

Massachusetts
Institute
of Technology

TECH TALK
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August 22, 1973
Volume 18
Number 7

Freshmen To Arrive Next Week

MIT is awaiting an annual rite of summer—the arrival of some 900 incoming freshmen for 10 days of orientation before the start of classes.

The Residence/Orientation week for the Class of 1977 will officially open with a picnic in the Great Court—or the Armory in case of rain—at 4:30pm Friday (Aug. 31). It will close with the President's Reception for incoming students and their parents from 3 to 5pm Sunday (Sept. 9) at the President's House—or the Sala de Puerto Rico in the Student Center in case of rain.

The approximately 40 freshmen from foreign countries are due to arrive on Monday (Aug. 27). Others are scheduled to check in Thursday and Friday (Aug. 30 and 31). Most will come by airplane, and MIT will provide shuttle transportation from Logan Airport.

The main objectives of orientation week are to have the freshmen choose living arrangements, select first term subjects and become acquainted with the campus, Boston and extra-curricular activities. It is also the time for fraternity rushing and pledging.

Registration is on Monday, Sept. 10, and classes start the next day.

10,000 Letters Urge Women To Consider MIT

"You are one of a group of talented young women who can make significant contributions to the scientific and educational communities in the years to come."

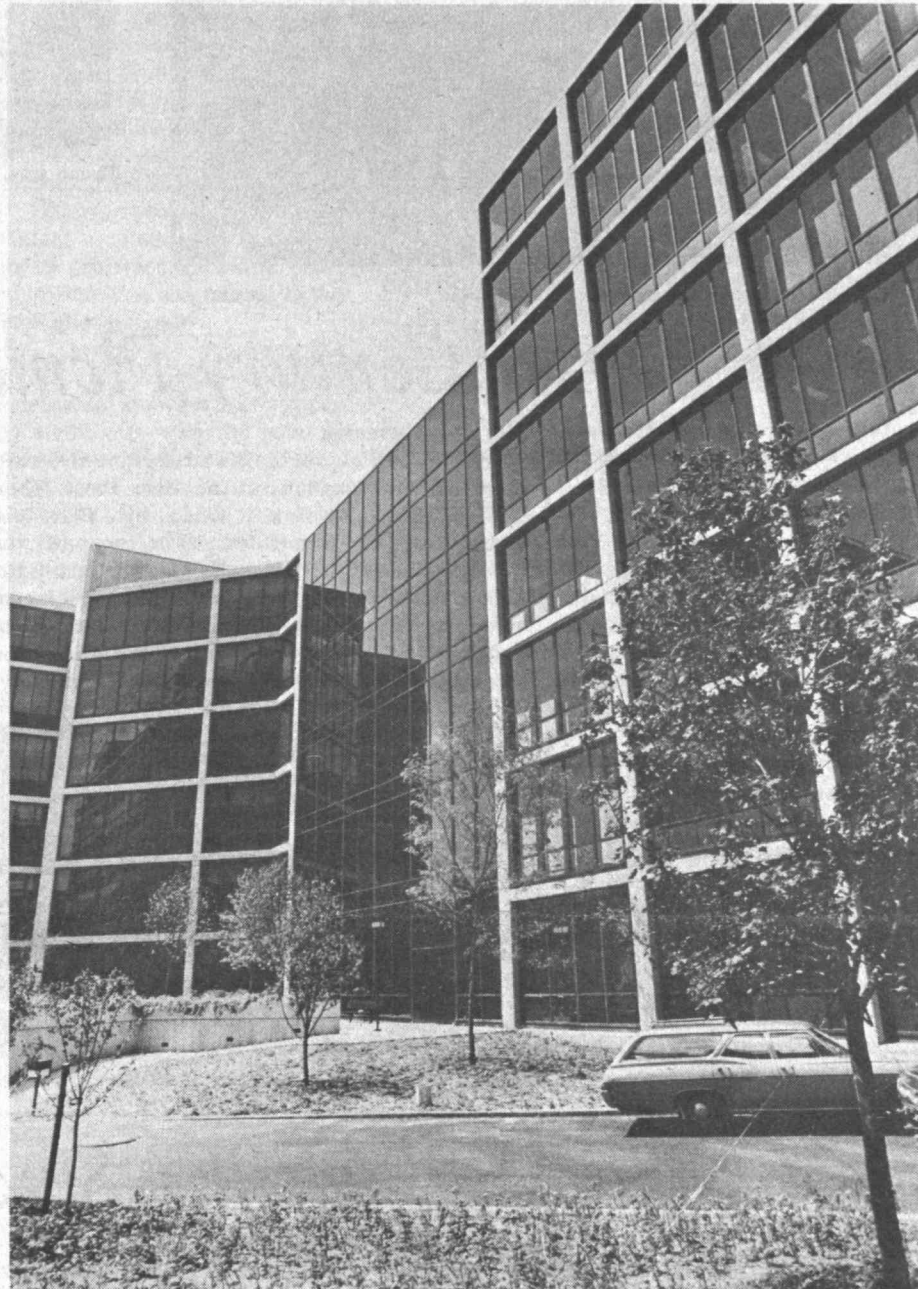
So wrote Peter H. Richardson, MIT director of admissions, in a cover letter to the booklet, "MIT: A Place for Women," recently mailed to 10,000 female high school juniors who scored well on Preliminary Scholastic Aptitude Tests.

"Most people," Mr. Richardson said, "still don't realize that MIT is a place for women, even though women have been attending MIT for more than 100 years."

"The booklet is one part of a continuing effort being made by women undergraduates and the admissions staff to encourage more women to apply to and enter MIT."

MIT's radio station WTBS (88.1FM) is broadcasting a weekly hour-long show presented by the Eastern Massachusetts Chapter of the National Organization for Women (NOW). The program on issues and events of the women's movement is aired Wednesdays at 6pm and includes discussions of issues such as employment, education, marriage and welfare.

All Former White House Science Advisors To be Here for Fairchild Bldg. Dedication



The Fairchild Bldg. on Vassar St.

—Photo by Susan Pogany

All six former US presidential science advisors will take part in a symposium highlighting dedication ceremonies for the new \$17.5 million Sherman Fairchild Building at MIT Oct. 4-5.

In addition, Dr. H. Guyford Stever, director of the National Science Foundation, will be the principal speaker at a special luncheon for members of the MIT Corporation, the Institute's governing body, and invited guests. Dr. Stever is former president of Carnegie-Mellon University and before that was for many years an MIT professor, department head and associate dean of engineering.

The Fairchild Building, which will house the MIT Department of Electrical Engineering and the MIT Research Laboratory of Electronics, is the largest single building project completed at MIT since the present Cambridge campus was built in 1916.

The building is being named for the late Sherman Fairchild, the inventive genius and industrialist who was founder and chairman of the board of Fairchild Camera and Instrument Co. and Fairchild Industries, Inc. He died in 1971.

The building was made possible by a \$4 million grant from the Fairchild Foundation as well as grants and gifts from 216 individuals, 44 corporations and five other foundations, including the Alfred P. Sloan Foundation and the Kresge Foundation. Two federal agencies—the US Office of Education and the National Institutes of Health—made facilities grants totalling \$1.8 million toward the building.

Leadership for organizing and securing support for the major new undertaking was provided both by the MIT Visiting Committee for the Department of Electrical Engineering and by the nationally based MIT Corporation Development Committee. The latter group is composed of some 140 leaders in business, industry, government and education and is headed by Dr. James Rhyne Killian, Jr., Honorary Chairman of the MIT Corporation and himself one of the former science advisors who will participate in the dedication symposium.

Sherman Fairchild was the son of the late George W. Fairchild, a successful manufacturer who was one of the founders of International Business Ma-

(Continued on page 2)

International Impact of Energy Peril Studied

An analysis of how the energy problem affects international relations is part of a study being undertaken by MIT for the US State Department.

The department has allocated \$58,120 to MIT's Center for International Studies for a redefinition of the complex problem of "interdependence" among nations and regions of the world.

Dr. Lincoln P. Bloomfield, professor of political science, is principal investigator for the study. Collaborating with him will be two other faculty members in the MIT Political Science Department who are, like him, senior staff members of the Center for International Studies. They are Professors Hayward R. Alker Jr. and Nazli C. Choucri.

Dr. Bloomfield said the study would be conducted at two levels.

One, he said, would be concerned with "overall patterns in which such basic sectors as resources, trade, diplomacy and defense interweave across regions and over time."

Dr. Choucri, who has been studying the origins of war in areas of population, resources and energy—and has special Middle

Eastern competence—will focus her attention on an analysis of energy supply and demand as an efficient way of illuminating in a single sector more general concepts of interdependence.

"Although it represents a limited problem area," Dr. Choucri said, "such a focus is recommended by the momentous policy issues it represents, such as the global significance of energy allocation procedures and their clear functional interdependence with Middle Eastern political issues, the future of oil producing countries and the prospects for American-Soviet detente."

Mathematical Models

Prof. Alker will concentrate on making an inventory and assessment of the growing literature bearing on "interdependence, which he believes can provide "a hard test of theories and techniques of interdependency that bear on the security, welfare and integration problems of virtually all advanced industrial societies."

"We hope here," he said, "to clarify at the conceptual level what has become an almost boundless set of real, postulated and forecasted interrelationships between virtually all nations and non-national groupings."

Prof. Alker is noted for his work on mathematical modelling of complex political systems, and other methods of formal political analysis.

Concept Widely Used

The MIT Center for International Studies has been increasingly concerned with questions of global interdependence, particularly the interactions between politics, conflict and technological change.

It suggested the study in response to a State Department request for a systematic analysis of "the extent and nature of interdependence."

"Interdependence has become one of the most widely-employed concepts in contemporary analyses of many global and regional problems," Dr. Bloomfield said.

"In an era of gradual, but limited, great power rapprochement, guidelines for assessing trends and policies are being revised, and new methodologies for checking assumptions and hypotheses that inform much of foreign policy are being called for," he added.

Too Diffuse

"International realities are more complex, not just because of the passing of the Cold War and

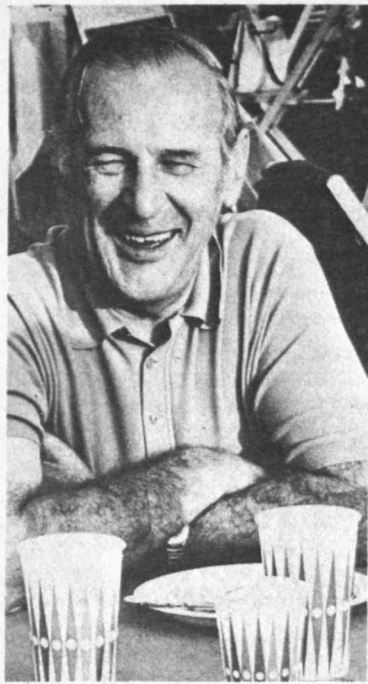
the emergence into prominence of a variety of transnational actors, but also due to the increased complexity of functional interdependence between diplomatic, military, economic, sociocultural and geopolitical policy sectors."

Dr. Bloomfield said that the concept of interdependence, at the level of abstraction commonly employed, "is too diffuse to have much analytic or policy utility."

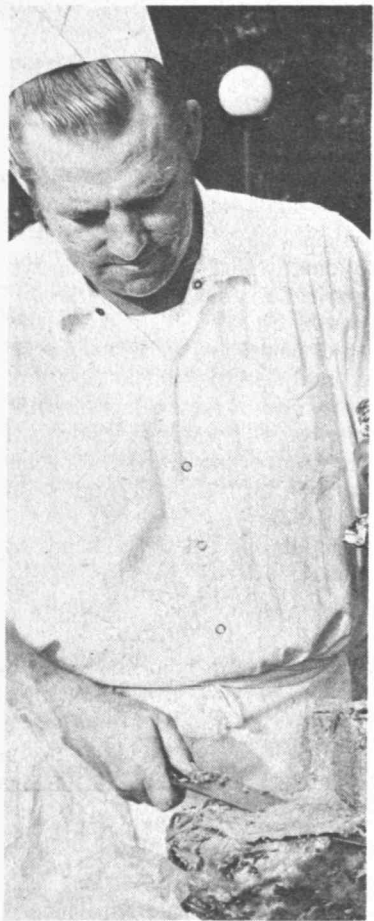
He said it was hoped that the MIT study, rather than being largely abstract or an "academic" analysis, would have important purposes "both in terms of policy implications and of necessary additional research."

Dr. Bloomfield, a former planner on United Nations affairs in the State Department, has concentrated in his 16 years at MIT on problems of US foreign policy, international organizations, strategy and arms control, the politics of outer space and the development of such methodological adjuncts to foreign policy analysis as political gaming and computer systems for minimizing conflicts.

The three researchers will be assisted by research assistants drawn from among graduate students in the Political Science program.



Draper Lab's C. Bruce Shannon.



Ronald Hull carving.



Quarter Century and Silver Club members queue up for a feast.



There was plenty for everyone at the steer roast.

250 Enjoy Quarter Century Picnic

The second annual Silver Club-Quarter Century Club steer roast was everything a "second" should be—twice as successful as the first.

Some 250 of the Institute's senior employees and retired members gathered on Kresge Plaza last Thursday (Aug. 16) for a feast that included 140 pounds of steer roast, 12 gallons each of potato and tossed salad, 21 dozen ears of corn, topped off by 10 watermelons, and plenty of soda, beer and coffee.

Three of the six men who worked at MIT for 50 years or more were in attendance: Abner Stodder and Mrs. Stodder of Somerville, William P. O'Conner of Arlington and H. H. (Nick) Carter of Cambridge. President Emeritus and Mrs. Julius A. Stratton also were there. Dr. Stratton was elected an honorary member of the Quarter Century Club last spring.

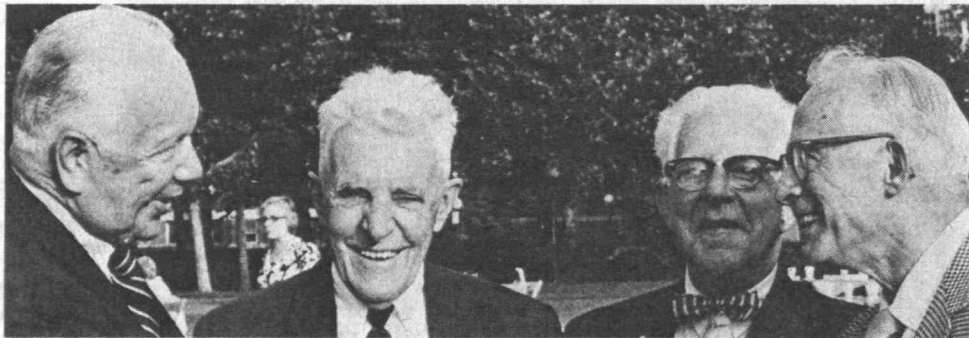
The day, which was gloomy during the morning, did not dismay Robert Radocchia, president of the Quarter Century Club, who organized the affair. Recalling a similar ominous start to steer-roast day last year, he proceeded with plans to hold the party on the lawn and, again as last year, was rewarded

with a fine evening.

Several Institute officials and their wives were guests of the two Clubs at the steer roast. They included Chancellor Paul E. Gray, Vice President Constantine B. Simonides, Secretary of the Institute Vincent A. Fulmer, Medical Director Dr. Albert O. Seeler, Associate Director of Lincoln Laboratory Walter E. Morrow, Jr., Director of Housing and Dining H. Eugene Brammer and Director of Graphic Arts James W. Coleman.



Nick Saia, Ed Griffith of LNS.



Dr. Stratton with 50-year men Stodder, Carter and O'Conner.

—Photos by Susan Pogany

Fairchild Bldg. Largest New MIT Facility Since 1916

(Continued from page 1)

chines Corp. The younger Mr. Fairchild himself served as an IBM director for more than 44 years.

In his own pursuits, however, Sherman Fairchild became interested in camera and aerial photography and devised the world's first between-the-lens shutter for aerial cameras as well as a technique to eliminate distortion.

His invention made accurate aerial photography practical and in 1920, at the age of 24, he established his first industrial company to manufacture his cameras. Eventually, Fairchild cameras were used to map all of the US and South America and millions of square miles elsewhere. Mr. Fairchild himself was credited with doing more than any other person in history to map the earth's surface accurately.

Aerial photography led him into design of aircraft to carry his cameras and in 1925 he established the Fairchild Engine and Airplane Corp. (now Fairchild Industries) which has since manufactured more than 40,000 aircraft of all types. He later helped organize Pan American Airlines and founded and operated companies manufacturing aircraft equipment, sound recording instruments, film projection systems as well as electronic components and

systems.

The symposium featuring the former science advisors—five of whom have some connection with MIT—will be held the evening of Thursday, Oct. 4, in MIT's Kresge Auditorium. Title of the symposium is: "High Technology for a Livable World." Attendance will be by invitation.

The following day, Friday, Oct. 5—following the annual meeting of the MIT Corporation in the morning and the Corporation luncheon where Dr. Stever will speak—formal dedication ceremonies will be held starting at 3pm in the plaza outside the Fairchild Building.

Howard W. Johnson, chairman of the MIT Corporation, will preside at the ceremonies. Walter Burke, chairman of the Fairchild Foundation, will present the building to MIT. MIT President Jerome B. Wiesner will accept on behalf of the Institute.

Principal speaker at the ceremonies will be Dr. Julius A. Stratton, MIT president emeritus. Both Dr. Stratton and Dr. Wiesner are former directors of the Research Laboratory of Electronics.

The six presidential advisors attending the symposium represent all those who held the post from its introduction by the late President Dwight D. Eisenhower in 1957 to its discontinuance under President Richard M. Nixon in 1973.

Host and chairmen for the Oct. 4 science advisors symposium will be President Wiesner, who was science advisor under the late President John F. Kennedy and Lyndon B. Johnson from 1961 to 1964.

Other former advisors who will participate in the symposium are:

Dr. Killian, who was the first presidential advisor, serving from 1957 to 1959.

Dr. George B. Kistiakowsky, professor emeritus of chemistry at Harvard University and visiting scholar at MIT's Center for International Studies, presidential advisor from 1959 to 1961;

Dr. Donald Hornig, president of Brown University, presidential advisor from 1964 to 1969.

Dr. Lee A. DuBridge, former president of the California Institute of Technology and former head of MIT's wartime Radiation Laboratory, presidential advisor from 1969-1970.

Dr. Edward E. David, Jr., Director and Executive Vice President of Gould, Inc., who received a master's and doctor's degree from MIT in 1947 and 1953 respectively, presidential advisor from 1970-1973.

The activities to be housed in the Fairchild Building are among MIT's largest.

The Department of Electrical Engineering is the largest of

MIT's 25 academic departments. Nearly 1,200 of MIT's 7,800 undergraduate and graduate students are majoring in various aspects of electrical engineering this year. In addition, the department's faculty—headed by Professor Louis D. Smullin and numbering nearly 100 assistant, associate and full professors—provides instruction in electrical and electronic sciences and in the related areas of computer sciences for hundreds of students majoring in other areas of science and engineering.

The Research Laboratory of Electronics (RLE), organized in 1946, is the outgrowth of the famed MIT Radiation Laboratory where MIT scientists and engineers designed and developed radar during World War II. Many of RLE's laboratories and facilities were housed in the "temporary" wooden structures erected quickly for Radiation Laboratory work at the start of the war.

RLE, headed by Professor Henry J. Zimmermann, draws research staff from 11 different academic departments—including science, engineering and social science departments—and served as the prototype for interdisciplinary research laboratories at colleges and universities throughout the world.

Today, RLE's staff of approximately 100 faculty and 300 students from diverse academic back-

grounds is engaged in numerous major research programs including two major areas: plasma physics and bioelectronics.

The concrete-and-glass Fairchild Building, located on Vassar St. on MIT's North Campus, consists of two elements, one six stories and the other eight stories, connected by a glazed link. All told, it contains 230,000 gross square feet of space. Facilities included classrooms, laboratories and offices, plus such service units as instrument rooms and mechanical and electronic shops.

Several novel uses of space have been designed into the Sherman Fairchild Building by the architects, Skidmore, Owings and Merrill of Chicago. There are "classroom clusters," for example, each containing a pair of classrooms, plus an adjacent study and office area. In addition, faculty offices are grouped around secretarial areas, allowing one secretary to answer calls and greet visitors for several professors. The top two floors of the six-story element will be devoted to undergraduate teaching and project laboratories.

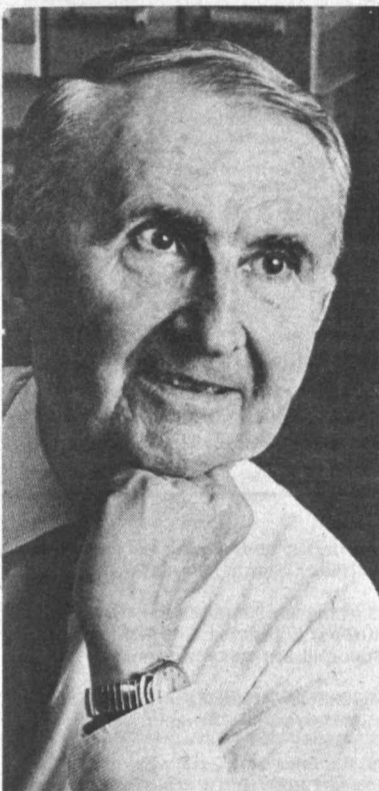
The building is built on a concrete pad beneath the basement, eliminating the need for deep pilings. The contractor was Vappi Construction Co., Cambridge.

MIT's Egon Orowan Wins Danish Metallurgy Medal

Dr. Egon Orowan, MIT professor emeritus in the Department of Mechanical Engineering and one of the outstanding authorities in the field of physics of metals, will receive the Danish Metallurgical Society's Paul Bergsøe Medal during ceremonies Sept. 4 in Copenhagen.

The medal—awarded only twice before in the 40-year history of the society, both times to Danish metallurgists—will be given to Dr. Orowan for his contributions to the concept of dislocations.

The society also will bestow the Bergsøe medals, in absentia, on Sir Geoffrey Taylor and Michael Polanyi, British scientists who outlined similar theories at the same time. Dr. Orowan will accept



Dr. Egon Orowan

the medals in their behalf.

The concept of dislocations, one of the outstanding advances in the knowledge of materials, concerns the molecular and atomic structure of crystals and has led to remarkable progress in the understanding of plasticity, diffusion and mechanical properties of real substances as opposed to ideal crystals.

High Strain of Bending

Dr. Orowan, who has made significant contributions to the understanding of the behavior of solids, introduced his theory in 1934. His later research overthrew the classical theory of the brittle fracture of steel and led to the realization that the speed with which a piece of steel is deformed is the most important factor in the problem of brittleness.

In other words, the stress required to cause a plastic deformation rises with the speed of the deformation but faster than the stress required for fracture. Brittle fracture, one of the problems that plagued American shipbuilding during World War II, is

now known to occur if elastic strain caused during the development of cracks can give up the energy needed for rapid development of cracks, especially those which involve high strain or bending or deformation around the crack.

Numerous Awards

Born in Budapest, Hungary, in 1902, Dr. Orowan attended the University of Vienna from 1920 to 1922. He received the degrees of Diploma of Engineering in 1929 and Doctor of Engineering in 1932 at the Technical University of Berlin-Charlottenburg.

He joined the MIT faculty in 1950 as visiting professor of mechanical engineering, was appointed professor the same year, and in June 1951 was named to the Westinghouse chair.

Dr. Orowan is regarded as unique in his ability of combining fundamental knowledge of physics and metallurgy with the point of view of the mechanical engineer. Among his awards are the Friedrich Gauss Medal, given by the Braunschweigische Wissenschaftliche Gesellschaft; the Thomas Hawksley Gold Medal of the British Institution of Mechanical Engineers, and the Bingham Award of the American Rheological Society.

Ippen's Studies Of Estuaries Cited

Dr. Arthur T. Ippen, Institute Professor and director of MIT's Ralph M. Parsons Laboratory for

Three Institute Employees Are Named To New Posts in Personnel Services



NEW STAFF members in the Personnel Office are, left to right: Kenneth L. Hewitt, Carolyn Scheer and Evelyn L. Perez.

—Photo by Susan Pogany

Three veteran Institute employees have been named to positions in the MIT Office of Personnel Services.

Evelyn L. Perez of Cambridge succeeds Richard Finnagan as personnel officer for Vice Presidents James E. Lampert, Kenneth R. Wadleigh and John M. Wynne,

Secretary of the Institute Vincent A. Fulmer and the School of Architecture and Planning.

Kenneth L. (Sonny) Hewitt of Cambridge, formerly a layout stripper/opaquer at Graphic Arts, and Carolyn Scheer of Cambridge, formerly in the Office of the Dean for Student Affairs and the Education Research Center, have been appointed personnel

assistants, a new position established to relieve the pressures on the personnel officers and to minimize waiting time for interviewing applicants.

Ms. Perez, a native of Cuba, came to MIT in 1963 as a secretary in the Department of Civil Engineering. She transferred to the Urban Systems Laboratory upon its formation and became its administrative officer in 1972. She is active in *Concilio de la Comunidad*, a Spanish-speaking community council, and is studying for a bachelor's degree in political science at Northeastern University under MIT's tuition assistance plan.

Mr. Hewitt, a Cambridge native, joined Graphic Arts in 1964. He has been active in the Research, Development and Technical Employees Union, serving as the Graphic Arts steward for the past six years. He has participated in the Cambridge Model Cities Area Four program and for the past two years has served as MIT assistant

junior varsity basketball coach.

Ms. Scheer this summer is completing requirements for her master's degree in education at Boston University. She joined the Dean's Office in 1970 after receiving the B.A. degree from Jackson College. She was with ERC from September, 1972, until it began phasing out last June. At MIT Ms. Scheer has been active in the Women's Forum.

Obituaries

Jane McCurdy

Funeral services were held Thursday, Aug. 16, for Jane F. McCurdy, 32, of Somerville who died Aug. 12. Miss McCurdy had worked as a laboratory assistant in the MIT Department of Biology since 1969. She is survived by her mother, Alice, and a brother, John, who both work at the Institute.

John M. Nalle

John M. Nalle, 76, of Charlottesville, N.C., an assistant placement officer at MIT from 1933 to 1937, died on July 23. Mr. Nalle received the SM degree from MIT in 1920. He is survived by his wife, Frances, a sister, and two brothers.

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Water Resources and Hydrodynamics, has been decorated by the Department of the Army for his contributions to studies of estuarine water flow.

In special ceremonies at the Army Waterways Experiment Station at Vicksburg, Miss., Dr. Ippen was presented the Outstanding Civilian Service Award. This medal is awarded by the Army to private citizens making a significant contribution to the Army's mission.

TV Program is Postponed

The Institute news film produced by a California-based health information project on MIT Professor Robert Lees' arteriosclerosis research, has been postponed.

The film was originally scheduled to be shown last week in Boston on WKBG-TV, Ch. 56.

According to the Television Health Information Project of the University of California, San Francisco, the film will be shown on 43 other stations around the country this week and next.

Physical Plant Monitoring River Level

For most MIT people the Charles is to sail on, bike over, jog across—or perhaps just ignore. But for the MIT Physical Plant, the Charles is a source of worry that requires close scrutiny, especially when it rains heavily.

The watching and worrying is necessary because flooding could occur at several places in the Institute if the Charles were to rise rapidly.

That's why a drum chart, tucked away in an obscure basement corridor in Building 1, has been monitoring the rise and fall of the

Charles since 1954.

Haig G. Gechjian, deputy superintendent of buildings, says flooding last occurred in 1954 during Hurricane Edna. But the possibility of a repeat performance cannot be ruled out.

An unusually high tide during a heavy rain means an anxious period for physical plant people.

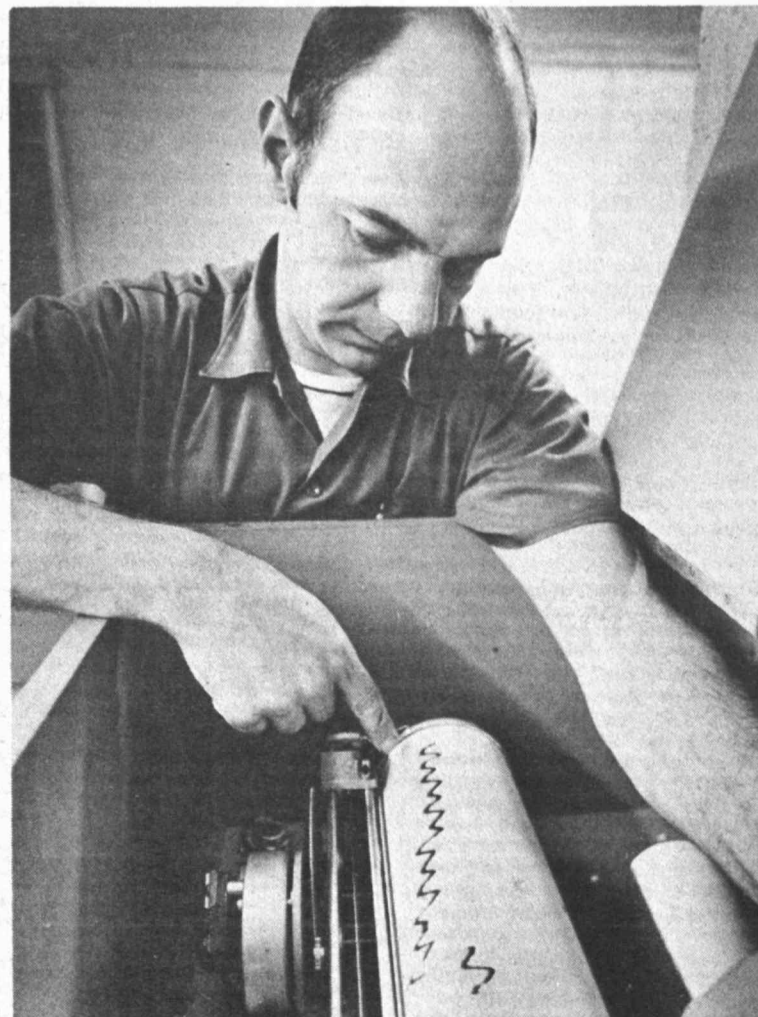
The Metropolitan District Commission can control the level of the river with the locks at the Charles River Basin. MDC engineers try to maintain a level that buildings along the river can tolerate. Occasionally, however, conditions

may require the MDC to hold the river at a higher level.

That is why the drum chart in the basement of Bldg. 1 has been quietly tracking the rise and fall of the Charles all these years.

Alfred Cangeme of Stoughton, the Pipe Shop employee who changed the chart last week, explained that each of the divisions represents a week's activity.

"We look at the chart daily," he says, "and if we spot anything there are emergency procedures we can follow to minimize damage.



PIPE SHOP Employee Alfred Cangeme prepares to change the drum chart that records the level of the Charles River. The monitoring device, in the basement of Bldg. 1, helps Physical Plant keep a wary eye on the height of the river.

—Photo by Susan Pogany

Continued from page 6

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. 73-600-A (6/27).

Micro Automation Systems Programmer - 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 (6/20).

Administrative Staff member will work with corporations to increase membership 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 (6/20).

Administrative Staff - Associate in the Analytical Studies and Planning 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 for this position should have an educational background equivalent to graduate study, and/or working experience 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 (5/30).

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 (6/13).

Administrative Staff - Systems Programmer will work full time in the Programming Development Office on the 370/165. The job will consist of systems programming and maintenance, systems assurance, and user interface functions. Applicant should have some project management experience, an understanding of operating systems and a good working knowledge of assembler language. 73-795-R (8/15).

Administrative Staff - Applications Programmer in the Office of Administrative Information Systems will 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 and 360 Assembler Language desirable; experience with university accounting or teleprocessing applications helpful. 73-776-R (8/15).

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 (5/1).

Systems Analyst - Admin. Staff for the office of Administrative 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, documentation and client education. 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 (5/1).

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-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. SM or MS degree in Chemistry required. 73-590-R (6/27).

DSR Staff member in the Energy Laboratory will assist in the construction of a mathematical energy model for U.S. supply and demand. Gather data, participate in econometric model building and analysis of various energy sectors. S.B. degree in economics with econometrics and mathematics background desired. Experience in FORTRAN programming and use of Econometric Software Package necessary. Ability to interact and communicate with a large interdisciplinary group working on the project important. 73-752-A (8/8).

DSR Staff - Systems Analyst at Cambridge Project will adapt Time Series Processor programs for use within the Consistent System on Multics. Knowledge of calculus, econometrics, statistics, and linear algebra; extensive PL/1 programming experience on Time Sharing Systems; familiarity with TSP-CSP required. This position is temporary until 7/1/74. 73-749-R (8/8).

DSR Staff (temporary until 7/74) at Cambridge Project will direct efforts of 2-3 staff programmers; coordinate project sub-contract work; participate in project planning; advise prospective users of consistent systems capabilities and use. Ph.D. in Mathematics (Statistics); experience in time-sharing systems (Multics, PL/1 and FORTRAN); knowledge of Behavioral Science applications desired. 73-750-R (8/8).

Research Assistant - DSR Staff at the Energy Lab will participate in and coordinate an ongoing research and development program in thermal systems and heat transfer. Work includes heat transfer equipment design, test instrumentation, testing, analysis, optimization studies and direction of related efforts by graduate students and engineers. Candidate must be familiar with power plant engineering, heat transfer instrumentation, detailed analysis of fluidized bed heat transfer phenomena and convective heat transfer. Experience in directing work by graduate students and graduate engineers. 73-801-A (8/22).

Infirmiry Nurse - (Exempt Staff) will do bedside nursing at the Infirmiry. Assist surgeons in the operating room, administer first aid and emergency treatment after clinic hours. Mass. Registered Nurses license required, as is previous nursing experience, preferably emergency room or industrial nursing. This position is on the permanent night shift (11pm-7am) with weekend rotation. 73-731-R (8/8).

Infirmiry Staff Nurse Part-Time - (Exempt) will work in the MIT Infirmiry on the day shift Sat, and Sun, and one day during the week. Administer first aid and emergency treatment; assist physicians with minor surgery. Individual must be a Mass. Registered Nurse with previous emergency room or industrial nursing experience. 73-744-R (8/8).

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 (4/29).

Medical Technologist/Technical Assistant - Academic Staff in the Clinical Research Center must be ASCP registered or the equivalent to work in the laboratory of a twelve-bed research unit. Experience in clinical chemistry, hematology, and urinalysis; familiarity with laboratory instruments required. A BS degree in Biology or Medical Technology preferred; non-degree candidates will be considered depending on experience. 73-754-R (8/8).

Applications Programmer - (Exempt) in the Office of Administrative Information Systems will translate program specifications into efficient computer programs; evaluate specifications, perform coding, testing, debugging, flowcharting, and final program documentation. Knowledge of IBM DOS PL/1 and/or COBOL required. Knowledge of 360 Assembler Language and/or 1401 Autocoder desired. Experience with university, accounting or teleprocessing applications helpful. 73-821-R (8/22).

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 maintaining systems for academic computer usage. Individual must have experience in machine language programming and operating systems; detailed knowledge about compilers, interpreters, schedulers, priority processors, and basic knowledge of computer hardware. Degree in computer science required. 73-537-R (6/6).

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 - DOS - Admin. Staff will provide technical expertise; develop and implement methods of improving computer performance. Minimum of two years S/360 or S/370 BAL (ALP) Assembler Language Programming experience. Knowledge of teleprocessing, and COBOL or PL/1. 73-265-R (4/2).

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 (5/23).

Administrative Assistant - (Exempt) in the Center for Transportation Studies will assist the Director and steering committee in organizing and coordinating the activities of the Center; administer short courses, advisory panel meetings, conferences; monitor accounts of research projects and programs; assist in the preparation of research proposals; maintain files on faculty, students, contracts, proposals, publications; assist with administrative procedures. Knowledge of Institute administrative procedures and practices, DSR accounting methods, organizational structure important. The initiative and ability to organize to set priorities and to pursue objectives with tact and diplomacy is essential. 73-805-A (8/22).

Administrative Assistant (Exempt) in the Aeronautics Department, Aeroelastic and Structures Research Laboratory will assist the Director with Administrative functions. Handle matters relating to payroll procedures, purchasing; prepare and maintain expenditure records on all accounts; prepare proposal summary sheets. Candidate should have some accounting background as well as the ability to handle modest typing assignments. 73-760-R (8/8).

Administrative Assistant V in the Fiscal Planning and Budget Office will assist in data collection; review budget information submitted by departments and labs; maintain logs of expenditures; perform some statistical typing. Ability to work independently is important. 73-757-R (8/8).

Computer Operator IV will operate IBM Model 135 and all peripheral equipment associated with it, including disk drives, tape units, card reader/punch, printers. Must have a good knowledge of DOS job control, multi-programming experience and be capable of understanding operating instructions. 4pm-12:30am shift. 73-443-R (5/16).

Senior Keypunch Operator III will operate the IBM 029 keypunch machine. Will punch into computer input cards formatted and unformatted documents. Minimum of two years experience operating IBM 029 or comparable equipment; familiarity with the creation of program drum cards desired. 73-574-R (6/27).

Secretary IV at the Center for Policy Alternatives will act as receptionist and provide secretarial support for three staff members. Excellent typing needed for correspondence and reports. Will assist with other projects as necessary; handle travel arrangements; order laboratory supplies for the center. 75-531-R (7/18).

Senior Secretary/Administrative Assistant V will give assistance to the Technology Matrons volunteers in carrying out both short-term and continuing programs serving students and other members of the MIT community. Maintain membership files; coordinate mailings; type and distribute minutes of meetings; keep financial records and make deposits; compile and distribute the annual reports. Maturity and tact; organizational ability, flexibility to work with many different people, extensive knowledge of the Institute and good

background preferred. 73-803-R (8/22).

Senior Secretary V in Resource Development will be Personal Secretary to the Vice President. Perform projects requiring considerable knowledge of Institute procedures and practices, such as visitations to the Institute by domestic and foreign government and business leaders, staff meetings and special events. Will also handle typing, machine dictation, travel arrangements, other office procedures. Excellent typing and shorthand skills are required. Ability to make decisions, exercise good judgment important. Several years applicable experience essential. 73-796-R (8/15).

Secretary IV in Nuclear Engineering will handle general secretarial duties for four professors. Type technical reports and journal articles from handwritten drafts, dictaphone, and shorthand; maintain student records; schedule appointments. Knowledge of general office procedures, ability to work important. Good typing and shorthand skills required, as is technical typing and dictaphone experience. 73-718-R (8/1).

Secretary IV to several faculty members and one visiting professor in Economics. Provide general assistance and perform secretarial duties; type class material, memos and correspondence; maintain busy calendars. Good typing and the ability to work for several people is required. 73-785-R (8/15).

Secretary IV in Economics will type correspondence, course material, technical manuscripts; make appointments; handle general secretarial duties for three faculty members. Will also act as editorial secretary for an Economics publication. Log, acknowledge, forward to readers all manuscripts submitted for publication, compile and type monthly report to all editors and co-editors. Good skills important; shorthand useful. Ability to type difficult, mathematical material and to organize own work in the midst of a busy office is important. 73-784-R (8/15).

Secretary IV will provide secretarial support for the Administrative Officer of the Educational Council. Individual will be responsible for several office procedures, including travel arrangements, scheduling appointments; transcribing correspondence from dictaphone. Minimum of two years secretarial experience, good typing skills required. Initiative and willingness to assume responsibility important. 73-778-R (8/15).

Secretary IV in the Research Laboratory of Electronics will provide secretarial support for a faculty member and research staff. Type technical manuscripts, set up material from rough data and verify footnotes and references; maintain busy calendar; independently handle other procedures. Excellent typing skills required; technical typing experience preferred. 73-780-R (8/15).

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 (6/27).

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 (6/13).

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 (5/9).

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 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 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 in Ocean Engineering will perform secretarial duties for one professor and several research assistants. Type correspondence, technical reports, some theses, notes from dictation and written drafts; handle accounting for DSR accounts; schedule appointments and travel arrangements. Excellent shorthand and technical typing skills, knowledge of accounting required. Individual must be mature, well organized and able to work under pressure with supervision. Familiarity with MIT procedures and policies is preferred. 73-812-R (8/22).

Secretary IV to the Director of the International Nutrition Planning Program Center for International Studies. Will perform all general secretarial duties; handle some administrative responsibilities; draft correspondence. Good typing skills; shorthand preferred but not essential. 73-802-R (8/22).

Secretary IV to three faculty members in Political Science will handle all general secretarial duties in addition to typing class material. Transcribe from tapes, confidential interviews pertaining to a study on school desegregation. Excellent typing skills; efficiency, ability to organize and establish priorities required. A number of years of experience is a must. 73-800-R (8/22).

Secretary IV position available in the Analytical Studies & Planning Group located in the Office of the President and Chancellor, the position provides secretarial support for the staff members in the Analytical Studies and Planning Group; offers a range of interesting work experiences and opportunity for growth; involvement in the preparation of major documents such as the Report of the President and Chancellor and Institute Catalogues, and preparation of a major report on activities by the President's Fund for Community Affairs; excellent, accurate typing and proofreading necessary; ability to arrange and coordinate complicated appointment schedules; tact, poise, and telephone presence necessary; ability to work independently and handle confidential materials; good judgment, sense of priorities, initiative and willingness to assume responsibility needed; overtime sometimes necessary; ability to work with several staff members simultaneously and under pressure is essential. 73-824 (8/22).

Secretary IV (Part-time) in Architecture will handle all secretarial and clerical duties for the History of Art Program. Type manuscripts for publication, books, correspondence; maintain filing system; assist in some library research. Excellent typing; fluency in reading and writing French; familiarity and/or background in art history required. Twenty-hour work week. 73-823-R (8/22).

Secretary IV in the Patent Section of the Office of Sponsored Programs will handle all office procedures for an attorney. Answer routine correspondence on own or from oral instructions. Maintain patent applications and case files; prepare documents for filing with patent office; transcribe dictation involving technical and legal terminology. Excellent, rapid typing and good shorthand are required for typing long patent applications, occasionally under pressure. Previous experience desirable. 73-819-R (8/22).

Secretary IV will perform secretarial duties to the Director of the Artificial Intelligence Lab. Take and transcribe technical dictation; type manuscripts on a typewriter and/or a computer terminal; edit with the computer manuscripts for inclusion in reports and proposals; coordinate the work of other secretaries in the section; answer routine correspondence. Accurate, proficient typing skills required. Previous experience desired. 73-808-R (8/22).

Secretary IV to the Mechanical Engineering professors will set up and maintain files; arrange meetings and schedule appointments; type from handwritten drafts and machine dicta-

tion; prepare lecture notes and assignments. Previous office experience, good skills, (preferably technical typing) required. Ability to organize and recognize priorities important. 73-806-R (8/22).

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 III-IV (Center for Space Research) to the Head of the Laboratory and four staff members will type correspondence and reports (technical and non-technical); make travel arrangements; maintain project and personnel files; handle other general office duties. Secretarial school training and/or experience desired. Technical typing skill helpful. 73-765-R (8/15).

Secretary III-IV to the Administrative Officer of Metallurgy and Materials Science will type correspondence and reports; schedule appointments; maintain personnel files and process paperwork relating to appointments and terminations. Will also act as backup to the Accounting Assistant. Good typing; ability to establish priorities important. MIT experience helpful. 73-771-A (8/15).

Secretary III-IV to a group of faculty and instructors in Mathematics will handle general duties of making travel arrangements, typing correspondence, filing. Good typing skills are important since the bulk of the workload is typing mathematical manuscripts, quizzes, exams, notes. Willingness to learn technical typing desired. 73-783-R (8/15).

Secretary III-IV in Physical Plant will perform secretarial duties for the Support Services Group and coordinate the work for one other clerical employee. Type correspondence and reports, answer phone and handle general inquiries. Excellent typing skills required, speedwriting or shorthand desirable; ability to work independently important. 73-804-R (8/22).

Secretary III-IV (Part-time) in the Electrical Engineering Department will assist in typing reports, correspondence; make appointments and travel arrangements. Good typing skills important; shorthand or experience with dictating equipment helpful; previous MIT experience preferred. 20-25 hour work week; 9-1 preferred but hours can be flexible. 73-792-R (8/22).

Secretary III-IV opening 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/Sr. Clerk IV in the Medical Department will be responsible for the secretarial and clerical duties for the X-ray and ECG unit. Maintain files; process X-ray reports; transcribe reports; compile statistics; schedule hospital appointments. Work closely with the ECG technician. One part-time typist will provide clerical assistance. Excellent typing and transcription skills. Ability to work with a volume of details. Maturity important in contact with patients and staff, and in coordinating the work of others. 37½ hour work week (8:30-5:00). 73-732-R (8/8).

Secretary IV in the Division for Study and Research in Education will work for the Executive Officer of this new research group. Type proposals, reports, budgets; establish and maintain office procedures for all administrative

functions; arrange schedules and travel. Good typing and shorthand skills a must; organizational ability, initiative, tact important in assisting with the beginning of the headquarters operation. 73-753-A (8/8).

Secretary IV to two professors in Mechanical Engineering will compose some letters; keep records on research accounts; type papers, proposals, and correspondence; assist with other functions of the office, including activities of registration. Ability to understand academic routines and procedures and to deal effectively with students important. Excellent typing, preferably technical experience; skills in English grammar and composition important. 73-733-R (8/8).

Secretary IV to a group of instructors and professors in Mathematics will type papers using technical typing skills; handle general office functions; assist with department duties and help out at peak times. Ability to communicate with faculty and students important. Excellent typing skills and/or technical typing experience required. 73-741-R (8/8).

Secretary IV in Mathematics will handle general secretarial duties for a group of professors and instructors. Type mathematical papers, oversee the department Reading Room, make travel arrangements, maintain files and records. Shorthand, experience or the ability to learn technical typing required. Organizational ability will be important for working for several busy people. 73-742-R (8/8).

Secretary IV in the Humanities Department will work for the head of the Literature Section. Type manuscripts and other material, transcribe notes for correspondence, act as liaison between members of the section, coordinate other assignments. Previous secretarial experience and training, excellent skills of shorthand and transcription required. Ability to work with students, faculty and staff important, as well as a strong sense of responsibilities and priorities. 73-746-R (8/8).

Secretary III-IV to two professors and one staff member in the Sloan School of Management. Prepare materials for courses in the management science/marketing field. Type manuscripts (some technical typing), exams, reports; handle all duties in one-secretary office. Excellent typing, shorthand or speedwriting. Ability to work with details important. 73-735-R (8/8).

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 (Part-time) - to a Professor in the Sloan School of Management will type papers (some technical), memos, correspondence; handle other general secretarial duties. Good typing skills with some experience in technical typing desired. 20 hour work week; afternoons preferred. 73-777-R (8/15).

Secretary III to two professors and junior staff in Organization Studies Group of Sloan School of Management. Type correspondence, proposals, research, questionnaires; distribute and receive questionnaires; coordinate coding and keypunching of data. Maintain files on courses, assist with student registration. Good typing, shorthand or speedwriting required. Ability to organize and work with details important. 73-748-R (8/8).

Secretary III to the Vice President for Administration and Personnel and to the Administrative Assistant in that office will handle heavy load of typing, transcribe from dictating equipment, maintain active calendar, serve as office receptionist, maintain files and answer phones. Good language skills, ability to take accurate messages are essential. Knowledge of Institute policy and resources is desirable to provide assistance to a large number of callers and visitors. Will use IBM Executive typewriter. 73-737-A (8/8).

Secretary III in Physical Plant will handle general secretarial duties for the Building Operations group. Type correspondence; answer phones; maintain petty cash; answer general inquiries concerning maintenance and operation problems. Excellent typing skills and ability to communicate with people important. 73-768-R (8/15).

Secretary III to two Professors and the Soils Division Head in Civil Engineering. Duties will include typing, answering phones, filing. Ability to coordinate duties and recognize priorities important; strong typing skills a must. 73-789-R (8/15).

Secretary III at Project MAC will handle reception duties for department headquarters; answer phones, receive visitors. Excellent skills required for typing headquarter's correspondence and dictaphone transcription. Previous office training and secretarial experience preferred. 73-810-R (8/22).

Secretary III in the Medical department will work at the MIT Infirmary and perform secretarial/receptionist duties for the Pediatric Clinic. Answer phone, schedule appointments, maintain records, process patient bills, perform typing for the clinic. Excellent typing skills and telephone manner required. Ability to relate to patients, particularly young children important. 37½ hour work week. 8:30-5pm. 73-820-R (8/22).

Secretary III in Dining Service will prepare cash banks; make daily sales reports and deposits; maintain sales ledger; answer phones; type correspondence. Accurate typing and light bookkeeping skills required. Ability to deal with a variety of customers important. 73-817-R (8/22).

Secretary/Library Assistant III in the Institute Archives will perform general office work and library processing; assist in arranging historical record material; assist students, researchers, and offices at the Institute. Accurate typing essential. Interest in history and the archive process; strong reading and writing skills; mature judgment required. Previous experience in the Institute's operations desired. 73-807-R (8/22).

Secretary III in Urban Systems Lab will be receptionist and general secretary for the Headquarters Office. Will type general correspondence, file, reconcile accounts, handle purchasing, payrolls, travel arrangements, and maintain a small library. MIT experience preferred; good typing; able to organize priorities. 73-665-R (8/22).

Secretary III to four faculty members in Economics will type class material and research papers, arrange travel, maintain files and handle other general office duties. Good typing skills; knowledge of grammar and spelling would be helpful. Ability to work for several people with frequent interruptions from students and telephones important. 73-774-R.

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 in the Industrial Liaison Office will take and transcribe dictation, handle travel arrangements, perform 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 (5/16).

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-R (6/27).

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 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 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 duties 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, acknowledgment 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 1 opening. 73-671-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).

Section Head V will supervise the publications section of an administrative office. Individual will be responsible for preparation of periodic publications listings; distribution of MIT reports outside of the Institute; contacts with MIT departments and laboratories, budget management, and development of effective systems for record keeping and activity statistics. Good organizational and supervisory skills and a careful attention to detail are required. Must be able to work independently, sometimes under pressure. 73-797-R (8/15).

Senior Clerk III or IV in Earth and Planetary Sciences will share the workload of four professors with another secretary. Will perform the clerical duties of filing, travel arrangements, phones; handle purchasing and invoicing procedures on twenty research contracts. Ability to do some typing; willingness to perform clerical and administrative chores is important. 73-767-R (8/15).

Senior Clerk IV will work in the Business Office of the Medical Department. Prepare, process and distribute all clerical and accounting projects for the office. Maintain payroll, vacation, sick leave records; process clinic, Infirmary, office supply orders. Previous business office experience (preferably with payroll and accounting procedures) required. Ability to handle a variety of assignments, and to work with detail important. Typing skills will be needed. 73-721-R (8/1).

Senior Clerk/Keypunch Operator III in the Records Section of the Personnel Office will keypunch data for the Personnel file; analyze and interpret data conditions of the file to determine necessary input requirements and resolve data problems; perform other clerical tasks required on the job. Minimum of three years keypunching experience, preferably combined with clerical duties; ability to cope with detail and analyze as well as understand data conditions; ability to design program control cards is desirable. 73-786-R (8/15).

Technical Typist III in the Research Lab of Electronics will type manuscripts and reports from rough data. Responsible for punctuation and paragraphing, may involve some editing for preparation for publishing. Excellent skills, minimum of one years experience. 73-397-R (7/27).

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 maintenance of programmer reference library. Good typing skills, experience in a data processing environment desirable. 73-684-R (7/25).

Senior Clerk III in the Research Laboratory of Electronics will handle distribution of scientific literature; maintain logs, files, subscriptions; fill requests for publications; type biweekly list of new acquisitions. Will also assist with library cataloging of reports, books and theses; order office and library supplies. Previous clerical experience ability to type and handle details required. 73-751-R (8/8).

Senior Clerk III in the Accounts Payable Section of the Comptroller's Accounting Office will be liaison between Accounts Payable and Control Section. Batch processed invoices, accumulate cash totals and dollar volume totals, perform other duties in the Section. Minimum 2-years experience in Accounts Receivable or Accounts Payable preferred. Ability to operate a 10 key adding machine desirable. 73-761-R (8/8).

Clerk-Typist II in the Admissions Office will perform general clerical duties; answer busy phones; open, sort, deliver over 150,000 pieces of mail yearly. Accurate typing skills, ability to work in a busy office with a variety of details is important. 73-745-R (8/8).

Clerk II in the Financial Aid Office will act as office receptionist, answer telephones, handle routine clerical duties. Maturity, ability to handle

responsibilities important. 73-734-R (8/8).

Clerk-Typist/Receptionist II will be receptionist for Urban Studies and Planning Department. Receive visitors; supply information regarding class schedules and locations of faculty and staff members; answer call director, screen phone calls; assist with typing; maintain address file of departmental personnel. Typing skills; good judgment; desire to work with a variety of people important. 73-782-R (8/15).

Clerk II (Part-time) in Preprofessional Advising and Education will assist in mailing premedical letters of recommendation to medical schools; maintain files; answer questions from students and faculty. Accurate typing skills needed; ability to work independently important. A 14-hour work week. 73-794-R (8/15).

Technical Assistant V in Nutrition and Food Science will order, house, weigh, feed and water rats. Mix diets, order components; autopsy animals; collect and weigh tissues; prepare tissues for chemical assays; wash lab glassware, including acid-washing. These responsibilities require a person with some sense of a career commitment. Individual must understand the care of research animals, and have experience in conducting experiments involving animals. 73-811-R (8/22).

Senior Library Assistant IV-V will maintain a library of systems documentation and technical information for the Office of Administrative Information Systems. Circulate professional publications; type write-ups developed by technical support group. Knowledge of basic dataprocessing concepts and terminology; good typing and clerical skills with emphasis in filing and library techniques required. 73-714-A (8/1).

Senior Library Assistant IV in the Barker Engineering Library will maintain the flow of current periodical material into the journal and reference collection; check material; process claims, title changes, materials for binding. Individual will also work at the reference desk. Previous library experience and/or graduate school training preferred. Knowledge of foreign languages is valuable in working with foreign journal titles. Ability to organize and communicate with the Staff and users important. 73-793-R (8/15).

Library General Assistant III in the Barker Engineering Library will assist with the process of the removal of items from the collection; pull catalog cards; type transferral forms; process all new engineering theses. Basic typing and filing skills are necessary; enthusiasm and willingness to learn library technical skills essential. 73-790-R (8/15).

Library General Assistant III in the Science Library will perform circulation desk routines; interpret loan procedures for borrowers; handle overdue procedures; handle renewals, charges, reserves. Will also sort and stack materials; keep statistics; assist with searches. Good clerical aptitude; accurate typing; ability to work without direct supervision required. Individual will work evening hours, M-Fri. 73-755-R (8/8).

Library General Assistant III in the Acquisitions Department will receive all Barker Engineering Library orders; process material; approve invoices; maintain records; act as liaison for the Engineering Library in solving problems and processing rush cataloging requests. Experience and accuracy in typing, acquisitions experience required. Ability to work with details important. 73-818-R (8/22).

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 (3/28).

Dietary Aid in the Clinical Research Center will prepare meals for all in-patients. Weigh formulas and other additives given to out-patients on dietary studies. Check to see that items are labelled and ready for patients. 73-775-R (8/15).

Nurse Aide III in the Out-Patient Clinic at the Medical Department will maintain adequate supplies, assist nurses in patient care; transport patients by stretcher or wheelchair; clean, sterilize equipment and instruments; prepare prepackaged medicine envelopes. Maturity important in dealing effectively with patients and staff. 37½ hour work week; 8:30-5pm. 73-809-R (8/22).

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 applicants should fill out an application at the Personnel Office and leave it for consideration. (8/1).

Training Officer Is Named

The MIT Campus Patrol has become the first university police force in Massachusetts to have a full-time training officer.

He is Fred A. Cammon of Winchester who retired last July after 32 years with the Somerville Police Department, the last 10 of



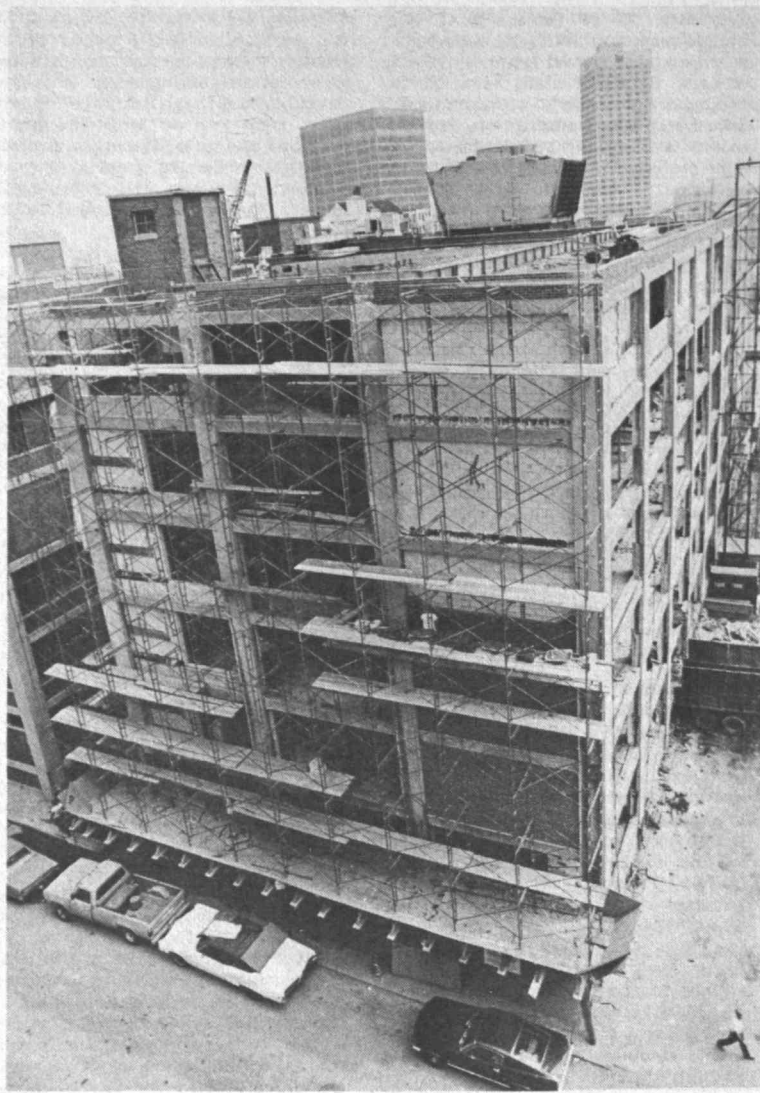
Fred A. Cammon

which he was captain in charge of the Somerville Police Academy. He will hold the rank of lieutenant on the MIT Patrol.

Lt. Cammon will supervise enrollment of new MIT patrol officers in existing academies in Massachusetts and will conduct in-service training for them and for veteran officers to keep them abreast of recent court decisions and in preparation of court appearances.

Lt. Cammon is well-known to most MIT officers, many of whom are graduates of the Somerville academy.

"The MIT force is well-trained, service oriented and involved with the community it serves," Lt.



Construction progresses at MIT Center for Cancer Research on Ames St.

WATS Service Will End Aug. 31

Wide Area Telephone Service (WATS), available at the Institute since May 29, will be discontinued Aug. 31, according to Morton Berlan, MIT communications officer.

Mr. Berlan said the three-month Cammon said, "Our training programs will be aimed at helping the officers maintain their present high standards."

A native of Somerville, Lt. Cammon was graduated from Suffolk University and did graduate study in education at Boston College.

WATS experiment has shown that the service is "not economically justifiable" for the Institute and would not greatly assist MIT business.

Furthermore, Mr. Berlan said, the cost of such service has increased greatly with the lifting of the price freeze.

MIT Draws Tennis Group Praise

Longwood Cricket Club probably doesn't feel threatened as the choice site for major tennis tournaments in the Boston area.

But MIT has come through its first experience with tournament tennis with high grades from the sponsors of last week's American Tennis Association 1973 National Championships.

The week-long tournament ended Saturday, with final matches televised by WGBH-TV (Channel 2). MIT Vice President Constantine B. Simonides assisted ATA officials in presenting awards.

James A. Smith of Mattapan, chairman of the host organization, Sportsmen's Tennis Club of Boston, praised the arrangements.

"We thought the MIT accommodations were super and the staff was super too," he said. "And we think the maintenance people especially did a fantastic job when you consider the pounding the courts took."

The American ATA was founded in 1916 to give blacks access to organized, competitive tennis. It has since been integrated, but remains predominantly black.

Nearly 400 persons, including many families, gathered for the 57th annual tournament last week—most as players in events for age groups ranging from children to seniors.

Players—from 8 to 70—came from across the nation, with heavy concentrations from Detroit, Chicago, New York City, New Jersey, Philadelphia, Washington and Boston. About half were housed in Baker, Burton and MacGregor Houses.

This was the second summer the tournament had been held in Boston.

Last year, participants stayed at

Part of Mudd Unit Ready in December

The new MIT Center for Cancer Research, under construction on Ames St., since mid-April, is expected to be ready for partial use by early December, just one year after the project was launched.

"Present projections are to have the fifth floor ready for

use and occupancy by December and the remainder of the Center done by early spring," Paul F. Barrett, superintendent for engineering and construction in the Institute's Physical Plant Department, said.

Plans for establishment of the Center, to be headed by Dr. Salvador E. Luria, MIT's Nobel Prize winning biologist, were announced last December 4.

MIT, which in recent years has become a leading site for research in molecular biology, received a \$3,150,000 grant from the National Cancer Institute and a \$1,775,000 grant from the Seeley G. Mudd Fund for construction of the Center.

Among the noted scientists from throughout the world who will head research groups within the Center are Dr. David Baltimore, American Cancer Society Professor of Microbiology at MIT, and Dr. Herman N. Eisen, professor of immunology.

Both Dr. Baltimore and Dr. Eisen will have their laboratories on the fifth floor of the six-story building, a major reason for concentrating construction efforts at that level.

The building will be named the Seeley G. Mudd Building in memory of the late Dr. Seeley G. Mudd, the physician, educator and philanthropist who died in 1968. During his lifetime Dr. Mudd con-

tributed more than \$10 million to colleges and universities, and under the terms of his will, established the Seeley G. Mudd Fund for the benefaction of higher education.

When fully staffed, the Center will have 12 researchers of faculty rank, some 60 professional staff members and technical assistants and a total work force of some 150 persons.

Dr. Luria—currently visiting the Imperial Cancer Research Fund Laboratories in England—is continuing to recruit faculty members for the Center, according to Paul H. Quinn, a research coordinator in the Institute's Office of Sponsored Programs, who directs the Center's administrative affairs.

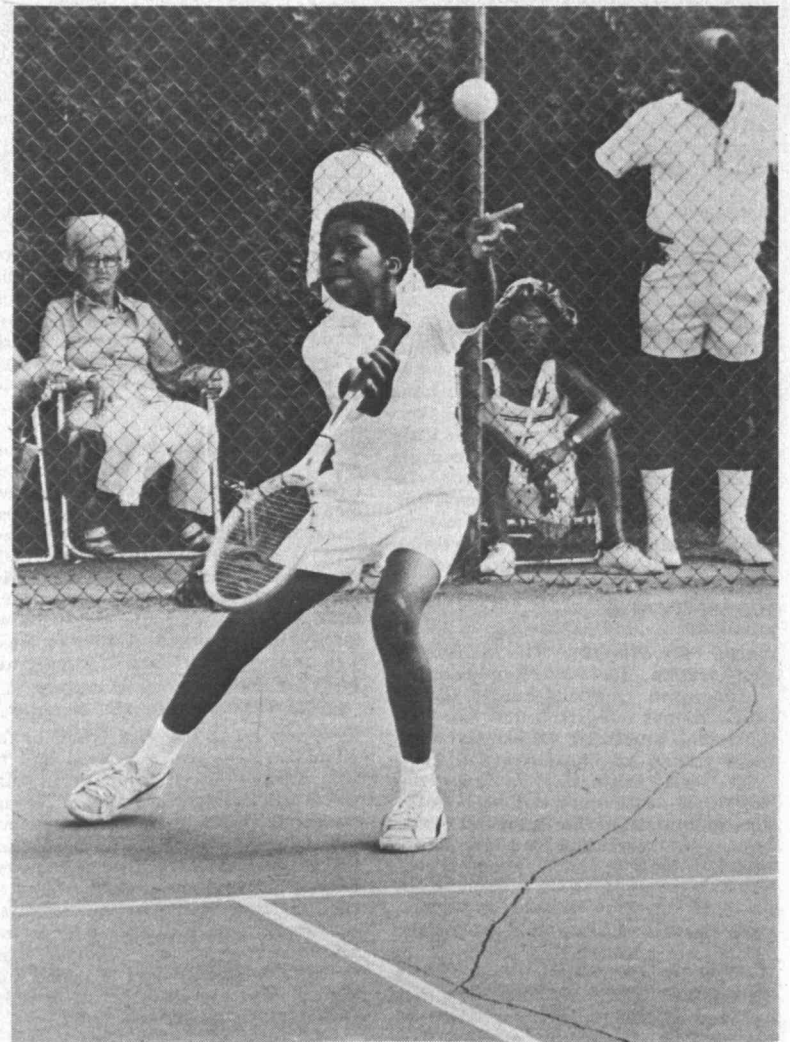
Library Offers Women Material

A collection of material on women's studies—gathered by Mary Potter Rowe, MIT special assistant for women and work, and coordinated by David Ferriero of the Humanities Library—is now available in the Humanities Library. Included are articles on education, socialization, sex-role characteristics and differences, employment, mental and physical health and the women's liberation movement.



A "granddaddy" tomato—John J. Callahan of Billerica, a shipping room clerk, proudly holds his prize Delicious tomato which he grew at home this season. It weighs almost two pounds. Mr. Callahan has had a backyard garden for 30 years. He raises his tomatoes from seeds and keeps vines pruned low.

—Photo by Susan Pogany



MARC JONES of New York City plays boys' division match in ATA —Photo by Susan Pogany

Boston College, but used courts elsewhere, including MIT.

Nor could the 11 MIT West Campus courts—six clay and five hard-top—handle all the players last week. Many women's events were held at Longwood, and other matches were at Harvard.

The tournament moves to Washington, D.C., next summer. "We move around to create interest in

various parts of the country," Smith explained.

When the week was done, Arthur Carrington of Elizabeth, N.J., had defeated Doug Sykes of San Francisco 6-2, 6-4, 6-1 for the Men's Singles title.

And Sykes lost more than the title. He dropped 17 pounds as well.