"reels, self-contned amp & spkrs, seldom used, \$37. Carol, x359Linc.

Stereo receiver, Regency WT-4, am/sw, amateur, military, citizen, int? sw band, 550-1600kc.. (am), 1.6-30mc (sw), exc cond, \$45; tonneau cover, '65 MG midget, nvr used, \$35; both nego. Call, 646-3157evgs.

Radio, National, am-fm, 4band, old but gd cond, \$35 or best. Donna, x3-4271.

Ham antenni: 6m sm beam, 2m lg beam, gd cond, nego. Steve, 646-5878. Refrig, GE, 13.5cu ft, wh, will help

AC 12000BTU, 115V, exc cond, \$150. High chr, \$8. x5326Linc.

deliver, \$50. Call, 484-0176.

Chest drwrs, 2, \$20ea; desk, \$15; changing tbl, \$5; car st, \$10; GE refrig, \$35; stroller, \$15; crib w/matt, \$20. Call, 862-6038.

Bed, sgl, wd hdbrd, exc cond, \$20. Helen, 492-1258aft 5pm or lve msg. Stereo, Longines Symphonette, sm,

non-port, gd cond, \$50. Sally, x0454Dorm aft 5pm.

Chest, 4drwr, \$15; brick & board bkcase, \$10; bbq, \$5; skis, \$15; coctail tbl, \$15. Gene, x5724Linc.

Lafayette stereo sys: LRK-480, 20w am/fm receiver, blt-in 8tr tape player, 2Criterion 50A spkrs, 1½yrs, exc cond, gd, compact sound. \$150. John,

VW 1300eng, extra carbs, coils, fuel pumps, gen; Volvo B18 cylinder head ass'bly, nw pres plate; 9000BTU ac w/leak; 2rad stud snows, 155x15, mtd Saab96; girls 3spd bike; lg desk; nw iron brd; Sears barbels; squash racket; all v cheap. Bob, x8943Dorm.

Bike, Sears, mens, 3spd, carrier, 6mos, \$50; boys bike, \$5; Fedders ac, 8000BTU, \$50; Grundig stereo, \$50; port tv, 1½yrs, \$50; Exakta Varex IIa camera, 50mm, 100mm lens, 2viewfndrs, bellows, extras, \$200 or best. Rudy, x3-5547.

Glass & chrome coffee tbl top, 28x20, exc cond, \$25. Fred, x7739Linc.

## Vehicles

x5424Linc.

'62 Chevy impala, auto, nw tires & batt, Mark IV '66 ac, gd body, runs, can see at Kresge 7-10pm Thurs, best. Call, x346Linc.

'63 Pontiac strchf, 87K, auto, p st & br, gd cond, old dependable, ask \$350. Call, x3-2420.

'65 Mustang, snows, 2extra tires, r, runs well, \$300. Call, 864-7994.

'67 VW bug, red, gd cond, \$475. Dick, x3-2816.

'67 Jaguar 3.4S, 48K, slvr bge, tan leather, Zeibarted, nw cltch, MichelinX tires, exc cond, orig owner, \$1,600; O-Day Interclubs sail dinghy, \$395; nw spare rudder & cntrbrd, \$50; Myford pro wd-trning lathe, w/stand, tools, \$125. Johnson, x3-4650.

'67 Toyota corona, 65K, auto, nds wk, best. jerry, x3-1691.

'68 VW, 35K, lt bl, 3extra tires, snows, exc cond, 1 owner, \$850 or best. Eleanor, x3-4642.

'68 Chevy nova, 35K, auto, p st, ac, r/tape deck, gd tires & snows, exc cond, mving west, must sell. Alan, x3-5069.

'69 Ford rch wgn, 57K, auto, p st&br, r, \$800 or best. Paul, x3-2380.

'69 Ford XL, 66K, auto, bkt sts, spare, 2snows, ac, r, runs v well, \$900nego. Larry, x3-3392.

'69 Corvette convert, dk gr, wh top, tint wndws, thrush side pipes, 350eng, 300hp, gd on gas, low miles, \$3,100 or best. Larry, x8-4602 Draper.

'69 Ford galaxie 500, nw snows, exc cond, \$1,400firm. Judy, x56-145Haystack.

'70 Peugeot 504, std, disc br, Michelin rads, \$1,800nego. Ihara, 491-0334.

'71 Ford LTD, convert, 400eng, ac, p st & br, p acces, am/fm stereo, \$2,500 or best. Joan, x7002Linc.

'71 Saab 99E, 4dr, sunrf, am-fm, best. Call, x7856Linc.

'71 VW sqbk, auto, rf rack, 16.5K, still on warranty, \$2,300 or best. Dr. Varma, x3-6737.

'71 VW bug, exc cond, \$1,800 or best. Das, x3-7873.

'71 Torino 500, 21K, 6cyl, 2dr hd tp, vinyl rf, ask \$1,500. Dick, x8-3391Draper.

'72 Dodge colt, 7K, std, perf cond, moving to Eur, must sell, \$1,700or best. Eugene, x3-5868.

'73 Hornet, all opt. Joe, x3-7709.

'64 Winnebago travel trlr, 16', slps 5, inclu 3brnr stove, icebox, frnce, gass & elec lites, \$700 w/Reese hitch or \$650w/out. Louis, x3-7049.

Mobile home, '66, Parkwood, 10'x56', 3BR, fully furn, LR expando, exc cond, \$3,500. Tom, x8-3366Draper.

'67 Honda 305, v gd cond, \$200 or best. Powelson, x3-3157evgs.

# Housing

Acton duplex, 3BR, 1½B, lg K, LR, DR, yr lse, no pets, \$240plus util. R. Hamlin, x5503Linc.

Allston, Camb St, apts: BR, \$150; 2BR, \$200; 3BR, \$225; n T, pking. Jeff, 969-3560.

ARI, sub 8/1 w/opt, 4Rms, plus K, B, furn, \$275incl util. Hans, x3-6281.

Camb, 9Rm hse, 6BR, new B&K, across from Charles, conv, \$520/mo. Call, x3-4112.

Camb, sub 10/1-9/1, 50 Craigie St, n Porter Sq, 3BR, LR, K, B. Call, x3-5783. Camb, sub 8/1-8/31, mod studio, dw, disp, ac, blcny, sndeck, stor & Indry

facil, n MIT, \$150, x3-6321.

Milton, 3BR splt entry, 2½B, 2car gar, central ac, acre,ask \$48,000. Call, 327-6514.

Westwood, deck hse, 3000sq ft liv space, 5BR, 2B, lg K, lg deck, 2acres, \$60,000. Call, 259-9441.

Maine, nr Rangeley, 3BR hse, lux contemp on huge lake, wilderness area, superb view, swim, hike, fish, canoe incl. Jeannie, x8-2577Draper.

NH, lkfrnt cott, 3BR, mod conv, plygrnd, pool, swim, fish, boat, etc, Aug, Sept. Kitty, x3-6466.

Newport, Vt, canadian Ikside hse, slps 15, spectacular view, boat incl, reas rent. Denny, x3-5606.

# social Events

mmer Coffee House

ne MIT 24-Hour Coffee House has re-opened as a 12-Hour Coffee ouse for the summer. Inexpensive food, candy, and non-alcoholic inks are sold. Relax, games, read. Open: daily 3pm-3am, center e, 2nd fl, Stu Ctr.

Friday Afternoon Club\*\*

usic, conversation and all the cold draft you can drink. Fri, 6pm, e Thirsty Ear, Ashdown basement. Admission: \$1 men, 50 cents omen. Must be over 18.

uddy Charles Pub\*\*

in your friends for music, beer, wine, snacks, conversation at the uddy Charles Pub, 110 Walker. Hours: Mon-Fri, 11:30am-2pm d 4-8pm; call GSC, x3-2195.

#### Novies

istana (Bunuel)

T film society. Thurs, July 26, 8pm, 10pm, Rm 10-240. amission \$1.

Planet of the Apes

ISC. Fri, July 27, 7:30pm, Rm 10-250. Admission: 50 cents, no

The Trip ISC. Fri, Aug 1, 7:30pm, Rm 10-250. Admission 50 cents. No IDs.

#### Music

adrigal Singing\*\*

very Mon, 7:30pm, Rm 4-260. For info, call John Chandler,

#### Folk Dance Club\*

Dance

International, Sun, 7:30-11pm, Sala. Balkan, Tues, 7:30-11pm, Student Center Rm 491. Israeli, Thurs, 7:30-11pm, Sala. Afternoon dance break, Fri, 12:30-1:30pm, Kresge Oval.

#### **Exhibitions**

Music Library Exhibit

Pictorial Exhibition, Mozart's Opera the Magic Flute. Daily, Rm

# Religious Services and Activities

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

Christian Bible Discussion Group\*

Thurs, 1pm, Rm 20B-031. Call Prof. Schimmel, x3-6739, or Ralph Burgess, x3-2415.

Islamic Society<sup>3</sup>

Prayers, Fri, 12:15pm, Kresge Rehearsal Rm B. Discussions on the Qur'anic interpretations of various aspects of life. Sun, 10am-1pm, W20-473 & W. Lge.

Roman Catholic Masses Sun, 10am, Chapel.

United Christian Fellowship<sup>4</sup>

Summer meeting. Fellowship, singing, sharing, praying. Newcomers welcome. Thurs, 8pm, Westgate I, Rm 708.

Westgate I & II Bible Study

Wed, 8pm, Westgate I, apt 1202. For information, 494-8405 or

#### Announcements

Maggie's Exercise Classes

Summer schedule: daily, 1-2pm, 5:15-6:15pm; east end small track, good weather, or DuPont Athletic Center. Must have athletic card.

Change: Group Tennis Lessons

The following time changes for group tennis lessons have been made: Fri, Aug 3: beginning, 12n & 5:15pm; intermed 4:15 & 6:15pm. Sat, Aug 4, 11: beg, 10am, intermed, 11am. Mon thru Fri, Aug 6-10: beg 12n & 5:15pm; intermed 4:15 & 6:15pm.

Hart Nautical Museum

The redecoration of the museum has been completed, and it has reopened. Sorry for the inconvenience.

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 August 1 through August 10 to the Calendar Editor, Room 5-111, Ext. 3-3279, before noon Friday, July 27.

### Animals

Kittens, f, 2, lg hair, tricolor, 8 wks, trained. Call 491-2672.

Airedale terriers, AKC, champ line, wormed, shots, 10wks, home envir, avail now. John, x3-2556.

Cats, adult, 2, nd home, manx-x, m; blk & wh, long hair, f; lving entry. Jane, x3-5649.

Kittens, 4, free. Call, x8-4061 Draper.

Gldn rtrvr-like, warm, loving dog, hsebrkn, 5yrs, nds gd home, lndlrd hates dogs, free. Call, 489-2772.

Baby rabbits, 5, for pets, free. Call,

## Lost and Found

Found: umbrella, mens, IPC Pding Rm. Call, x3-4105.

Lost: cat, f, blk, lg hair, wh on chest, seen 2½wks ago, No. 6 Club, (428 Mem). Call, x3-1485dys, or x3-3213evgs.

Lost: bifocal glasses, tortoise shell, prob print case, while ago. Vi,

#### Wanted

Rmmate, fem, share apt w/2, own rm, nonsmoker, 10min wk MIT, \$46plus util. Call, 491-2672.

Ride or car to drive to Calif, mid Aug. Buddy, x3-7179.

Bike rack, roof, fit VW bug. Carol, x3-7001.

Power mower, cheap, no 2stroke, \$20-\$25. Nancy, x3-5322.

Rmmate, fem, Sept or late Aug, share w/2, Bri, gd area, n T, shops, \$100. Diane, x3-1473.

Male, spks Ital, offers free rent for hr Eng conversation dly, share BR apt, Jam Pl, n Jam Pond, lg LR, 8/20-12/30. Mr. Jarvis, x3-1913.

Rmmate, fem share 2BR apt, LR, K, lg, Mass Ave, Arl Cntr, no pets, avail 9/1, \$117.50. Diane, x3-1648.

Hse, s shore or west area, beg 8/1 or 9/1, for yr, 3-4BR, 3-4sgl prof men, exc credit & rental ref. Call, 646-5878.

Resident counselor, p-t, for teens in Bklne, no exp nec, lk kids, 2evgs & some wkends, modest salary, start Sept. Call, 566-5658.

Rmmate, fem, 8/1-8/31, rm in 4BR Beac Hill twnhse. Susie, x3-3717.

Refrig. Wink, x8782 Dorm.

Cat-lover, to feed, be kind to 2cats while living in lg Wtrtwn apt, n T, 8/18-9/1, will pay. Call, x3-1659.

Deep freeze, apt-sz, reas. Patty, x3-4905.

Apt, 2BR or lg BR, 9/1, \$200-\$225. Call, x3-3138.

Apt in Camb environs, to rent long-term to professional woman, reas rent, start Aug. Sally, x3-3277.

'66 Nova hubcap, 13". Call, x3-4495.

#### Miscellaneous

Ride offered to KC, Ive NY Aug 15, share exp. Mike, 783-2436.

Grad stu wife will babysit full or part time in her Westgate apt. Call,

# Positions Available

The following positions are on Hold pending final decisions:

73-645-A	Admin. Staff
73-577-R	Dorm Manager-Exemp
73-573-R	Assoc. Editor
73-498-R	Secretary IV
73-531-R	Secretary IV
73-546-R	Jr. Animal Caretaker

The following positions have been filled since the last Tech Talk and are no longer available:

73-669-A Systems Programmer

73-677-R	DSR Staff (cancelled)
73-678-R	DSR Staff
73-444-R	Keypunch Operator
73-610-R	Secretary IV
73-558-R	· Secretary IV
73-605-R	Secretary III-IV
73-606-R	Secretary III-IV
73-614-R	Secretary III-IV
73-593-R	Secretary III-IV
73-322-R	Secretary III-IV
73-534-R	Secretary III-IV
73-586-R	Secretary III
73-599-R	Secretary III
73-608-R	Secretary III
73-660-R	Secretary III
73-655-R	Sr. Clerk III-IV
73-533-R	Sr. Clerk III
73-397-R	Tech. Typist III
73-604-R	Nurse
73-316-R	Maintenance Mechani
73-522-R	Infirmary Matron

Employees at the Institute should call their Personnel Officer for further information,

Virginia Bishop

Mike Parr

3-1591

3-4266

Phil Knight (secretary – Priscilla Mah)	3-4267
Sally Hansen	3-4275
Jack Newcomb	3-4269
Evelyn Perez	3-2928

Dick Higham	3-4278
Pat Williams	3-1594
Claudia Liebesny	3-1595
(secretary - Dixie Chin	)

(secretary - Mary Ann Foti)

New applicants should call the Personnel Office on extension 3-4251.

Special Assistant for Minority Affairs Admin. Staff - the Special Assistant will advise the President and the Chancellor on minority matters and concerns. He or she will act as advocate for minority interests, with a particular

concern for the well-being of minority members of the community students, faculty, and employees. The Assistant will be expected to speak for the Institute on minority affairs and will be the principal official representative of the Institute to minority communities. Within the Institute the Assistant will be a member ex-officio of the Equal Opportunity Committee, the Administrative Committee, the Administrative Council, and such other MIT groups as may be deemed desirable in order to carry out his or her responsibilities effectively. The Assistant will be a point of appeal for complaints of discrimination because of minority status, with a principal responsibility for the handling of charges of discrimination filed with MCAD, EEOC, HEW or other agency. Qualifications must include an

advanced degree or appropriate equivalent experience and concern with minority problems and interests, and interpersonal skills. It is expected that the Assistant will be familiar with university life and procedures, and will have demonstrated the qualities of judgment and communications skills required by the position. 73-646-R (7/11).

Administrative Staff member in Personnel Development Training Section will instruct empolyees in the areas of general typing, dictaphone transcription, basic education, and general office practices. Background and expein tutoring and/or teaching adults helpful. Ability to prepare course plans, and to work independentimportant. Please submit resume. 73-611-R. (7/11)

Staff Recruiter (Admin. Staff) will report to the Employment Officer will be responsible for coordination of search for well-qualified persons to fill non-academic staff positions. Particular emphasis will be given to assisting laboratories, centers, and departments in fulfilling Affirmative Action Plans with respect to research staff openings. Person will work closely with Personnel Officers and departments in defining description of positions and qualifications required. Frequent travel will be expected. Experience in Personnel and/or recruiting required. Technical background with degree in Engineering or Science preferred. Please submit resume. 73-643-A. (7/18).

Executive Officer - DSR Staff for Mid-Ocean Dynamics group will manage multi-institutional and international oceanographic deep sea program; supervise, under responsibility for all project funding, logisitics of the field program, scheduling of ships and projects, publication of results, and planning future field work projects. PhD physical oceanographer required; experience as Chief Scientist, having conducted research at sea. Ability to write and negotiate proposals, experience with relevant Washington agencies, good theoretical knowledge of geophysical fluid dynamics. Fluent English; Russian language useful.

Administrative Staff - Assistant Director in an administrative office dealing in resource development will handle specific tasks of educational fundraising; extensive writing of letters, memoranda, statements on priorities, some proposals and informational studies. Must have a minimum of three

years active, consecutive experience in fund-raising, preferably in a university environment. Effective writing skills, ability to communicate verbally, professionalism and career motivation important. Exposure to data processing systems useful, BA required; advanced degrees are welcome. 73-479-R.

Administrative Staff member will work in area of resource development dealing with individual contributors. Develop strategies and programs, pre-pare reports, provide advice and counsel of a legal nature for resource development activity. Some travel required to represent MIT. Must have legal training and preferably some experience as a counselor in practice or a job situation utilizing legal training. Writing and organizational ability, motivation, enthusiasm required. 73-480-R.

Administrative Staff Writer in Resource Planning will provide substantial writing support for resource development activities. Tasks will include preparation of proposals for major private donors, pamphlets supporting planned giving programs and correspondence. The position is sensitive and demanding. College graduate with previous writing experience and a sense of humor required. 73-452-A (7/11).

Director for Alumni Data Resources in the Alumni Association to provide analytical and planning support for the Association. Develop and implement improved systems for researching, codifying, storing, recalling and maintaining information on alumni re: their areas of MIT interest. Coordinate with the Corporation, Development office, other Institute offices and data processing group. Coordinate, develop, maintain performance and cost measurements, and statistical support data. Must relate easily to individuals in leadership positions; MIT degree recipient preferred. 73-670-R (7/18).

DSR Staff member will plan, manage, and execute high-quality research projects having a strongly experimental orientation. Familiarity and experience with low-speed flight and wind tunnel testing methods and advanced piloting qualification for particularly general craft; Ph.D in namics and five years applicable research and development exerience required. 73-4880A.

Biochemist - DSR Staff member will participate in lipoprotein studies, and will supervise the activities of several technicians in a glinical research setting. PhD or MD in Biochemistry required, as well as experience with lipoprotein and supervising. 73-515-R.

Administrative Staff Project Officer will be principal staff administrator for major funding programs. May support very large campaign such as a building or two, or more smaller projects which are determined by Institute's priorities. Individual will work with Resource Development Office. Will arrange for solicitation visits, provide follow-up and coordinate all activities leading to completion of campaign. Person must have capacity for hard work, often under considerable pressure. Must be well organized and able to work easily with institutional and industrial leaders. Familiarity with MIT desirable.

Micro Automation Systems Program-mer - DSR Staff member will develop a PDP-10/PDP-11 operating system for the project; design and implement a computer operating system. Experience on the PDP-10 and PDP-11; as well as a background in automata theory is required. 73-512.

Administrative Staff member will work with corporations to increase member-ship in Industrial Liaison Program and related areas. Identify prospective member companies, evolve solicitation strategy travel extensively and establish continuing relations with senior management of member companies. MIT graduate desirable with several years experience in marketing-related fields. Technical background helpful. Must relate easily to senior corporate management. 73-569-A.

Administrative Staff - includes participation in the activities of the Group which provides staff support to the senior officers and to the Academic Council in the conduct of studies of academic and administrative programs, plans, and organization. The ASPG is a part of the Office of the President and the Chancellor and reports to the Vice President C.B.Simonides. Candidates position should have an this educational packground equivalent to graduate study, and/or working experi-ence in such areas as management, program planning, analysis and evaluation. Systems analysis and computational background and skills would be especially helpful. Superior communication and writing skills are essential. This position offers very useful career preparation for senior responsibility in universities and other complex organizations. 73-461-R.

Administrative Staff Accountant for the Comptroller's Accounting area will perform internal cost audits of research contracts and grants; prepare contract cost reimbursement billings and a variety of grant fiscal reports and fund accounting reports. Coordinate accounting and audit functions with Office of Sponsored Programs and various MIT schools and departments. College graduate with major in accounting or general business is desired. 73-619-R. (7/11)

Administrative Staff - Asst. Loan Officer in Student Loan Office will assist in collection of delinquent student loans through correspondence, telephone and personal interview. Liaison with data-processing section; control data input and output in Loan System, help prepare reports for MIT administration and the Federal Gov't. Accounting experience required; knowledge of loan operations particularly desirable. Maturity, tact to deal with individuals concerning Institute loan policies. Available Sept. 1, 1973. 73-639-R (7/11).

Editorial Director - Administrative Staff opening requires wide, diversified publishing experience, and an ability to define and create innovative publishing programs as well as administer existing ones. Acquaintance with international publishing and a distinguished record variety of areas such as environment al studies, linguistics or the public interpretation of science required. Appreciation of science and technology, a developed sense of publishing

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process and practice, a desire for challenging interaction with scholars and the staff essential. 73-326-R.

Administrative Staff Planner will direct long-range physical planning for the Institute; monitor and coordinate the various efforts of the planning team; develop budgets and schedule of events. Will act as liaison between government agencies and community groups. Must have a Masters degree in Planning and a minimum of 5 years experience. 73-535-R.

Application Programmers – Admin. Staff the office of Administrative Information Systems is seeking two Application Programmers to take program specifications and translate them into an efficient computer program. The process includes the evaluation of specifications, flowcharting, coding, testing, debugging and final program documentation. Knowledge of IBM DOS ANS COBOL and/or PL/1. Knowledge of 360 Assembler Language desirable; experience with university accounting or teleprocessing applications helpful. 73-340-R/73-341-R.

Systems Analyst – Admin. Staff for the office of Administratvie Information Systems will design financial and/or administrative applications to be run on a medium-sized computer Duties include making feasibility studies, system flowcharting, defining programming specifications, conducting system tests, implementation. Experience in designing financial applications, teleprocessing applications, data base management systems and a working knowledge of ANS, COBOL and/or PL/1 is desired. 73-330.

Administrative Staff Programmer for the MIT Information Processing Center must have experience and thorough knowledge of large-scale, time-sharing computer system. PL/1 language, documentation and communication skills are necessary qualifications. The Users Services Group requires an individual who understands and is responsive to the needs of the Center's users. This person will be challenged in entering a new area of time-sharing operation for this group which includes the following:

User Assistance – assisting users by providing programming information and debugging help and tracking down special problems.

User information – instructional documentation and conducting seminars, workshops, and other courses. 73-640-A (7/11).

DSR Staff member will perform chemical assays for enzyme and neurotransmitters. MS degree in Chemistry required. 73-590-R.

DSR Staff member in Civil Engineering will be administrator for active research group: responsible for fiscal management for research accounts, budgets, payrolls; will compile, edit, compose reports for lay audiences; prepare reports for sponsors; will manage production of all reports; maintain liaison with staff, faculty, students. Much international correspondence. Assist in policy administration. Coordinate a variety of activities; will arrange administrative aspects of workshop and conferences held at MIT. Must have mature, independent judgement; tact; ability to organize. 73-667-A (7/18).

Industrial Hygienist — (Academic Staff) will work in the Environmental Medical Service to study and control occupational disease and other environmental factors such as noise, heat, pressure and toxic materials that may be physically or chemically hazardous to employee health. Will work closely with physicians, depts., supervisors. BS. in Chemical Engineering is required. 73-336-A.

EDP Coordinator — (DSR Staff) will maintain the software systems and expand the operating systems for a computer facility; assist users; determine loads and aid in scheduling. Will work with students and faculty in developing and maintain systems for academic computer usage. Individual must have experience in machine language programming and operating systems; detailed knowledge about compilers, interpretors, schedulers, priority processors, and basic knowledge of computer hardware. Degree in computer science required. 73-537-R.

Administrative Staff - Assistant Director for a program which provides member industrial firms direct and convenient access to Institute's educational and research programs, while at the same time providing the Institute with unrestricted financial assistance and professional relationships. Primary responsibility would be liaison function between MIT faculty and research staff and representatives of participating companies. Requirements include Bachelor's degree (MIT preferred), approximately two years of technical experience (preferably engineering) and management perspective (MBA preferred and ability to deal with

executives of small to medium-size corporations), 73-508-A,

Computer Systems Analyst — DSR Staff — in Electrical Engineering/Electronic Systems Laboratory will work on research and development projects in information retrieval including networking of I-R systems. Develop systems, research computer interfaces for interconnecting heterogeneous I-R systems, develop information centers by which individuals can access all sources of information. Broad experience with hardware and software computer systems; experience with PL/1, 360/370, MULTICS, or ARPANET systems; programmer supervisory experience and an advanced degree required. 73-691-R (7/25).

Systems Programmer — Admin. Staff will provide technical expertise; develop and implement methods of improving computer performance. Minimum of two years S/360 or S/370 BAS (ALP) Assempler Language Programming experience. Knowledge of teleprocessing, and COBOL or PL/1. 73-265-R.

Systems Programmer DSR Staff will work in the Program Development Office as a full-time Multics System Programmer. Two or three years experience with the Multics system and PL/1 is required. Other experience in system design and programming desirable. 73-466-R.

Advertising Assistant (Exempt) at the Technology Review requires skill in all phases of advertising sales including actual advertising space sales, creating promotion material, advertising production, billing, and correspondence. Some typing skills needed. 73-642-R (7/11).

Admin. Asst./Exempt — P.T. for the Institute Secretary for Corporations will research corporate possibilities for financial support; will assess success potential; recommend priorities; provide background research on corporations and executives; compose proposals. Will handle special mailings, other assignments as required. 20 hours work week, flexibly arranged. Must enjoy writing and detailed researching; flexible; tactful. 73-673-A (7/18)

Accounting Asst./(Exempt) will prepare monthly dining operating statements and supporting workpapers for the MIT Dining Services. Will reconcile accounting statements; prepare monthly operating statements for the Faculty Club. Education, experience in accounting field, 73-675-R (7/18)

Administrative Assistant V will work part-time (15 hrs) in the DSR – Patent Administration section. Prepare marketing abstracts and marketing plans based on MIT inventions. Engineering background, combined with marketing research or business background is required. 73-708-R (7/25)

Administrative Assistant V in Urban Studies and Planning will assist the Department Head. Responsible for development of grant proposals; assist in organization and implementation of new research projects and development of department information system; prepare and edit the department newsletter; prepare departmental class schedule and catalogue. Administrative experience and good writing and editing skills required. 73-579-R (7/11).

Admin, Asst. V for the Director of the Operations Research Center, an active interdisciplinary research center. Will have responsibility for interdepartmental academic program procedures such as admissions, correspondence and records. Substantial interaction with students, faculty, visitors. Schedule appointments for Directory; nontechnical editorial work; supervision of report reproduction; maintain reading room. Able to make independent judgments; establish priorities; deal well with many people. College background preferred. 73-662-R. (7/18)

Computer Technical Assistant V will be responsible for all input into the computer system for the book order process: categorize orders, generate invoices, process foreign orders, process special coding and entries, generate new codes and records on new books and accounts, update all computer input. Individual must have ability and interest in Electronic Data Processing. Maturity, a good memory, ability to handle details with precision most important. 73-467-R.

Computer Operator IV will operate IBM Model 135 and all peripheral equipment associated with it, including disk drives, tape units, card reader/punch, pringers. Must have a good knowledge of DOS job control, multiprogramming experience and be capable of understanding operating instructions. 4pm-12:30am shift. 73-443-R.

Senior Keypunch Operator III will operate the IBM 029 keypunch machine. Will punch into computer input cards formated and unformated documents. Minimum of two years experience operating IBM 029 or comparable equipment; familiarity with the creation of program drum cards desired. 73-574-R.

Senior Secretary V will be responsible for smooth operation of an academic dept. headquarters office. Type correspondence from dictation or shorthand, maintain busy schedules, handle travel arrangements, coordinate office workloads, supervise support personnel, maintain complicated files. Ability to recognize priorities, to wrok under pressure, to organize important. Excellent typing; knowledge of MIT valuable. 73-519-R.

Sec./Admin. Asst. IV-V in Sloan School to work for visiting professor in Industrial Relations who will direct a project on equal employment opportunity, funded for one year. Assist in organization and implementation of plans for three workshops. Type correspondence and reports; schedule and coordinate activities regarding conference held at MIT. Maintain account records. Some administrative experience valuable; MIT familiarity preferable; good typing skills ability to work independently important. 73-672-A (7/18).

Senior Secretary V to Civil Engineering Department Head will have contact with a variety of faculty, administrators, and students. Screen phone calls; schedule appointments and meetings; maintain department records of technical reports and research papaers, and arrange for their publication and distribution; prepare correspondence for signature. Excellent typing and shorthand; ability to organize and establish priorities; initiative and tact essential. Knowledge of MIT helpful. 73-700-R (7/25).

Secretary IV in academic department will type correspondence, proposals, DSR reports, manuscripts, theses (much of it technical). Keep DSR account records; compose routine letters; assist professor with details of registration. Ability to work independently and to write letters important; accurate typing essential; knowledge of shorthand, technical typing and bookkeeping preferred. 73-578-R.

Secretary IV in academic department will type manuscripts and correspondence for life science lab; handle operation and renewal of grants; perform all functions of one-secretary office. Excellent typing and dictaphone skills required; ability to organize important. 73-591-R.

Secretary IV or Senior Secretary V to the Director and Assist, Director of an Interdepartmental Laboratory will type technical reports and journal articles. Occassionally coordinate office workload; handle all general secretarial procedures, Excellent shorthand and typing skills, 3-5 years experience and ability to learn technical typing required. 73-342-R.

Secretary IV to three psychiatrists will handle all secretarial duties; transcribe patient case histories; maintain accurate records. Excellent typing skill, maturity, ability to deal with patients important. 73-525-R.

Secretary IV will perform secretarial duties for the administrative officer of an academic department. Maintain department contract and personnel records. Excellent shorthand, dictaphone, typing skills needed. Organizational ability, familiarity with keypunch or computers desirable. 73-390-R.

Secretary IV in the Clinical Research Arteriosclerosis Center, will perform secretarial duties for the clinical director. Transcribe from dictaphone, patient records; type manuscripts, speeches, proposals; schedule appointments, maintain bookkeeping records. Knowledge of medical terminology is preferred. Previous medical secretarial experience is desired. 73-698-R (7/25).

Secretary IV in Urban Studies and Planning will handle registration for a special program in regional studies, set up special meetings, type correspondence, act as liaison between the program Fellows and the Program Director. Compose letters by instruction, answers questions related to the program. Good typing skills, ability to take on additional responsibilities; Institute background desirable. 73-699-R. (7/25).

Secretary IV to the Office of the Director in the Urban Systems Laboratory. General secretary for the Headquarters Office. Will type general correspondence, file, reconcile accounts, handle purchasing, payrolls, travel arrangements, and maintain a small library. Will work closely with the Administrative Officer and is expected to help prepare financial reports, as well as compiling information for the Directory of Research Projects published once a year. This position requires good judgment, excellent secretarial skills and ability to communicate well. MIT experience preferred; able to organize priorities. 73-665-R (7/18).

Secretary IV in Psychology will type articles and papers, schedule appointments, handle travel, maintain files, take dictation for one professor. Secretarial training or previous experience important. Maturity and good general skills required, 73-704-R (7/25)

Secretary IV to Associate Director of an Administrative group will type bulletins, correspondence, minutes of meetings; maintain committee records and files; arrange travel; monitor and process solicitation materials returned by alumni, Will also independently answer routine inquiries. Excellent typing, shorthand and a flair for details required. Overtime sometimes necessary. 73-585-R (7/25)

Secretary IV in academic department will handle general secretarial duties for a Biology professor including correspondence and manuscript typing, account maintenance and assistance in operation of training grants. This demanding and interesting position requires excellent skills for an extremely productive laboratory. Will do some correspondence for other laboratory members. Excellent MIT benefits and competitive salary. 73-591-R.

Secretary IV in Laboratory for Nuclear Science will work for group of professors and staff; schedule appointments; type technical reports, correspondence; handle all other general secretarial duties, good secretarial skills (typing and dictaphone); ability to work independently required. Experience typing technical reports very helpful. 73-609-R. (7/11).

Secretary IV to busy professor in Earth and Planetary Sciences will compose correspondence; manage heavy typing load; do some editing and library research; handle general administrative chores necessary in the operation of the office. Excellent typing, (shorthand preferred); ability to edit; tact, good judgment and sense for priorities important. 73-613-R (7/11).

Secretary IV to two professors at the Sloan School of Management will type correspondence from dictaphone; schedule appointments, maintain files; type course material. Will also handle some administrative duties including maintenance of information system for group; arrange seminars; coordinate information about class schedules, teaching assignments and description changes for catalogue. Strong secretarial and administrative skills and experience in both required. 73-615-R (7/11).

Secretary IV in Chemistry for several professor will type scientific manuscripts for publications; correspondence, reports, reviews, and course materials. Maintain all files. Audit monthly accounts, rectify errors. Maintain busy calendar; make travel arrangements, handle visitors. Maintain student rolls, answer student inquiries. Machine dictation. Technical typing experience helpful. 73-648-R. (7/11).

Secretary IV in Administrative Office of Mechanical Engineering will work for three administrators, handling correspondence, calendars, composing letters, departmental records, general accounts. Will order supplies, set up and maintain files, schedule meetings and rooms. Deal frequently with people, answer variety of questions. Shorthand, good typing; knowledge of office procedures, Accurate; cooperative; poise to work with many interruptions. 73-652-R (7/11).

Secretary IV will work in Center for Theoretical Physics for three-four professors. Must be able to work well in busy, pressured office; establish work priorities; type technical manuscripts, correspondence, class notes, papers. Some telephone work. Typing and shorthand skills must be excellent. 73-630-R (7/11).

Secretary IV in Physics Department to head of the Optical Maser group will assume wide responsibilities for output of large volume of work for a very active group. Ability to work under heavy pressure; will coordinate the workload of another secretary. Experience and good shorthand and typing skills are a must. 73-632-R (7/11).

Secretary IV at Project MAC to two professors will handle the preparation of course materials, type technical papers; maintain schedules. Will help coordinate major interdisciplinary research project involving computer scientists, physicians, and graduate students. Ability, motivation to appreciate and master differences between medicine and computer science, and to interface effectively with workers from both areas. Organizational and secretarial skills must be excellent; interest to serve as a valuable assistant to the project. 73-681-A (7/18).

Secretary III-IV in Meteorology will assist with administrative duties and perform secretarial functions for the Executive 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 to organize office and to communicate with 60 scientists on a regular basis. Good office skills important; interest in physical oceanography desirable. 73-701-R (7/25).

Secretary III-IV in Meteorology was handle all general secretarial duties for the office; order supplies; maintain research account; keep records, handle travel arrangements. Will also maintain small departmental library. Good typing required. 73-705-R (7/25).

Secretary III or IV to a Professor of computer science and his graduate staff will type quizzes, reports and technical manuscripts. Excellent secretarial skills and technical typing ability a must. Ability to deal with faculty and students important. 73-545-R.

Secretary III-IV two openings in an academic department working for 2-3 professors. Good skills of shorthand and typing, organizational ability and experience required. 73-323-R.

Acct, Clk./Secretary III-IV will work for the Administrative OFficer in Nuclear Engineering, and his assistant in the Reactor Business Office. Perform all typing, filing; compile data and prepare various records and reports; maintain various departmental budget records; prepare vouchers; process reactor use charge information. Must work with little supervision; accurate typing; dictaphone; must like figures, complex clerical work, 73-653-R (7/18).

Acct. Clk/Secretary IV in Nuclear Engineering for the Administrative Officer will maintain budget records for various departmental accounts including processing statements; maintain various administrative and financial files; originating or answering correspondence and questions concerning monthly statements. Previous experience in secretarial and accounting work required. Dictaphone typing, 73-654-R (7/18).

Secretary IV for Institute Secretary for Corporations will organize and run the office. Very accurate typing needed for some letter-perfect copy; other typing duties require speed. Preliminary research on corporate prospects; gather backup information for visits; draft not-too-technical correspondence. Work closely with other Institute offices in obtaining pertinent data; receive visitors. Flexible, adaptable, good telephone presence. 73-674-R (7/18).

Secretary III in Earth and Planetary Science headquarters office will assist the secretary to the Department Head. Good typing needed for correspondence and manusceipts; handle monthly billing records for Xerox machine, maintain petty cash, purchase office supplies; answer general questions. Ability to deal with all types of people, willingness to work in a busy office with many interruptions. 73-706-R (7/25).

Secretary III-IV in Personnel Benefits Office will answer phones and explain benefits to employees and faculty. Excellent typing skills and shorthand or speedwriting are needed. Knowledge of insurance, pensions or medical plans would be helpful. Initiative, poise and the ability to clearly explain benefits important. 73-687-R (7/25).

Secretary III will provide secretarial support for an attorney; take and transcribe dictation; maintain office files and records of material dealing with patent law. Good shorthand and typing skills needed; previous office experience desirable, 73-518-R.

Secretary III in the Industrial Liaison Office will take and transcribe dictation, handle travel arrangements, rform secretarial duties for one staff member dealing with major industrial corporations. Secretarial or business school background, 1-2 years experience preferred. Shorthand, good typing, spelling and ability to master office procedures essential. 73-683-R (7/25)

Secretary III will handle reception duties for busy student-oriented administrative office; maintain files and complex schedules. Good typing and dictaphone skills required, as well as previous office experience. 73-429-R.

Secretary III to one staff member will take and transcribe dictation; type correspondence; handle travel arrangements; handle other general office duties. Ability to organize and work independently; good secretarial skills required. Previous working experience and secretarial training preferred. 73-581-R/73-580.

Secretary III in the Office of the President and Chancellor will handle heavy typing of tapes and handwritten material; preparation of speeches; filing; screening phone calls; incoming mail. Will eventually handle complicated travel arrangements. Excellent typing and command of English spelling required; Norelco dictating machine; poise, tact, good telephone presence. Will be second secretary in office. No smoking, due to allergy of other staff member, 73-647-R (7/11).

Secretary III in Metallurgy Department will assist a professor with the coordination and administration of a large undergraduate "service" course; will type all class material, lecture notes, and material for publications. Maintain records of research project expenditures. Shorthand or speedwriting desirable, organizational and administrative skills required. Previous secretarial experience or training essential. Lots of student contact in this job. 73-520-R (7/11).

Secretary III in Physics Department Theoretical Center to work for three-four busy professors. Ability to handle some pressure, decide work priorities, type technical manuscripts and papers, cover phones as needed. Typing skills must be excellent; shorthand preferred, experience necessary. 73-629-R (7/11).

Secretary III to work closely with support staff of Physics Optical Maser group. Second secretary in two-person office will handle heavy volume of correspondence, type proposals and manuscripts; shorthand; experience helpful. 73-631-R (7/11)

Secretary III in Physics Department Graduate Office handles all material relating to prospective graduate students including applications, correspondence, sending out booklets, and typing acceptance and rejection letters. Good typing and shorthand; experience desirable. 73-633-R (7/11).

Secretary III to the Manager and members of Technical Service Section of the Information Processing Center (about 20 people) will handle correspondence, occasional technical typing; travel arrangements some registration procedures, preparation of course material. Good skills required; shorthand helpful. Must enjoy variety of duties; and interaction with many people. 73-624-R (7/18).

Secretary III in the Sloan School of Management will work for three professors in management science, management information and control, and information systems. Correspondence, typing of class materials, distribution of them; some manuscript typing (occasionally technical); handle secretarial details of a one-secretary office. Shorthand or speedwriting required; able to organize a variety of tasks, 73-664-R (7/18)

Secretary III in the Treasurer's Office will use dictaphone and magna card for security transactions, acknowledgement letters, and general correspondence; type gift records on all security gifts; keep log of MIT Community Service Fund gifts; file. Accuracy with figures and details; good typing and spelling; familiar with corporation names. August 1st opening. 73-671-R (7/18)

Secretary III at the Joint Center for Urban Studies will type manuscripts of social science research from dictaphone or handwritten copy. Will act as receptionist and secretary for group of researchers. Typing skill must be strong; secretarial training plus some experience preferred. 73-676-R (7/18)

Secretary III to a Contract Administrator in the Office of Sponsored Programs will type letters, keep records on contracts and grants; coordinate routing them for approval; keep accounting statements, government regulation books updated; set up meetings, write letters, arrange travel. Previous secretarial experience; shorthand helpful; careful worker, able to work without close supervision. 73-680-R (7/18)

Secretary III in Medical Department will transcribe clinic notes and case histories for the Surgical clinic and Specialty Clinics. Will cover for the other secretaries when needed. Excellent typing; previous transcribing experience and knowledge of medical terminology are required. Must be flexible and willing to assume a variety of assignments. 73-659-R (7/18).

Senior Clerk III or IV in the Personnel Records Section will process personnel actions; act as liaison with employment sections; answer phone inquiries and follow-up on department problems; generate required statistics or reports. Good typing skills; ability to work with details; minimum of three office/clerical experience required. 73-612-R (7/11)

Sr. Clerk-Receptionist III-IV will be one of two receptionists serving entire Personnel Office, Will handle general information inquiries by phone, in person; must be well informed of current status of all jobs on all payrolls; will type job listings, postings, job updates, handle mailings, will maintain daily calendars for eleven Personnel Interviewers. Extremely important contact point in a very hectic office requires good judgment, sensitivity, diplomacy, good humor at all times. Good typing skills needed; patience and a positive attitude, 37½ hr. work week, 73-649-R (7/11)

Sr. Clerk/Media Asst. III-IV at the MIT Press will set up and maintain budgets fiscal records and inventories, process invoices. Will process all reprints and rebinds; deal with printers; binders; handle scheduling and follow-up. Highly organized individual required interested in analyzing and solving problems. Bookkeeping experience helpful; productive manner in extremely busy atmosphere. Interested in learning about book production. 73-663-R (7/18).

Technical Typist III in the Office of Administrative Information Systems will type technical memoranda, data processing control documents and manuals. Maintain documentation library, including filing, organization and maintenanace of programmer reference library. Good typing skills, experience in a data processing environment desirable. 73-684-R (7/25).

Statistical Typist III will type a variety of Institute reprots including Financial and Treasurer's reports, Professorship, NiH and Research Grant reports etc; as well as other reports and typing that comes in from various departments. Will operate a 24in. typewriter; work with A. B. Dick Masters; use the adding machine. Excellent typing skills and a minimum of one year statistical typing necessary. 73-565-R.

Senior Clerk III in Academic Records Office must type letter-perfectly for all notices of Faculty Appointments, letters, etc. File all appointment forms; set up Personnel folders; will learn use of IBM Mag card selectric typewriter. Other typing demands accuracy for records and Personnel changes; and for statistical counts and surveys. Discretion, maturity to work with highly sensitive material; liking for detail; ability to follow through. 73-641-R (7/11)

Senior Clerk III in Student Accounts Office in Comptroller's Accounting will help prepare Degree list: typing, filing, work with Registrar. Handle variety of check requests, distribution of funds; inventory of supplies. Will help analyze student accounts and computer reports. Some secretarial duties included: schedule appts., travel, handle mail, type correspondence for a supervisor. Bookkeeping familiarity helpful. 73-650-R (7/11).

Library Assistant III in Barker Engineering Library will type biweekly Bulletin; type reference correspondence, literature requests; handle billing for lost books; maintain files. Check in journal issues (approx. 1000); claim missing issues. Flexibility, organization ability; strong typing skill; able to work with a variety of people. 73-626-R (7/18).

Library Assistant III in Reserve Book Section of Dewey Library will work in demanding public service job, processes reserve book lists from faculty, maintains reserve book circulation statistics, prepares overdue notices, bills, collects fines. Will supervise student assistants; must be willing to assist in other areas of the library; may include evenings and weekend hours. 73-679-R (7/18).

Electronic Technician A will operate, maintain, and repair commercial electronic instruments. Will assist in laboratory, research, or analytical work under direction of scientific personnel. Graduate from a two year day technical school or its equivalent and a minimum of two years experience in trouble shooting and repairing instruments, especially oscilloscopes and digital measuring equipment. 73-391-R.

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.

3rd Class Engineer at the Power Plant may work any and all shifts and do all kinds of work, consistent with self sufficiency of the plant, Mass. Third Class Stationary Engineer's license or a license of a higher grade required. Experience on high pressure boilers, oil and gas fired with automatic combustion controls, turbine driven auxiliaries: AC and DC generation, switchboard and feed water controls required. Some experience on turbine-driven refrigeration equipment is desirable, 73-703-R (7/25).

Electronic Technician B in Center for Space Research will assist in laboratory or research work under the supervision of scientific personnel. Operate highly technical experimental apparatus; Should have considerable skill and good performance in aerospace, computer or related fields. Requires some supervision. Breadboard and test linear and digital circuit systems for satellite-type experiments. Does flight quality soldering and cabling. Will be required to perform function tests on subsystem and make indicated adjustments and corrections. Graduate from a two-year day technical school. 73-602-A.

Technician A (EM) in the Center for Space Research will assist scientific personnel in laboratory or research work, constructing, maintaining, or troubleshooting equipment or instrumentation of an electro-mechanical nature. Work with minimum supervision, have a general knowledge of the theoretical aspects of the apparatus he/she uses on the experiments on which he/she assists or the equipment he/she helps to make or set up. Graduation from a two-year day technical school or its equivalent and a minimum of two years of applicable experience. Knowledge in vacuum systems and their use; some experience in use of machine shop equipment such as millers and lathes. 73-603-R (7/25)

Architectural Draftsman will develop architectural plans, elevations and details of Institute remodeling and alteration work. Technical school graduate with 5-10yrs experience, knowledge of electrical and mechanical systems helpful. 40hr/week. 73-396-A.

Clinical Research Nurse will assist scientists and physicians in research procedures. Work being done at this 12-bed unit includes research in cardiology, clinical nutrition and biomedical engineering. Must be Mass. Registered Nurse with at least 2 years hospital experience. 4pm-12midnight shift. 73-236-R.

Grounds Crew member in Physical Plant will lift rubbish, platforms, fertilizer, concrete blocks, lumber, gravel and equipment onto trucks; shovel snow. General care of lawns. Mechanical aptitude helpful; special physical examination required. Must have a Mass. driver's license. Hours: M-F 8am-4:30pm. 73-561-R (7/11) Hours: Irregular schedule (73-616-R), (73-617-R) (7/11)

Pot Washer in the Faculty Club will wash pots, store merchandise received on a daily basis; sweep and mop kitchen floor, coolers and empty trash. Hours 7:30am to 3:30pm 73-668-R (7/18)

Custodians — We are seeking qualified applicants for our waiting list. Openings will be on the second and third shifts. Candidates must have a steady, reliable work record and good references. The waiting list will be used to fill openings as they occur over the next several months. Interested applicatns should fill out an application at the Personnel Office and leave it for consideration.



SACRIFICIAL ALTARS? Not exactly, but stone benches at MIT Student Center do attract worshippers of a sort who, at lunch time, willingly put themselves under the spell of the summer sun.

# Science Writer Meredith Appointed to News Staff

Dennis L. Meredith, former science editor for the University of Rhode Island, has been appointed assistant director of the MIT News Office.

Mr. Meredith, 26, has received science writing awards from the



Meredith

National Society for Medical Research and the Atomic Industrial Forum. His most recent award was the 1972 AAAS-Westinghouse Science Writing Award for newspapers with circulation under 100,000. Mr. Meredith was given the award for a series of articles on the problems of nuclear power plant siting.

At MIT, Mr. Meredith joins the staff of Tech Talk, and will edit Reports on Research, a publication on MIT science and engineering.

Mr. Meredith received his BS in chemistry from the University of Texas in 1968 and an MS in biochemistry and science writing from the University of Wisconsin in 1970. He has also been a science writer for the University of Wisconsin and assistant director of information for the University of Wisconsin Medical Center.

Mr. Meredith and his wife Joanne live at 68 Lancaster Road in Arlington.

# MIT Affirmative Action Plan Accepted by HEW

(Continued from page 1)

be organized under five major areas. These areas are (1) Administrative Component, (2) Policy Component, (3) Analysis Component, (4) Remedies and or Program Component, and (5) Goals and Timetables Components. While no specific written format was imposed on the Institute for the information of its plan, we believe its current organization lends itself readily to analysis and comment in terms of these overall concepts. Accordingly, the questions and comments which follow will deal with the Institute's plan in terms of these components and the essential elements they must contain if the plan is to adhere closely to the requirements of the Executive Order and the Higher Education Guidelines.

#### I. Administrative Component

- A. Responsibility for Affirmative Action Program Implementation
  - To clarify the textual description of the decisionmaking process in the employment area of the plan an organizational chart identifying and linking the various levels of authority relating to employment decisions should be submitted as a supplement. The lines and levels of authority in this crucial area could then be readily identified in their appropriate relationships to each other.
- 2. We believe that the responsibilities of the Institute's Equal Employment Opportunity Officer (i.e. The Assistant for Minority Affairs in the Office of The President and Chancellor) have been adequately described in the Plan but the question of this officer's actual authority to initiate or enforce remedies to problems or deficienceies uncovered in the course of his normal duties is not clear from the text in the plan. Additional, more explicit information on this point is necessary.
- 3. The plan indicates that committees play an important role in implementing the Institute's Affirmative Action Program. For this reason precision and clarity in the description of the responsibilities and authority of these committees is imperative. In the case of the MIT Equal Opportunity Committee, discussed in Appendix C-1, there is a clear statement of its responsibilities and authority. These are not explained in the same way for the Academic Council, Academic Appointments Subgroup and Staff Appointments Subgroup (Appendix C-2). This same comment is applicable to the Draper Laboratory-Equal Opportunity Committee (Appendix C-3).
- 4. On the subject of committees there is a series of related questions which should be answered in the text of the plan describing the roles of each committee involved in the affirmative action process:
- a. How is the committee formed?
- b. Is there assurance of equitable representation of protected class members on the committee?
- c. What is the relationship between the Affirmative Action Officer and the committee?
- d. Does the committee have the same type of authority in administering the affirmative action plan as do other committees in administering their respective programs?
- B. Method of Dissemination of Affirmative Action Program

Based on Section 60-2.21 dissemination of the affirmative action plan is required both internally to the Institute community and externally to the community and public at large. The latter grouping is meant to include potential and prospective employees, contractors, subcontractors and vendors, community and minority and women organizations, and all recruiting sources.

Our review of the Institute's Plan indicates that the subject of dissemination is discussed in the preface and in Parts III (Section B, No. 7) and IV (Section A, No. 5). As the subject is currently treated in your plan, much more detailed information about the specific plans and procedures for internal and external dissemination of the affirmative action plan is required. Your response to the following questions and requests for information will meet this requirement:

- Please provide samples of the actual or proposed correspondence to be used for both internal and external dissemination of the plan.
- 2. Is the EEO Policy Statement contained in the Affirmative Action Plan to be included in the employee handbook and/or policy manual and what is the time frame established for their inclusion in these documents?
- 3. What are the details of the procedure to disseminate the plan through lower level supervisors to all employees? And, if not already accomplished, is there a target date?
- 4. Does the plan:
- establish periodic meetings with executive management and supervisory personnel to ex-

- plain the intent of the Institute's policies? (Minutes of these meetings should be included. If not already established then target dates should be included).
- b. provide for informing employees of affirmative action progress on a periodic basis?
- c. include scheduled meetings with union officials to inform them of the Institution's policy?
- d. give a time frame for the inclusion of nondiscrimination clauses in union agreements?
- e. give a time frame for union negotiation to correct any discriminatory aspects to union contracts?
- f. include correspondence to recruiting sources? (The letters should stipulate that these sources actively recruit and refer minorities and women for all positions listed.).
- g. contain correspondence which stipulates that the recruitment source acknowledges an understanding of the affirmative action program?
- include letters to all subcontractors, vendors, and suppliers requesting appropriate action from them? (A list should be provided).

# HEW LETTER

#### C. Procedures to Insure Effective Implementation

The Institute's Plan, on page 10, states that the Assistant for Minority Affairs and the Special Assistant for Women and Work.... "will assist department heads in the preparation and implementation of specific plans to ensure the effectiveness and continuity of the Institute's Plan within each department unit."

For purposes of clarification we would like to have your response to the following questions:

- Is any verbal or written notice being given at the department level that the work performance of the supervisors is being evaluated on the basis of their Equal Employment Opportunity efforts and results?
- 2. Is any form of disciplinary action contemplated or implied in the plan for failure to adhere to EEO policies and procedures? If so, what official(s) is authorized to initiate such action and to ensure that it is enforced?

#### II. Policy Component

A. Equal Employment Opportunity Policy Statement

Our reading of the Institute's Plan indicates that this major policy component is covered in Parts I and II of the document. We believe these sections comprise a sincere and effective statement that clearly explains the Institute's attitude and commitment to a meaningful affirmative action program.

1. However, as a technical matter the Higher Education Guidelines require that this particular policy component be set forth over the signature of the chief administrative officer of the Institute which, in the case of MIT, is President Jerome B. Wiesner. We would consider a letter signed by President Wiesner stating his personal agreement to and support for the policy outlined in Parts I and II of the Institute's Plan as constituting compliance with this requirement. Upon receipt of this letter it will be automatically appended to the Plan. This letter should be given the same internal and external dissemination as the plan.

#### A. Maternity Leave Policy

 As a point of clarification a statement of the effect that "regardless of marital status the maternity leave-policy is applicable to any female employee of the Institute," should be added to this important policy statement. Your response should indicate that this is the intent of the policy for both staff members and other personnel specifically mentioned in Appendix D-5 of the Institute's Plan.

#### C. Anti-Nepotism Policy

As in Appendix D-1, the Institute's anti-nepotism policy is considered to be in compliance with the requirements of the Higher Education Guidelines.

#### D. Other Policy Issuances

- Any other policy statements affecting employment which have not been written and otherwise disseminated to all employees should be included here.
- Where the absence of a written policy (e.g. "unwritten rule against hiring anyone with an arrest record") has caused a disparate effect and a part of the remedy is the development of a written policy, that statement of policy would be included here.

 If there are any criteria, standards and procedures which govern employment practices on the departmental level which differ from the Institute-wide Policy it would be appropriate for them to be included as part of this component.

#### III. Analysis Component

The various analyses which make up this component to the Institute's Plan are central to the proper development of all the other components. For this reason it is necessary that they be carried out accurately, thoroughly and honestly.

#### A. Utilization and Analysis

This office considered the required utilization analysis to be the keystone of any well-developed set of goals. The prominence of this requirement is obviously recognized by the Institute because its importance is stressed throughout the Plan. In Part Two of this letter, which deals with the individual plans submitted, we will discuss the utilization analyses in more detail.

1. However, the areas of non-academic employment where the Plan states there is a sharing of responsibility between the departmental leadership and the Personnel Office, we would like to review any efforts on the part of the latter to develop a utilization analysis for those categories of employees not included in the departmental analyses submitted thus far.

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#### B. Other Analyses

The following analyses should be completed and supporting documentation maintained on file at the Institute:

- Salary Analysis to determine disparate compensation between male and female and/or majority and minority employees.
- Promotional Analysis for all but the terminal position in each career ladder during a given period of time, preferable for one year prior to the date of analysis.
- 3. Tenure Analysis which equates the number of minorities and women eligible for tenure to those receiving or having received tenure as compared with the majority and/or males for a given period of time.
- Termination Analysis which compares the percent of terminations by classification for majority vs. minority and male vs. female.

At the earliest practicable date representatives from this office would like to visit the Institute to review this information and to discuss other areas of concern relevant to the continuing development of the Institute and departmental affirmative action plans.

#### IV. Goals and Timetables

The Institute and its departments have obviously made a strong effort to meet this requirement and our office wishes to acknowledge the fact and commend the effort. However, still more refinement is needed in this area on the part of a number of the departmental plans. The most important aspect of setting goals and timetables is that their development be equated to the required utilization analysis as closely as possible. Second only in importance to this aspect is the need for goals and timetables to provide for the elimination of underutilization in a realistic manner. Clearly, the accuracy and thoroughness of the various departmental utilization analyses will dictate the formulation of the goals and timetables component of your plan.

# V. Remedies and /or Programs

The Institute's Plan has excelled in specifying the development and execution of programs to eliminate deficiencies in its affirmative action posture. This evaluation was a major factor in our decision to accept the Institute's Plan and its departmental components in their current state of development. We found the section of the Plan dealing with Affirmative Action for Educational Opportunity especially noteworthy.

To formally recognize the close interrelationship between increasing undergraduate and graduate representation of minorities and women at MIT and increasing the size of the availability pool of qualified persons in these groups is extremely important and instructive to the MIT community and the public outside the Institute. The scarcity or complete absence of minority and women employees in certain of the highly specialized disciplines at MIT will never be remedied without a vigorous effort to enlarge the numbers of women and minority students in these same fields. The Institute's acknowledgement of this often-overlooked fact, by including an extensive treatment of Title VI activities in the formal plan, merits special recognition and encouragement from the Office for Civil Rights.

(Editor's Note: Part 2 of the letter, dealing with individual departmental programs, is being distributed to the various departments.)