Massachusetts Institute of Technology

TECH TALK

June 12, 1974
Volume 18
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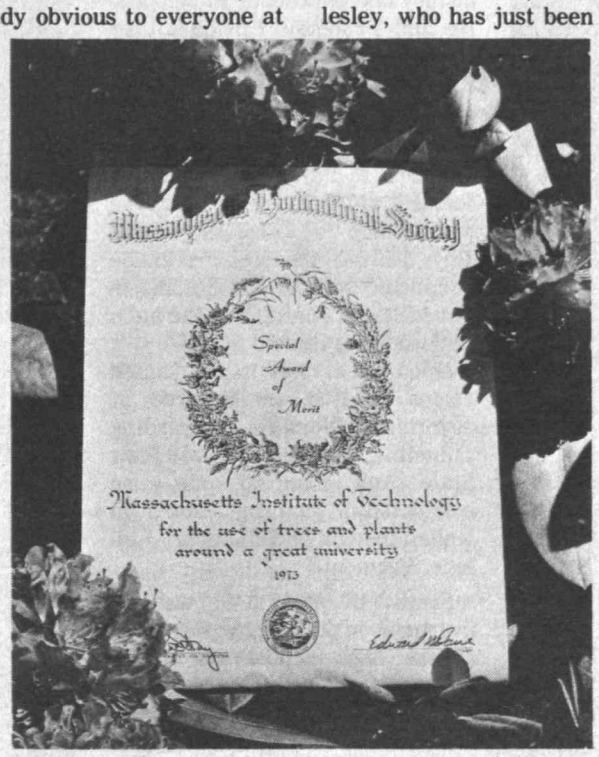
Special Horticultural Award

MIT: A Green Garden Amid City Bricks

Statement: MIT is a great university in the midst of all the asphalt, bricks and concrete of an urban habitat.

Statement: MIT is a great, green garden.

One description would seem to belie the other, but if the second isn't already obvious to everyone at the Institute this spring, the Massachusetts Horticultural Society has come along to affirm it.



The society, probably the most prestigious among American horticultural organizations, recently presented a Special Award of Merit to MIT, citing the Institute "for the use of trees and plants around a great university."

The citation constitutes a singular honor for MIT in that it is the first entire university campus to receive a merit award. A previous recipient was the suburban experiment station of the University of Massachusetts in Waltham.

The award was made by the society's board of trustees, on the recommendation of its committee on gardens, and was presented May 30 (at the Taylor Greenhouse at The Vale, in Waltham) in conjunction with the organization's nine-day spring garden and flower show.

MIT was represented at the ceremony by Philip A. Stoddard, vice president for operations, and MIT planning director O. Robert Simha, who received an award certificate embellished with a graphic floral wreath that had been hand-colored by Mrs. G. Kennard Wakefield, of Milton, former chairwoman of the society's committee on gardens.

Selection of MIT for one of the five 1973 awards was made by the committee on gardens after a visit to the Institute last September. Committee chairwoman is Mrs. John C. Storey, of Milton. Other committee members at the time were Edward N. Dane, of Pride's Crossing, secretary and vice president of the society; Henry S. Francis, Jr. of Chestnut Hill; Willard P. Hunnewell, of Wellesley, who has just been elected president of the society; Mrs. Charles G. Rice, of W. Gloucester, and Mrs. Samuel H. Wolcott, Jr., of Milton.

The Massachusetts Horticultural Society, founded in 1829, publishes *Horticulture*, a magazine with a circulation of more than 150,000, and its library of 33,000 volumes is considered the greatest existing horticultural collection.

Asked about the award, Laurence Pickard, manager of grounds in physical plant, said: "It's an Institute award. There's a lot of people who deserve a pat on the back"—including, he said, architects of Institute buildings, the Planning Office, the Committee on the Visual Arts, members of the administration from the president on down, and also the gardeners who planted the elms and rhododenrons in Killian Court some 50 years ago.

The only equitable way to put it, he said, is to say "Hooray for everybody!"

Mr. Pickard said "we're very proud" with respect to the important role of his group in the daily maintenance of plantings—"You just can't put them there and leave them"—and in their task, as he sees it, "to upgrade the face of MIT with existing plant material."

Besides horticultural problems, the grounds crew is kept busy devising means to combat the continuing pestilence of thefts of newly planted flowers and shrubs.

Leonard Bernstein Appointed To Institute Lectureship

Appointment of Leonard Bernstein—American born and trained conductor, composer, performer and teacher—as Institute lecturer at MIT has been announced by Walter A. Rosenblith, Provost.

A special faculty seminar is being set up at MIT to advance the study of musical structure in relation to aesthetics and linguistics, a subject explored by Mr. Bernstein last year in his lecture series as Charles Eliot Norton Professor of Poetry at Harvard University.

Mr. Bernstein said, "I feel profoundly honored to be associated with MIT, which manifests such a vital interest in fields outside of pure science and engineering. I hope to be able to participate in a very stimulating session in Cambridge next year."

"Having Mr. Bernstein at MIT is a special pleasure," said MIT President Jerome B. Wiesner. "He is a rare combination of great artist and eloquent teacher, and sharing his gifts is rewarding to all of us. He will have a warm welcome here."

Irving Singer, MIT professor of philosophy, said, "This seminar is, we hope, just the beginning of the exploration of topics that relate to the problem of innateness in science and philosophy. We anticipate the appointment of post-doctoral Fellows for interdisciplinary studies in these areas, and eventually we hope to generate courses in relation to this whole project. Leonard Bernstein provided the right impetus at the right moment."

According to Professor Singer, the MIT seminar on music, linguistics and aesthetics will begin in the fall of 1974. It will benefit from the occasional participation of several professors at MIT and in the Boston area, including:

Noam A. Chomsky, Ferrari P. Ward Professor of Modern Languages and Linguistics, MIT; Morris Halle, professor of modern languages, MIT; Arthur V. Berger, Irving G. Fine Professor of Music, Brandeis; Stanley L. Cavell, Walter M. Cabot Professor of Aesthetics and the General Theory of Value, Harvard; Jerry A. Fodor, professor of philosophy and psycholinguistics, MIT; Richard M. Held, professor of experimental psychology, MIT; Jerome Kagan, professor of developmental psychology, Harvard; Gerald Stechler, professor of psychiatry, Boston University Medical School; Dr. Arnold Modell, Harvard Medical School, Boston Psychoanalytic Institute.

Leonard Bernstein

Regular participants in the seminar are expected to be David M. Epstein, professor of music, MIT, and conductor of the MIT Symphony Orchestra; Irving Singer, professor of philosophy, MIT; S.J. Keyser, professor of linguistics, University of Massachusetts at Amherst; Ray S. Jackendoff, associate professor of linguistics, Brandeis; Jeanne S. Bamberger, associate professor of music and education, MIT; George S. Boolos, associate professor of philosophy, MIT; Alfred W. Lerdahl, assistant professor of music, Harvard.

Experts Cite US Manufacturing Lag

By CHARLES H. BALL
Staff Writer

Automated manufacturing methods using computers have the potential for bringing about a second industrial revolution—with higher productivity, lower costs and greater leisure time for workers—but the process is having a slow start in the United States.

That is the conclusion of a group of international experts who gathered at MIT for a three-day conference on Computer Managed Manufacturing (CMM) sponsored by the Institute's Center for Policy Alternatives. CMM is a new technology that puts the computer in direct control of the processes that manufacture products as diverse as watches, tractors, surgical equipment, machine tools, appliances and toys.

The conference participants found that other industrialized nations have taken the lead in the development of a number of the new computerized manufacturing techniques, largely because these governments provide significant financial support and have policies that encourage cooperation between government, industry and universities.

The long-term effects, if the situation continues, could be to put the United States at a serious competitive disadvantage in the world market place, they said.

The participants in the conference—specialists in manufacturing, manufacturing technology and computers—came from the United States, West Germany, Norway, Japan and Poland. On the final day of the meeting, their findings and recommendations

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'Explo' to Open in Sala

A festival "Explo: A Celebration of the Arts," organized by the Massachusetts Division of Drug Rehabilitation, will take place at MIT, June 14-16—bringing together for the first time a spectrum of talented young people and adults from all over the state who work or participate in over 130 drug-related community health programs.

The festival which will be open to the public free of charge, will present an exhibition of paintings, sculptures, drawings, various crafts, as well as poetry in the Sala de Puerto Rico. This display will remain on view all weekend. Other festival highlights will be an evening of two one-act plays by playwrights Edward Albee and Bertolt Brecht on Friday and a dance program and music concert on Saturday and Sunday afternoon.

The Division of Drug Rehabilitation which is jointly sponsoring the weekend with the Massachu-

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Giorgio de Santillana Dies

Memorial services for retired MIT Professor Giorgio Diaz de Santillana will be held at noon Friday (June 14) at St. John's Episcopal Church in Beverly Farms.

Dr. de Santillana, who lived on Prince St. in Curtis Point, Beverly, died Saturday at Jackson Memorial Hospital in Miami at the age of 72. He became ill in Miami while traveling to Beverly from Haiti, where he had spent the winter.

He retired on June 30, 1967, as professor of the History and Philosophy of Science in the Department of Humanities. He then served as a part-time senior lecturer until Dec. 31, 1971.

He had joined the MIT staff in 1941 as instructor in the Department of English and History (now the Department of Humanities). He became assistant professor of the History of Science in 1942, associate professor of the History and Philosophy of Science in 1948

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Tennis Gains Two Courts

The Department of Athletics announces the opening of two new tennis courts located along Memorial Drive adjacent to the Tang Residence for Graduate Students.

The Tang Courts are available to the entire MIT Community. Reservations may be made in person in the Tang lobby.

The addition to the Institute's tennis facilities is a part of the original gift of J.B. (Jap) Carr, Class of 1916, and Mrs. Carr to provide indoor tennis for the MIT Community.

The Carr Indoor Tennis Center was constructed on the site of four existing courts on Briggs Field in October 1971.

MIT Women Win Bowling Meet

The atmosphere surrounding Frances Fisher's trophy-laden desk in the Admissions Office is not altogether different from the excitement that greeted her in Newport, R.I., May 31.

She defeated bowlers from eight states and Canada that day to win the East Coast regional and Hi Game Trophies for the Prince Hall affiliation of the Masonic Temple, Boston, Mass.

Her winning partner for the team trophy was Marguerite Pinkston, senior clerk in Student Accounts and second vice president of the Cambridge Business and Professional Women's Association. Mrs. Pinkston has won over

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Arts Festival to Flower at MIT

(Continued from page 1)

setts Association for Self-Help, Inc. was created four years ago. The Division funds a variety of community based programs including drop-in centers, hotline and referral centers, counseling and crisis intervention programs, alternative schools, day care, therapeutic communities and methadone treatment programs.

Explaining the title of the festival, "Explo," India Thompson, Explo's coordinator and MIT summer employment coordinator in Personnel says, "the individuals participating in this festival have undergone a process of exploration—of themselves, their problems and their environment and with their new knowledge of themselves and their world, have found a need to express new feelings and thoughts."

" 'Explo' means even more. Society tends to dismiss addicts and ex-addicts as non-persons. This is a myth. The people in our programs have the same potential for creativity as others...maybe more because of the changes they've been through. 'Explo' will change peoples' perspectives," she adds.

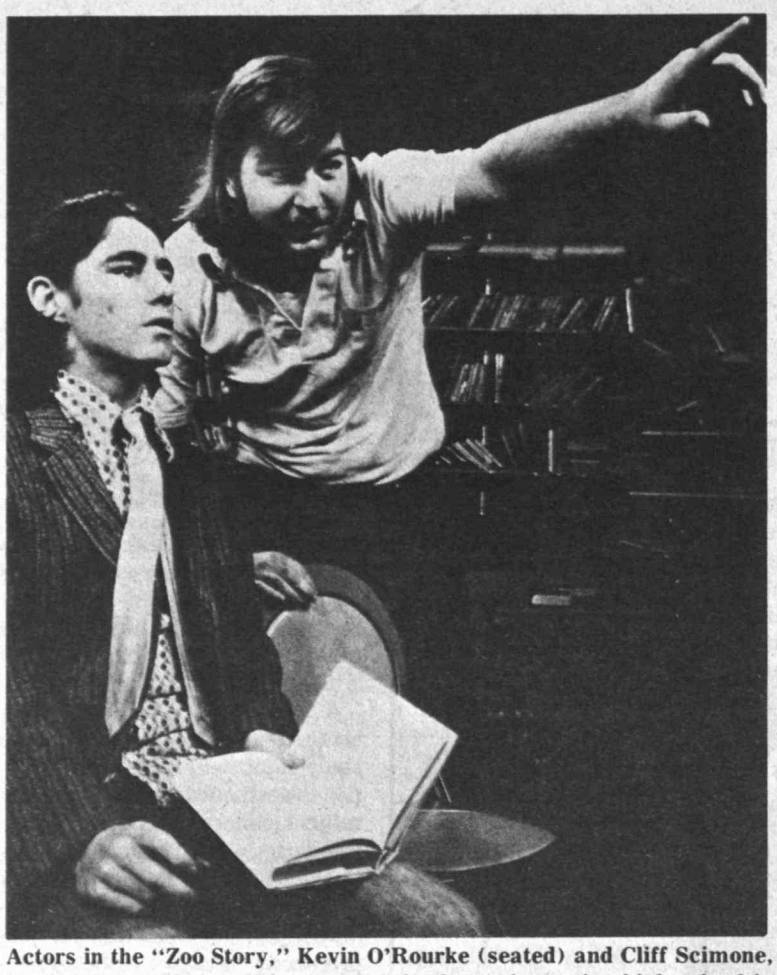
The public is invited to a special reception marking the festival's opening, 5-7pm, Friday, June 14, in the Sala.

Some of the participants in the exhibition will include artists and writers from the Third Nail in Roxbury, Meridian House in East Boston and Spectrum House in Shirley, Mass.—all of which are therapeutic communities. A special "sculptured space" in a section of the Sala will be created by members of Identity, a community alternative school in Concord, Mass. The exhibition will be accompanied by pottery and dance workshops.

The "Explo" exhibition hours are: Friday, June 14, 5pm to 10pm; Saturday, June 15, 10am to 10pm and Sunday, June 16, 10am to 5pm.

Following the reception there will be an evening of two one-act plays and skits which will begin at 8pm in Kresge Auditorium.

Edward Albee's "The Zoo Story" will be performed by two members of the Group School in Cambridge, an alternative community high school. Thirteen members of Hillside Outreach, a drop-in center which serves the Mission and Parker Hill sections of Jamaica Plain will present Bertolt Brecht's "He Drives Out a Devil."



Actors in the "Zoo Story," Kevin O'Rourke (seated) and Cliff Scimone, both of Cambridge and the Group School, an alternative high school in Cambridge, rehearsing a scene from the one-act play by Edward Albee. The play is one of two one-act plays being performed Friday evening, June 14 as part of "Explo."

On Saturday, June 15 at noon in Kresge Little Theatre there will be a program of ethnic and folk dances. Umoja, a group of drummers and dancers from the HELP Program of Boston will perform African dances. In addition to folk dances, a group from Spectrum House in Shirley, Mass. will perform a suite of modern dances.

The weekend will close with a concert featuring a series of folk, jazz and rock bands at 2pm, Sunday, June 16 in the Little Theatre. Two of the groups participating in the concert will be from Turning Point, a community counseling service program in South Boston and Meridian House in East Boston.

"Explo" is sponsored at MIT by the MIT Student Art Association.

Honoraries Given To 7 from MIT

MIT President Jerome B. Wiesner and six members of the faculty are among recipients of honorary degrees this year.

President Wiesner received his degree from Notre Dame University, which also presented an honorary degree to Professor Jay W. Forrester.

Other recipients are:

Franco Modigliani, professor of management and Institute Professor, from the Catholic University of Louvain, Louvain, Belgium;

Paul A. Samuelson, professor of economics, Institute Professor and Nobel Prize winner, from Gustavus Adolphus College, Saint Peter, Minn.

Cyril S. Smith, Institute Professor emeritus, from the University of Pennsylvania;

Victor F. Weisskopf, professor of physics and Institute Professor, from the University of Rochester.

Nevin S. Scrimshaw, from the University of Rochester School of Medicine.

Five Appointed to Faculty

One associate professor and five assistant professors were recently named to the MIT faculty by the Executive Committee of the MIT Corporation,

P. Narayan Nayak of India, formerly assistant professor of mechanical engineering from 1966-1969 will return to MIT as associate professor in mechanical engineering for three years effective July 1. Dr. Nayak was a graduate of Bombay University in 1961 and received the SM in 1962, the ME in 1966 and PhD in 1967, all from MIT. He has been chief of technical services in the research and development department at Tata Chemicals Ltd. in India since leaving MIT in 1969.

Also joining the Department of Mechanical Engineering will be James D. Felski who was named assistant professor for three years beginning July 1. A graduate of the University of Michigan in 1971, Dr. Felski received the SM degree in mechanical engineering from the University of California at Berkeley in 1972 and PhD there this year.

Peter Pin-Shan Chen and James M. Lyneis have been named assistant professors at the Sloan School of Management for three years, effective July 1.

Dr. Chen graduated from the National Taiwan University in 1968 and received the SM and PhD degrees in computer science from Harvard University in 1970 and 1973 respectively. Dr. Chen comes to MIT from Honeywell, Inc. in Waltham where he was the principal engineer in a computer development project.

James M. Lyneis graduated from MIT in 1971 with two undergraduate degrees in electrical engineering and management. Mr. Lyneis expects to receive a PhD in business administration from the University of Michigan this summer.

James M. Becker will become assistant professor in the Department of Civil Engineering for three years beginning September 1. Dr. Becker received the SM degree in 1967 in civil engineering at Cornell University, where he had also been an undergraduate. He received a PhD from the University of California at Berkeley in 1973. He is now a lecturer and assistant research engineer at the University of California at Berkeley.

In a change of appointment, Joseph F. Vittek, Jr., lecturer in the Department of Aeronautics and Astronautics and a member of the research staff of the Office of Sponsored Programs, has been named assistant professor in the Department of Aeronautics and Astronautics for one year, effective July 1. Dr. Vittek, who has worked at OSP for the past eight years, graduated from MIT in 1962. He received the Juris Doctor degree in 1971 from Suffolk Law School and LLM degree in 1973 from the Harvard Law School.

Kleppner to Hold NATO Fellowship

Dr. Daniel Kleppner of Belmont, associate professor of physics was recently awarded a NATO Senior Fellowship in Science to study at Oxford University in England next year.

The NATO fellowship program under the National Science Foundation and the Department of State offers scientists the opportunity to study new scientific techniques and developments abroad while fostering the interchange of information among NATO nations.

Obituaries

Giorgio de Santillana

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and professor in 1954.

Professor de Santillana was born in Rome and attended the University of Rome from 1920 to 1925, receiving a doctorate in physics. He did additional graduate work in Paris, concentrating on philosophy, and from 1927 to 1929 was an instructor in the Physics Department of the University of Milan.

In 1929, he was called back to the University of Rome by Professor Federigo Enriques, who held the chair of Higher Geometry and who was in the process of organizing a School for the History of Science. As his assistant, Dr. de Santillana helped to organize the school and also conducted a course in the history and philosophy of science. He and Professor Enriques also started writing a History of Scientific Thought, giving special attention to antiquity.

In 1935, Dr. de Santillana returned to Paris for a series of lectures at the Sorbonne under the sponsorship of Professor Abel Rey. During the same year he conducted several colloquiums in Brussels and Pontigny on the main philosophical issues.

Upon his arrival in the United States in 1936, he lectured at several universities, including Columbia, Chicago, Vassar, Iowa State and Stanford. He also conducted a summer course in Italian thought at Middlebury College, Vermont.

From 1937 to 1938 he was an instructor in philosophy of science at the New School for Social Research. In September, he became a visiting lecturer at Harvard University, where he remained until his association with MIT.

For eight months in 1954 and 1955, Professor de Santillana lectured on the history of science at the University of Florence and the Institute of Architecture, Venice, under the sponsorship of the Fulbright Foundation. In 1959, he gave guest courses at London and Frankfurt Universities. He was awarded a Guggenheim Fellowship in 1957-58, a National Science Foundation Fellowship in 1958 and a Bollinger Fellowship in 1960. In 1962, he was invited to give a series of lectures in Italy.

Professor de Santillana

He was a member of the American Academy of Arts and Sciences, the History of Science Society, the Renaissance Society, the Examiner Club, l'Academie Internationale d'Histoire des Sciences and had been made Knight Commander of the Order of Merit of Italy.

He wrote several books, including *Reflections on Men and Ideas, Galileo's Dialogue on the Great World Systems, The Crime of Galileo, the Age of Adventure* and *The Origins of Scientific Thought.*

Professor de Santillana was a naturalized American citizen. He leaves his wife, Dorothy Hancock (Tilton), a former literary editor of the Boston Globe and editor at Houghton Mifflin Co.; two sons by former marriages, Ludovico of Venice, Italy, and Gerald, with the US State Department, and four grandchildren.

A. R. Kaufmann

Albert R. Kaufmann, Sr., 62, of Bremen, Maine, formerly associate professor of metallurgy, died Friday, June 7.

Dr. Kaufmann was a graduate of Lafayette College in 1933 and received the ScD at MIT in 1938.

He joined the MIT teaching staff in 1935 as an assistant in metallurgy. In 1939 he was named assistant professor of the physics of metals and in 1946 was appointed associate professor.

During the 1940's he served on research projects under the National Defense Research Committee, the Office of Scientific Research and Development and the US Army Engineers.

He resigned as associate professor in 1957, remaining at the Institute as lecturer until 1962.

He leaves his wife, Gertrude; a son Albert R. Kaufmann Jr. of Nobleboro, Me.; three daughters, Sister Ann Kaufmann of Bradford, Mass., Mrs. Nancy Strathearn of Schenectady, N.Y., and Joan Kaufmann of Denver, Col.; two brothers; five grandchildren and one great grandchild.

Services were held Monday, June 10, in Newcastle, Me.

C. H. Graham

Charles H. Graham, 50, of Dracut, who has been on a long-term disability leave from Lincoln Laboratory since March 1972, died Friday, May 3.

Mr. Graham had worked at the Lab for 20 years as an electrician He is survived by his wife, Shirley and daughter, Charlene, both of Dracut.

B. A. O'Neil

Bernard A. O'Neil, 72, of Lowell, who retired as a custodian at Lincoln Laboratory in 1966, died Tuesday, May 14.

Mr. O'Neil had worked at the Laboratory for seven years. He is survived by his wife, Therese, of Lowell.

Chem E. Award Won by Porter

Students in the Department of Chemical Engineering awarded this years's outstanding faculty member award to Professor James H. Porter, associate professor.

The award cites Professor Porter for his outstanding performance as a teacher in the department and for his research.

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CHAMPS: Marguerite Pinkston, left, and Frances Fisher.

Bowlers Win Trophies

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35 awards in her 20 years of bowling.

Mrs. Fisher's winning score for the high single trophy in candlepin bowling was 179.

The former stock clerk in Lab Supplies claims it was a new 14-lb. ball that helped her win the four-foot high championship trophy her region will hold until next year's competition. Not one to take life sitting down, Mrs. Fisher says she aims to bring back "the big one" at competitions in Atlantic City, N.J., next year.

Under the rules of competition, Mrs. Fisher's region (Syria Court No. 10, Boston) will be eligible to keep the memorial trophy if they win it again next year.

Mrs. Fisher, who is a resident of Dorchester, has worked at MIT since 1970. She completed courses in MIT's Personnel Development Program before assuming her present position as senior clerk in Admissions.

Mrs. Pinkston, who attended Boston University in business administration, started at MIT in the Cashier's Office before advancing to senior clerk in Student Accounts. She is a resident of Medford.

Donaldson Wins Humanist Grant

Professor Peter Donaldson, assistant professor in the Department of Humanities, was recently awarded a Younger Humanist Fellowship for 1974-75 from the National Endowment for the Humanities to carry on research on Machiavellianism and the patterns of political secrecy in renaissance thought and literature.

The fellowship will assist Professor Donaldson in completing one volume of a multi-volume study on renaissance politics. The Cambridge University Press will publish the first volume of the study next year.

Foreign Students Begin Paper

The establishment of a newspaper for MIT's 1400 foreign students and 400 foreign teaching staff members has been announced by Eugene R. Chamberlain, Foreign Student Advisor.

The Graduate Student Council, which represents all graduate students at MIT, and the undergraduate Financial Board have pledged support for the student-run effort.

Chris Dahlin, a Wellesley senior who has volunteered to serve as editor of the new four-page publication, says it is ironic that while MIT has one of the largest foreign student populations of any university in the United States, it has had few publications specifically for that community.

"Extere," a student-initiated newspaper for foreign students at MIT emerged in late 1969 but soon lost support in succeeding issues.

Ms. Dahlin, who will register for two humanities courses at MIT next fall, has edited Wellesley publications and contributed to political journals on a free-lance basis.

Circulation for the newspaper is estimated at 2,000. The initial production schedule calls for five issues.

Arvind Khilnani, from Karachi, Pakistan, has been a leading campus spokesman for a specific vehicle of communication for special foreign student interests. Before he graduated recently, he said he thought the newspaper would help discourage insularity among individual foreign student groups.

A coordinate project being sponsored by the Foreign Student Office is a directory of faculty and organizations involved in research in international fields. Vaqar Zakaria, a graduate student in chemical engineering from Lahort, Pakistan, said the idea for the catalogue grew out of a mechanical engineering seminar on "Foreign Student Participation in International Development."

"We hope to compile a complete list of possible field projects in underdeveloped countries for faculty as well as student interests," he said.

According to Ms. Dahlin, volunteers for an editorial board and writing staff are still needed. She may be reached through the Foreign Student Office (3-3795).

Health Research Projects Receive Funding

Nine research projects and four graduate fellowships will receive support totaling $245,000 for the 1974-75 academic year from the recently established MIT Health Sciences Fund.

Recipients of the awards, effective July 1, 1974, are:

Professor Jack W. Baldwin, Department of Chemistry—the synthesis of chemical models which will stimulate the behavior of hemoglobin.

Professor Ann M. Graybiel, Department of Psychology—a study of the microscopic anatomy of certain regions of the brain with reference to their structure and function.

Professor Charles M. Oman, Department of Aeronautics and Astronautics—a study of the semi-circular canals in fish and man with reference to their function in space orientation and equilibration.

Dr. Curberto Garza, Department of Nutrition and Food Science—minimum requirements for protein in human subjects.

Professors Jonathan King and **David Botstein**, Department of Biology—mechanisms involved in the biosynthesis of viruses within the living cell.

Professor Irving London, director of the Harvard-MIT Program in Health Sciences and Technology—regulation of hemoglobin synthesis with special reference to inhibitor proteins.

Professor Nancy Hopkins, Department of Biology and Cancer Research Center—regulatory mechanisms in RNA tumor viruses.

Professor Daniel Kemp, Department of Chemistry—synthesis of angiotensin antagonists.

Dr. Gordon H. Williams and **Dr. Norman K. Hollenberg**, Peter Bent Brigham Hospital—vascular activity and adrenal cortical responses to angiotensin antagonists. They will work in collaboration with Professor Kemp.

In addition, **Professor Irwin W. Sizer**, dean of the Graduate School, received support for four graduate students who are pursuing doctoral theses in the health sciences.

The grants were made by directors of the fund, President Jerome B. Wiesner and Dean Sizer, and two members of the Corporation, Dr. George W. Thorn and Uncas A. Whitaker.

According to Dean Sizer, the directors plan to treat these initial projects as "demonstration grants" to help them formulate policy for administration of the Health Sciences Fund in future years.

Most of the awards this year were made to young investigators, Dean Sizer said, to help them get started on their research projects. However, he said, other awards were made to mature investigators who plan to extend their interests into new fields.

Dean Sizer said provision has been made for renewal of some of the grants for up to three years if the investigators can demonstrate good progress. But the directors would prefer to terminate the grant at the end of one year if the investigator has found other support, so that money would be available for other new projects, he said.

The Health Sciences Fund also may be used, where appropriate, to support collaborative research between MIT faculty members and investigators in the Boston biomedical community.

Dean Sizer said the directors expect the Fund to develop in such a way that it will be possible to support another group of faculty research projects next year.

Three Appointed To Arts Council

Three new members have accepted appointment to the Council for the Arts at MIT.

The appointments, made by MIT President Jerome B. Wiesner, were announced by Roy Lamson, special assistant to the president for the arts at MIT. The new members are:

John Burchard, historian and architect and Dean of the MIT School of Humanities and Social Science, emeritus;

Bates Lowry, chairman of the department of art at the University of Massachusetts, Boston, and former director of the Museum of Modern Art in New York City;

Thomas Méloy, an MIT alumnus of the Class of 1917 who is president of Meloy Laboratories, Springfield, Va., and active in the work of Washington's Arena Stage.

ASSEE to Hear Five from MIT

Five members of the MIT faculty will be speakers at the 82nd annual conference of the American Society for Engineering Education to be held at Rensselaer Polytechnic Institute in Troy, N.Y., June 17-20.

They are James M. Kyed, director of the Barker Engineering Library at MIT, who will moderate a panel on "Social Responsibility and Human Values in Engineering Implications for Engineering Libraries"; Clark Colton, associate professor of chemical engineering, whose topic is "Bioengineering Courses in the Chemical Engineering Curriculum"; and Yao T. Li, professor of aeronautics and astronautics, who will speak about "Teaching Entrepreneurship."

The conference, which will deal with the question of "Resources and the Quality of Life," will also feature Albert G.H. Dietz, professor of building engineering, emeritus, and senior lecturer in the Department of Architecture. The title of his speech is "Building: A Challenge to Engineering and Architectural Education."

Gerald L. Wilson, associate professor of electrical engineering and Philip Sporn Associate Professor of Energy Processing, will be speaker for a session on the mutual benefits of faculty industrial experience. Director of MIT's Electric Power Systems Laboratory, he will discuss "Experience with American Electric Power Company."

Founded in 1893, the American Society for Engineering Education has 12,500 individual members.

US Lags in Computer-Controlled Manufacturing, MIT Panel Finds

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were presented to representatives of several agencies, including the US Office of Technological Assessment, the General Accounting Office, the Department of Defense, the National Bureau of Standards and the National Science Foundation.

The keynote speaker on the conference's last day was J. Herbert Hollomon, former assistant secretary of commerce and now director of MIT's Center for Policy Alternatives.

He said MIT had sponsored the conference "to provide a forum for the beginning of discussions around the world" on computer managed manufacturing.

Products made on computerized systems, he said, can be lower in cost, more diversified in design and delivered to customers more quickly than is possible through conventional techniques.

The integration of computers into manufacturing processes, he said, will be highly important to industrialized nations, where labor rates are high and productivity growth has slowed.

Another major factor, he said, is the increasing resistance of workers to have work as the "center and focus" of their lives.

Dr. Hollomon said a better life lies ahead for workers, on the condition that productivity continues to grow. He predicted that the average worker in the year 2000 will begin his working life between the ages of 20 and 25, work 30 hours a week, have one to two months of vacations and holidays and retire at 55—if the present rate of productivity continues.

The panelists heard that productivity is threatened by dwindling resources of all kinds—materials, energy and labor—but that computer managed manufacturing can be a major influence in counteracting these developments.

While automation often causes temporary dislocations, they were told, it also holds down costs and increases profits, thereby permitting greater growth and new jobs.

Robert T. Lund, senior research associate in the Center for Policy Alternatives and director of the conferences, told the participants that a "hierarchy of computers" can manage the whole manufacturing process. This, he said, includes design, design translation, parts manufacturing, inspection, product assembly and testing.

He added that the process was applicable "to the entire gamut of things that are manufactured," whether made of metal or some other materials.

While the potential benefits are evident, he said, industrial response in the United States has been slow. Much of the technology already exists, he said, but US machine building firms, for reasons that include lack of financial resources for research and development, have been unable to produce more than a few rudimentary systems with limited capability.

Other countries, however, appear to be responding in a much more positive manner, he said, and a few have undertaken some apparently far-reaching programs involving coordinated government, industry and university participation.

"There is reason to believe," he said, "that this is the way toward solving problems of productivity. The government should join with interested people in industry and the universities to develop a common approach that will get us out from behind the barriers that are holding back our progress."

In its formal findings, the conference identified some of these barriers as "anti-trust fears, high-risk investment, tax policies, inadequate dollars and skills, untried technology, a small and fragmented machine tool industry, limited exchange of information about computer managed manufacturing, resistance by potential users and lack of university-manufacturing cooperation.

Some of the benefits listed were "lower cost, improved quality, increased manufacturing capacity, increased equipment utilization (up to 90 percent), reduced scrap and waste, improved quality of work life, exportable high technology, fast reaction time and reduced inventory."

The group's three major recommendations were directed at the government.

It said the government should: (1) Be a "partner" in the development of computer managed manufacturing (by acting as a catalyst for developing mechanisms for cooperation and by removing barriers); (2) Sponsor a technological assessment of computer managed manufacturing "now," and (3) Stimulate university education and research in the field of manufacturing by creating academic centers of excellence.

In a final discussion, the conference participants and representatives of government agencies agreed that a primary requirement is a clear-cut government policy establishing the framework for government-industry-university cooperation.

THE INSTITUTE CALENDAR

June 12 through June 23

Reminder: As there will be no *Tech Talk* Wednesday, July 3, all calendar items for Wednesday, June 26 through Tuesday, July 9 must be submitted by Friday, June 26, at 12 noon.

Events of Special Interest

Northeastern Regional Seminar on Oil Development off the Atlantic Coast* – Participants: **Jared G. Carter,** Deputy Under Secretary of the Interior; **Thomas L. Kimball,** executive vice president, National Wildlife Federation; **Senator William M. Bulger,** chariman, Special Commission of Marine Boundaries and Resources, Commonwealth of Massachusetts; **Dr. Judith Kildow,** ocean policy; **Dr. Beatrice E. Willard,** Council on Environmental Quality; **Keith Hay,** conservation director, American Petroleum Institute; and other experts. All-day event sponsored by National Wildlife Federation and Sea Grant Program. Sat, June 22, beginning 9am, Kresge.

Seminars and Lectures

Thursday, June 13

Biological Consequences of Resistance Development in Pseudomonas Aeruginosa* – **Dr. Frank W. Adair,** CIBA-GEIGY Corporation. Nutrition & Food Science Seminar. 4pm, Rm 16-134.

Applications of De Haas-Van Alphen Effects to Solids* – **Prof. David Shoenberg,** Cambridge University, Cambridge, England. Joint Seminar-Materials Science and Engineering Center, Bitter National Magnet Laboratory. 4:15pm, 2nd fl conference rm, Magnet Lab. Coffee and tea 4pm.

Tuesday, June 18

MIT PDP 11 User Group – Sponsored by Information Processing Center. Meeting 2:30pm, Rm 13-5002. Coffee 2pm. Info, Tom Provost, x183-236 LINAC.

Women's Forum* – Meet with the Steering Committee to make plans for the fall. Mon, 12n, Great Court; bad weather, Rm 10-280.

Introduction to FORTRAN** – Information Processing Center course. June 18,20,24,26,28 10am-12n, Rm 39-530. Enrollment limited, pre-registration required. Fee: $5. Register, Lynne Penney, Rm 39-427, x3-6320. No previous knowledge of programming will be assumed.

MIT Club Notes and Meetings

Bridge Club* – ACBL Duplicate Bridge. Open pairs Thurs, 7pm, Stu Ctr Rm 473. Jeff. 864-5571.

Classical Guitar Society – Classes, group or private. Thurs, 5-9pm; Sat, 9am-12n; Rm 1-132, 134, 136. New group class for beginners every month. Vo Ta Chuoc, x9623 Dorm.

Goju Karate Club* – Beginners enter class first week of each month. Classes Mon, Wed, 7-9pm; Fri, 7-10pm; 4th fl Stu Ctr. Terry Gibbs, 440-9631.

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

MIT/DL Bridge Club** – ACBL Duplicate Bridge. Tues, 6pm, Stu Ctr Rm 473. Jeff, 864-5571.

Scuba Club*** – Summer compressor hours: Mon & Thurs, 3-5pm.

Strategic Games Society* – Offers opponents and discounts on merchandise to members plus gaming and periodical library. Sat, 1pm-1am, Walker Rm 318. Info, Kevin Slimak, x0389 Dorm.

Student Homophile League* – Meetings 1st & 3rd Sun of each month, 4pm, Rm 1-132. Next meeting Pot Luck Supper Sun, June 16. Bring food or drink, call for details. Hotline, for info, talk, help in coming out, 494-8227. Come on in, the water's fine!

Social Events

Summer 12-Hour Coffeehouse – Currently open Mon-Fri, 9am-2pm and 5pm-12m; Sat & Sun, 12n-12m. Enjoy relaxing, conversation, piano playing, games, inexpensive food & drinks. Stu Ctr 2nd fl center lge.

Movies

Umberto D – Film Society. Fri, June 14, 7:30pm & 9:30pm, Rm 6-120. Admission $1.

Diary of a Mad Housewife – LSC. Fri, June 14, 7:30pm & 9:30pm, Rm 10-250. Hot night, Rm 26-100. Admission 50 cents.

The Goldrush – LSC. Sat, June 15, 7:30pm & 10pm, Rm 10-250. Hot night, Rm 26-100. Admission 50 cents.

Acha Nak* – SANGAM. Sun, June 16, 3:30pm, Kresge. Admission 50 cents with ID. Indian refreshments available.

Music Man – LSC. Fri, June 21, 7 & 10pm, Rm 10-250. (Watch for signs on hot nights indicating showings in Rm 26-100). Admission 50 cents.

La Terra Trema – Film Society. Fri, June 21, 7pm & 9:45pm, Rm 6–120. Admission $1.

Good Neighbor Sam – LSC. Sat, June 22, 7&10pm, Rm 10-250. (Watch for signs on hot nights indicating showings in Rm 26-100). Admission 50 cents.

Farewell Again; The Black Fox* – MIT CSC. Asian films with English subtitles. Sun, June 23, 2pm, 4pm, Kresge. Admission $2, $1.50 MIT community, $1 members.

Daag* – SANGAM. Indian movie with subtitles. Sun, June 23, 3:30pm, Rm 26-100. Admission 50 cents with ID. Indian refreshments available.

Dance

Folk Dance Club* – **International,** Sun, 7:30-11pm, Sala. **Balkan,** Tues, 7:30-11pm, Stu Ctr Rm 491. **Israeli,** Thurs, 7:30-11pm, Sala. **Afternoon Dance Break,** Fri, 12:30-1:30pm, Kresge Oval.

Exhibitions

Music Library Exhibit – Chinese musical instruments.

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

Athletics

Community Softball League Schedule – Games start at 5:30pm, Briggs Field, at the field number indicated after the team names. **Wed, June 12** – EE vs Dodgers, 5; Turkeys vs Miscellaneii, 7. **Thurs, June 13** – Ashdown vs Baker, 4; Comets vs Fantoms, 5; LCA vs OR Center, 6. **Mon, June 17** – Nutrition vs Fantoms, 4; Metallurgy vs SAE, 5 EE vs Comets, 6; Hydros vs Food & Nuts, 7. **Tues, June 18** – Chemistry vs Economics, 4; Turkeys vs Charlie Browns, 5; Ashdown vs Ocean Engg,6. **Wed, June 19** – Draper vs Dodgers. 5; Motleys vs MacGregor, 7. **Thurs, June 20** – LCA vs Baker, 4; No Names vs Miscellaneii, 5; A Planets vs OR Center, 6; Turkeys vs Hydros, 7. Info, Sam Benichase, x8-3686 Draper.

Religious Services and Activities

Campus Crusade for Christ/College Life* – Family time, singing, prayer, teaching from God's word. Fri, 7:30pm, Rm 37-252.

Roman Catholic Mass* – Sun, 10am, Stu Ctr West Lge.

United Christian Fellowship* – Singing, sharing, praying meeting. Thurs, 7pm, Westgate 708.

Announcements

Official Notice – Applications for advanced degrees in September 1974 must be returned to Registrar's Office, Rm E19-335, by Monday, June 17.

TCA Summer Schedule – Will be open limited hours from June 17 to end of summer, but most business can be conducted by leaving a phone message at x3-4885. Call for further info.

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

Send notices for June 19 through June 30 to the Calendar Editor, Room 5-111, Ext, 3-3279, before noon Friday, June 14.

Study Finds Nuclear Material Safeguards 'Inadequate'

By ROBERT C. DiIORIO
Staff Writer

Five Atomic Energy Commission consultants—one of them Prof. Daniel J. Kleitman of MIT—have warned that safeguards are "entirely inadequate" to prevent thefts of nuclear material from which bombs could be made.

..."The level of danger represented by the potential acquisition of explosive quantities of special nuclear material by malevolent people...is large and growing," the consultants said in a report.

The danger is increasing, the report continued, "due to the widespread and increasing dissemination of precise and accurate instructions on how to make simple nuclear weapons, and due to the increasing professional skills, intelligence networks, finances and level of armaments of terrorist groups throughout the world."

Another factor heightening their concern, the consultants said, "is the recent start of political kidnappings within the United States. It is our opinion that the kidnapping of Patricia Hearst does not represent an isolated and passing incident, but is rather the precursor of a wave of such incidents."

Terrorist groups, the consultants said, "are likely to have available to them the sort of technical knowledge needed to use the now widely disseminated instructions for processing fissionable materials and for building a nuclear weapon."

The type of nuclear material referred to is generally found at no more than a dozen sites around the country where fuel used at atom-powered electric generating plants is produced, Professor Kleitman said.

"The kind of special nuclear material from which a bomb could be made is not found at power plants," he said.

Professor Kleitman is a member of the MIT Department of Mathematics. An introduction to the report refers to Professor Kleitman and to the other consultants as "five knowledgeable people who have no vested interest in the system (of safeguarding special nuclear material) as it now operates."

The consultants said their mandate was "to say what ought to be done."

The other consultants were Dr. John N. Googin of Union Carbide Corp.'s Nuclear Division, Oak Ridge, Tenn.; Robert Jefferson of the Sandia National Laboratory of Albuquerque, N.M.; William C. Sullivan, former assistant director of the Federal Bureau of Investigation, and Dr. David M. Rosenbaum, formerly with the Office of National Narcotics Intelligence.

The AEC, in a statement released with the report, said it is taking "a hard look" at the consultants' findings to "determine what additional measures should be taken to further strengthen the requirements to safeguard nuclear materials from theft."

The AEC also said: "The fuel used in practically all of the nuclear power plants in operation today or expected to go into operation over the next several years consists of low-enriched uranium which cannot be made into a bomb. Plutonium is being used in the breeder reactor development program. Highly enriched uranium is used in the naval programs and in the civilian High Temperature Gas Reactor program. A very small amount of plutonium is being used for demonstration purposes in light water cooled nuclear power plants. However, light water reactors are not contributing significantly to the safeguards problem at this time."

The consultants, in outlining the essence of the problem, said: "The potential harm to the public from the explosion of an illicitly made nuclear weapon is greater than that from any plausible power plant accident, including one which involves a core meltdown and subsequent breach of containment."

The report recommended the establishment of a federal nuclear protection and transportation service which would be responsible for all protection functions that could require the use of force.

"If a small federal force is formed now it will help to meet the present pressing need and can be enlarged and improved as the need grows," the report said.

The consultants said it is neither reasonable nor equitable to assign such security responsibilities to private industry. Private companies, the report said, "have neither the capability nor the desire" to meet the kinds of threats that the consultants described in a classified paper prepared for the AEC in connection with the report. The classified paper gives examples of ways in which special nuclear material might be diverted under present regulations.

"There is also a substantial question as to when private guards can legally use their weapons," the consultants continued. "We were told by one transportation company that it had written to the attorneys general of the 48 contiguous states asking whether their uniformed guards can carry arms across the state border. They were informed in every case that they could not do so without a license. The company does not plan to license its guards to carry guns in any except its home state even though, because of AEC requirements, its guards will carry weapons across the country and will be instructed to do what is necessary to protect the SNM (special nuclear material).

"Other companies have instructed their guards not to use their weapons to stop theft of special nuclear material, but only in defense of their lives.

"It seems to us that the present system of protecting facilities and transportation which handle special nuclear material may be illegal and is certainly inadequate," the report said.

Current safeguards against secret thefts, the report continued, rest primarily on an inventory system in which nuclear material is measured to determine if any is missing.

However, the report said, it sometimes takes days to discover whether an indication of missing material is a counting error or whether a theft has occurred.

The consultants recommended refinements in the inventory and accounting systems so that losses can be detected more quickly.

Alexander Named Schlumberger Fellow

Jeffrey Carl Alexander of Skokie, Ill., has been awarded the Schlumberger Foundation Fellowship in the Department of Electrical Engineering at MIT for 1974-75.

The Schlumberger Foundation, a non-profit organization established in 1954 by the Schlumberger Well Surveying Corporation, now a subsidiary of Schlumberger, Ltd. of New York City, established the fellowship at MIT in 1955 and has continued it each year since. It is awarded annually to an outstanding student planning to study for an advanced degree in electrical engineering and provides a $6,000 grant towards tuition and living expenses for the student.

Alexander, who received the SB degree in February, 1974, will begin his graduate studies at MIT in September working toward a master's degree in electrical engineering. His long-term goal is research and innovation in electrical engineering.

Schweickart Takes New NASA Post

Astronaut Russell L. Schweickart, lunar module pilot for the March 1969 Appollo 9 flight was recently named to the staff of the NASA Office of Applications as director of user affairs in Washington, D.C.

Schweickart graduated from MIT in 1956 and received the SM degree in aeronautics and astronautics here in 1963.

In addition to serving on the third manned flight in the Appollo series, he served as backup commander for the first Skylab mission.

Annual Dinner Honors 120 on Eve of Retirement

Some 120 employees of the Institute will officially retire this year.

The group was honored at a reception and dinner on Tuesday, June 4, which was attended by the retirees, their families and associates, and members of the Silver and Quarter Century Clubs.

Walter L. Milne, assistant to the chairman of the Corporation and special assistant to the president for urban relations, served as master of ceremonies for the occasion. Howard W. Johnson, Chairman of the Corporation, spoke to the retirees and their guests.

In his remarks to the retiring group Mr. Johnson commented on growth and the Institute saying, "The true growth of an institution is marked not merely by the proliferation of buildings and changes in the magnitude of its operating budget. It is marked more in less tangible things—in the character of its scholarship and the effectiveness of its teaching; in the achievements of its alumni; and in the caliber of the people who serve it and who build it."

"It is in the quality of the people who have worked here, in all the many functions that are needed, that we have been particularly blessed," Mr. Johnson said.

Remarking on comments made to him by members of the Class of 1924, who were recently on campus to celebrate their 50th anniversary, Mr. Johnson said, "You would all have taken great satisfaction in their observations about how the Institute has grown and prospered and in their pride in what we have built together over the years."

Mr. Johnson concluded his address by quoting Dr. James R. Killian on the occasion of the recent renaming of the Great Court as Killian Court, " 'MIT has grown in strength and power of service because there was faith and because men and women of all stations cared for it and were willing to struggle to insure that the Institution fulfilled its potential. ...' "

John M. Wynne, vice president for administration and personnel, read the names of the retirement group in the symbolic presentation of certificates. The certificates were actually handed out by officers of the Quarter Century and Silver Clubs before dinner. Women guests were presented with gardenia corsages as they arrived.

Members of this year's retirement group are:

Douglas P. Adams of Charlestown, professor of mechanical engineering, 35 years.
Michael P. Arena of Hyde Park, physical plant, 28 years.
Edward H. Azzari of Everett, physical plant, 28 years.
Margaret Barrett of Cambridge, Department of Chemical Engineering, 37 years.
Robert C. Blackberg of Cambridge, physical plant, 33 years.
Lynwood S. Bryant of Winchester, professor of history, 36 years.
Ward B. Carroll of Cambridge, Campus Patrol, 12 years.
Winifred Collins of Arlington, Dining Service, 21 years.
Sabina J. Colman of Somerville, Campus Housing, 10 years.
Raymond Costello of Boston, Faculty Club, 19 years.
Jeanne M. Courtemanche of Allston, Medical Department, nine years.
Joseph T. Cowles of Boston, Libraries, six years.
Edward J. Curtis of Wilmington, Department of Chemistry, 49 years.
Margaret Davis of Boston, Dining Service, 11 years.
Isabella S. Evans of Watertown, Sloan School, ten years.
Frederick C. Fahnley of Marco Island, Fl., Physical Plant, 17 years.
Adelle H. Fallows of Cambridge, Laboratory for Nuclear Science, 19 years.
Gertrude Fowlow of Boston, Libraries, 11 years.
Margaret Z. Freeman of Belmont, Associate Professor of Russian, 42 years.
George E. Furlong of Winthrop, Physical Plant, 25 years.
Elizabeth Grourke of Cambridge, Comptroller's Office, 11 years.
Rolf H. Gustavson of Waltham, Laboratory for Nuclear Science, 25 years.
Sven O. Hallberg of Arlington, Physical Plant, 16 years.
Joseph R. Hanasik of Acton, Center for Space Research, 23 years.

Walker's Morss Hall was filled to capacity at the annual all-Institute retirement dinner.

Frederick Hennesey of Wakefield, Magnet Laboratory, five years.
Esther Herrick of Beverly, Department of Aeronautics and Astronautics, eight years.
Murray Hill of Dorchester, Campus Housing, 28 years.
Sylvester Hinds of Dorchester, Campus Housing, five years.
Myle J. Holley, Jr., of Lexington, Professor of Civil Engineering, 28 years.
Marion Hoxie of Cambridge, Center for Space Research, 38 years.
Gertrude P. Hubbard of Belmont, Department of Aeronautics and Astronautics, 20 years.
John H. Huska of Whitman, Department of Metallurgy and Materials Science, 27 years.
John J. Hutchinson, Sr., Physical Plant, 31 years.
Betty Johnson of Dedham, Endicott House, 18 years.
Dorthy L. Jones of Lynn, Project MAC, 9 years.
Frank T. Kallery of Lynn, Physical Plant, 8 years.
James V. Kazanjian of Waltham, Physical Plant, nine years.
Margery King of Arlington, Comptroller's Office, 18 years.
Anthony J. Lepore of Cambridge, Physical Plant, ten years.
William N. Locke of Newtonville, Foreign Study Advisor; Director of Libraries, Emeritus; Professor of Modern Languages, 28 years.
Frank Luongo of Medford, Physical Plant, 12 years.
Robert C. Lyon of Saugus, Graphic Arts, 16 years.
Evelyn A. MacLean of Belmont, Purchasing, 12 years.
Ellen MacTavish of Dover, Endicott House, 3 years.
Anthony Marcolongo of Cambridge, Physical Plant, 23 years.
Elizabeth S. Massie of Dorchester, Physical Plant, 18 years.
Vincent Mauriello of Arlington, Physical Plant, seven years.
Patrick McLoughlin of Dorchester, Physical Plant, 12 years.
Donald L. Miller of Brockton, Campus Housing, 26 years.
Zachary A. Minichiello of Boston, Physical Plant, two years.
Anthony Monaco of Boston, Physical Plant, seven years.
Paul W. Murray of Watertown, Department of Electrical Engineering, 30 years.
Armand Nadeau of Somerville, Physical Plant, 17 years.
Albert J. O'Neill of Milton, Technical Instructor, 31 years.
Adolf Polak of Norwell, Physical Plant, five years.
Thomas A. Redmond, Physical Plant, five years.
Sigmund T. Romaszkiewiecz of Newton Upper Falls, Comptroller's Office, 27 years.
Lawrence W. Ryan of Peabody, Division of Spronsored Research, 37 years.
Jules J. Shermen of Newton Centre, Accounting, nine years.
Elizabeth Simms of Middleborough, Physical Plant, 18 years.
Alexander Simms of Middleborough, Physical Plant, 26 years.
Victor P. Starr of Newton Centre, Professor of Meteorology, 26 years.
Helen Stodder of Somerville, Medical Department, 17 years.
John F. Sucena of Belmont, Physical Plant, 12 years.
Blease C. Sullivan of Portland, Me., Physical Plant.
Howard C. Tinkham of East Taunton, Graphic Arts, 20 years.
George E. Valley, Jr., Professor of Physics, 15 years.
Samuel M. Venuti of Everett, Physical Plant, six years.
Antonio S. Vieira of Arlington, Physical Plant, 23 years.
George P. Wadsworth of Lexington, Professor of Mathematics, 40 years.
Victor F. Weisskopf of Cambridge, Institute Professor And Killian Award Lecturer, 28 years.
Donald Whiston of Kingston, Physical Plant, 20 years.
Minor White of Arlington, Professor of Photography, 9 years.
Willam C. White of Cambridge, Campus Housing, 6 years.
Joseph Zeidmann of Randolph, Physical Plant, 12 years.

Lincoln Laboratory

Bertram H. Adams, Jr., of Malden, Group 11, 22 years.
Margaret F. Allen of Nashua, N.H., Group 28, 22 years.
Walter E. Blanchet of Waltham, Group 11, 16 years.
Biagio Caiani of Wilmington, Group 63, eight years.
Edward J. Carell of Islington, Group 71, 19 years.
Annette L. Desaulnier of Cambridge, Group 16, 24 years.
Cornelius T. Donovan of Somerville, Group 12, 12 years.
Paul R. Gaudette of N. Chelmsford, Group 14, nine years.
Joseph A. Gill of Arlington, Group 13, 31 years.
Thomas E. Gunnison of Bridgewater, Division six, 26 years.
Marie H. Hawes of Medford, Group 18, 22 years.
Waldo G. Henry of Bolton, Group 15, seven years.
Vaughn Henry of Bolton, Group 17, 14 years.
Edith E. Olive of Belmont, Group 14, 18 years.
James C. Rumson of Somerville, Group 11, 14 years.
Russell A. Smith of Arlington, Group 16, 21 years.
Rudolph E. Yngve of Lexington, Group 12, 13 years.

Draper Laboratory

Joseph C. Armato of Somerville, Physical Plant, 11 years.
Manuel S. Barriera of W. Somerville, Security, ten years.
Albert J. Beaurivage of Cambridge, Physical Plant, eight years.
Francis J. Carney of Cambridge, Security, 24 years.
Howard J. Clark of Maynard, Security, nine years.
John A. Dolan of Brighton, Security, 12 years.
Arthur C. Donovan of Needham, Navy Programs Department, 27 years.
Sidney C. Erb of Winchester, Motor Pool, eight years.
Edward D. Fay of Waltham, Component Development Department, 20 years.
John T. Fitzgerald of Belmont, Security, 22 years.
Wilson Fudge of Medford, Physical Plant, eight years.
Frederick E. Giannelli of Allston, Security, nine years.
Kermit W. Heath of Cambridge, Physical Plant, eight years.
Everett C. Henderson of Arlington, Physical Plant, five years.
Dorothy S. Hughes of Arlington, Fiscal Office, six years.
Mary Jagiello of Mattapan, Purchasing, seven years.
Patrick J. Kelleher of Jamaica Plain, Security, 13 years.
Dorothy C. Ladd of Manchester, Publications, 23 years.
John Laniefsky of Arlington, Physical Plant, 15 years.
A. Allan MacDonald of Manomet, Security, 12 years.
Kenneth Moyle of Lexington, Security, 21 years.
William M. Murray of Hull, Administration and Facilities Department, 13 years.
Harry Nesbitt of Dorchester, NASA/Army Programs Department, 11 years.
Elmer E. Odien of Burlington, Security, 11 years.
James Orgettas of Winchester, Physical Plant, 13 years.
William H. Quinn of Dracut, Bedford Flight Facility, eight years.
C. Jean Jacques Rivard of Chestnut Hill, Technical Communications, 13 years.
D. Gerard Sullivan of Natick, Security, 12 years.
George Zoboli of Wollaston, Navy Programs Department, years.

Retirees William C. White (far left), desk clerk in MacGregor; Donald L. Miller (second from right), maintenance mechanic in McCormick; and Sabina Colman (far right), a counterwoman in McCormick are pictured at the reception/dinner for recent retirees with Norma Mele (center), manager of McCormick Hall, and Cecil Saunders, manager of MacGregor Hall. The fete was held in Walker Memorial Dining Hall on Tuesday, June 4 and was attended by some 460 people.

—Photos by Edward McCabe

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, June 14.**

For Sale, Etc.

Polyethylene 1 gal jugs, used but cln, w/caps, flex, $10 or best for 150+. Rick, x0110 Dorm.

Tires: 4 ww, F78-14, $16/ea; 2 stud snows, 7.35-15, $30; matt & flat spr for dbl bed; old type storm wndws; dishes & odds & ends. Ralph, x8-2016 Draper.

Hotpoint regrig/frzr, 2 dr, 15 cu ft, gd cond, $110; solid oak organ case, $35. Val, x8-4519 Draper.

Revox A77 tape deck, perf cond w/100 hrs use, $429. x3-7836.

K tbl w/4 chrs, $45. Shinji, x3-5957.

Solid mpl dinette set w/4 cptn chrs, $150. Jean, x3-1717.

Da-Lite 40x40 lentic proj screen, lk nw, $12; Agfatronic 160A nicad strobe, nw, $20. Aldrich, x3-5360.

Hydroplane, 10'x6', seats 2, eng capacity 60 hp, any reas offer. Neva, x3-2566.

Used belted tires, H78-15, $2/ea. x3-3504.

Alum dbl seat rocking chr, $8; folding ping pong tbl, $10; alum insulated cooler, $6. Call, 861-8982, aft 6.

Yashinon zoom lens, 70-230 mm, auto, screw mnt, best. Charlie, 738-5449, aft 6pm.

Dbl bed w/box spr, $30 or best. George, x3-4170, 10am-4pm.

Lt grn spring coat w/gold buttons, sz 14, worn once, $18. Anne-Marie, x8-3514 Draper.

Remington man typwrtr, 16" carriage, $45; GE reg iron, nvr used, $6; Kenmore buttonholer for zig-zag or reg, $5; 4 mpl chrs, $20; drop lf tbl, $20; wd book rack, $2. Call, 643-4283, aft 6pm.

Frigidaire refrig w/freezer, 66"x33"x30" deep, $40. x3-5679.

Compl frpl set, $25; 10 gal console humidifier, $20; car seat, $15; basinette, $2; toaster, $3; mtl cab, $2; 10 cu ft refrig avail last wk June, $20. Call, 484-3882.

BR set: dbl bed, chest, dresser, gd qual & gd cond, $200. Mike, x3-5217.

Amfm Multiplex stereo rcvr, 6 mos, hrdly used, 15 w/ch, was $200, $85; $3 antenna free w/purchase. Bob, x3-4242, kp try.

Sears Jetwind sailboat, lk nw, $420 w/xtras. Vic, x7206 Linc.

Case hardened mtrcycl chn w/lock, nrly nw, $15. Mike, x3-7203.

Plan ahead, beat rush & get 2 exc mtd snows, almost nw Uniroyal Zeta 8.25-14 stud radials, used short time last wntr, exc cond, $70/both. Bob, x252 Linc.

Magnavox TV; hi-rise day bed; end tbl/rcrd holder; lg uncleared acerage in So NH. Jo, x3-2723.

B nw lenses: Nikon 35 mm f2, 43-86 mm f3.5, 85 mm fl.8, 135 mm f2.8, any for $150; Pentax 24 mm f3.5 or 135 mm f2.5, $120; 85 mm f1.9 or 105 mm f2.8, $85. x7611 Linc.

Wndw awnings, dk grn fbrglas w/alum frames, used & in gd cond, best. Walt, x3-6105.

TV, 23" b&w console w/uhf, $50. x3-7075.

Stained glass wndw in 3 pnls, 30" wide, 96" total ht, relig theme, slight minor damage, $50 or best. x3-5529.

Lake front property, 1½ acres, 2 cottages, 220 V, well water, outhse, furn, Merrimack, NH, $16,000. A Jones, 427-2840.

Under counter dishwash; wht porcelain 21x30" sink; Polaroid color pack II camera; all best. x119 Linc.

Carpets, 2/3 off orig price, less yr old: 15x17 silver grey, $90; 9x15 blu, $50; 12x12 bge, $20. Call, 547-6161, evgs.

Porpoise, 12'4" fbrglas, compl rigged, orig '72 $445, sell for $250. DiNapoli, x8-3997 Draper.

Rabco SL-8E tonearm mtd on Thorens TD-125 trntbl w/DC 26 crtrdg, cstm-made hinged dustcover, $405. Jack, 776-3672.

Used Frigidaire 10 cu ft refrig, $55; imtermed 24" boys bike, $17. Call, 868-9204.

Sears sewing ctr, takes all std mach, exc cond, catalog description avail, $50; workbench Kevi desk or sew chr, chrome & blk vinyl, exc cond but whls stiff, $15 or $10 w/sew ctr. Helen, x3-7690.

Exakta VX IIa SLR w/case, nds shutter repair; Schacht f2.8 50 mm macro lens w/case; Vivitar 135 mm f2.8 telephoto lens w/case; best. Stephen Ringle, x3-4680.

Fanon 3 ch 500 milliwatt citizen's band transceiver, orig $62.95 last Aug but nvr used, gd emergency radio for boat, best. Elaine, x3-5486.

Jacobsen self-prop 21" reel lawn mower, used 3 seas, exc cond, spare parts, ½ price, $100. John, x7202 Linc.

Dbl bed, wd frame, matt, box spr; 2 metal bkcases, 7 shlv ea; hand lawn mower; 3x4' desk; cheap, must sell. Carole, 527-0325, evgs.

Qn sz bed, $50; sgl bed, $10; 19" b&w TV, $10; sm wd desk, $4; strong wd K chrs, $5/ea; card tbl, $5; hseplants; crtns, etc, lve 6/15, nego. Call, 489-2772.

Gdyr 4 ply nylon tires, 8.55x14, exc for spare, $3; Draper employee pls call back. Dave, x7689 Linc.

Sears couch, $120; Sears full sz matt, $30; file box, $25; crib & matt, $45; car seat, $10; various K appl & cookware; iron brd & cover, $10; B items; Eureka vac, $40. Park, 494-8743, evgs.

Gibson SJ Southern Jumbo guitar, mint cond w/hard shell case, $300 or best. Roberta, x3-4971.

Sgl bed, exc cond, $15; 2 mtrcycl helmets, gd cond, $5/ea or best. Mike, x3-5796.

Johnson 223 base radio; Sharpe mobile radio; mobile antenna; base antenna, best. x8-3531 Draper.

Elec washer & dryer; full length mirror. Larry, 734-4400, x2105.

Raleigh f 5 spd 21" frame bike, acces, nw, $90. x8-1250 Draper.

Madonia guitar, 12 str, exc cond, nds strings, $70. x3-3273.

AC, 5000 BTU, $50. Tom, x8-1276 Draper.

Barbell & 2 dumbbell, $18; ski rack, trunk mnt, $10; Martelli ski boots, sz 5½, 10½ $10/ea; mtrcycl chn & lock, $10; workbench, $10; iron brd & cvr, $5; nursery lamp, $5; Schick mist rollers, $9. David, x465 Linc.

Old Eico tube stereo preamp-amp; Hallicrafters SX110 am-sw rcvr; 27x1¼ front bike whl; pr lineman's boots, sz 10, nw, lace 16". John, 354-8170.

Gold 9x12 rug, $10. x3-2663.

Ambassador 21" TV, $50; study desk w/bkcse & metal file cab, $25; '65 Pontiac, gd mech cond, $275. x3-2686.

F bike, $5. Jim, x3-5319.

Med style dinette set, 5 pc, blk wrought iron chrs w/red seats, tbl w/2 lvs, exc cond, $100. John, x8-2338 Draper.

Early ac powered, Royal Radio of Prov, ca 1928 sep pwr pack, mahog finish cab, works well, $25; 2 Continental stud VW snows, 5.60x15, gd tread, $15/pr; 2 VW 5-hole rims, $3/pr. Jim V, x3-2173.

Norge refrig, $50. Nick, x3-6920.

Swedish ivy plant, hang bskt, $5; other asst sm plants. x3-6893.

Beaulieu 16 mm R16E camera, 3 Switar lenses: 10, 25, 75 mm, 1 Ibar 150 mm, 2 batt packs & chargers, all v gd cond, 9 rolls film, $950; child stu desk/chr comb, $25. Tony, x3-5717.

Nice couch w/match chrs, mpl frames & cushions; big cedar chest; dbl bed; 2 mpl mates chrs; 2 sm chests; best. Joanna, x3-4661.

Girl 20" 3 spd Columbia bike, hand & pedal brake, perf cond, $59 nw, $29. Tim, x8-1187 Draper.

Craftsman 36" lawn sweep, $15; 10" radial arm saw dewalt, $125; 2 brnr gas log stove, $60; K tbl, 4 chrs, ideal for camp, $25. Kathy, x7702 Linc.

Sears r-to-r quarter tract tape rcrdr, $15; elec knife, $5; set 4 smoke-clr car fl mats, $5. Holly, x3-6758.

Desk, $20; dresser, $20; bed, $15; chr, $3; or all for $50. Call, 491-3403.

Phillips m 3 spd bike, rear bskts, chn & lock, $40; metal desk, $10. Jon, x3-5239.

Garage sale: crib, carriage, playpen, 30 cup perc, etc, moving x cntry, must sell; Sat, June 15, 11-4, 89 Upland Ave, Newton Highlands.

Budget component stereo, $30; color TV as is, $20; KLH 4 spkr, $60; unmatch 12" sys, $75/pr; stereo rcvr, fm out, $25; stereo amp, $50. Ernie, x9610 Dorm.

Vehicles

'64 Buick Spec, V6, 15-16 mpg, gd cond, best reas; tire, 775x14, v gd cond, $12. Cindy, x3-4851.

'65 Rambler wgn, great eng, gd body, trans work, $225. Joe, 536-5497, evgs.

'66 VW sed, sunfr, r, gd transp, body fair, $250. Mike, x3-1429.

'66 Chevy Bel Air, 70 K, 4 dr, auto, exc run cond, gd body, 2 snows, nw shocks, front br, valve job, tuned, muff/pipe, batt, volt reg, nds 3 tires, $250. Joe, x7277 Linc.

'68 Tbird, 4 dr Landau, full lux equip: auto climate/ac, amfm stereo, impressive cond, 58 K, $1,395. E. Hill, x408 Linc.

'68 Mustang conv, p st & br, gd cond, 60 K, $550. Zine, x3-1761.

'69 Imp, 2 dr, nw carb, batt, just tuned, reg tires & snows, 70 K, exc cond, $800. Peter, x3-1913.

'69 Simca 1204GS sed hatchback, 32 K, exc cond, 25 mpg, front whl drive, amfm. Call, 965-0536, aft 6 pm.

'69 Chevy Chevelle, 2 dr conv, std, sm 8 cyl, amfm, exc mileage, $1,075 or best reas. x3-4257.

'69 Toyota Corona Deluxe, 4 dr, auto, nw batt & exh, ask $1,000. Bill, x8-4455 Draper.

'70 Olds Cutlass Supreme convert, $1,600. Frank, x8-3463 Draper.

'70 Toyota Corona Mark II wgn tan w/ blk int, exc cond, nw tires, 4 spd std, 25-30 mpg, $1,200; lg hvy ¼-cut oak DR tbl, 42" sq, (3) 10" lvs, 4 stenciled oak chrs, $125/all. x3-5742.

'71 Chevelle SS, hidden tape player, other xtras, $1,500. Phil. x3-7220.

'72 Volvo 122S wgn, ac, nw radials, stud snows, v gd cond, hi mileage, $850 or best. Ron, x7636 Linc.

'72 Suzuki 500 titan, mint cond, ridden 1 yr, $900 or best. Joe, x8-1240 Draper.

Housing

Arl, 3 BR Dutch colonial off Grey St. frpl, playrm, patio, priv yard, mid 30's. Jack, x3-1419.

Back Bay, unfurn 5th fl studio w/alcove, beaut view Fenway, avail 6/1 for sub w/opt, $138. David, x3-7838.

Back Bay, Boylston St, Fenway area, BR avail 7/1, $150 heated. Carol, x3-7028.

Bel, 5 rm, furn, nr bus line, pkg, avail 7/1, $200. x3-6979.

Bos, sub July & Aug, lg Comm Ave studio nr Pru. Shelly, x8-3528 Draper.

Bkln, rent condo w/opt to buy, 20 St Paul St, 2 BR, mod K, $315. Linda, x3-6771.

Bkln, 7 rm furn hse, avail 9/74-6/75, nr T, $500/mo. Call, 566-0033.

Burlington, dbl brick center ent 4 BR colonial, 1½ B, 2 car garage, 1 acre, ideal loc. low $60's. x3-7235.

Camb, nr H Sq, 2 apts, semi furn, 5 & 6 rms, lg K, $285 & $295. Marilyn, x3-4112.

Camb, 3 BR hse w/xtra lg LR, DR, K, B, Harv Sq, avail 6/15-8/31, $315. Ann, x3-2889.

Great Neck, Ipswich, 6 rm sum cottage, 4 BR, ocean view, 3 min beach, July 6-Aug 3, $150/wk. Jean, x3-7410.

Jam Pl, priv hse nr T, furn rm w/no K priv, qt area, $20/wk. Nancy, x3-4433.

Newton, 6 rm duplex 1½ B, d&d, lg yard, avail 8/1, fam pref, $350. x3-6632.

Som, rm in bsmnt 1 fam hse, part furn, conv loc, lg yard, K priv, $15/wk. Agnes, 666-3188.

Som, nr Inman Sq, sum sub w/opt, 2 BR, ww, ac, full K, pkg avail, heated, lndry facil, avail 7/1, $225. Lee-Or, 491-0917.

Som, 50 Craigie St, BR, refrig, ac, dw, free pkg, avail now, MIT affil, rent incl heat. Call, 731-4473.

Wellesley, 2nd fl apt in 3 fam hse, roomy K w/walk-in pantry, mod B, 5 other rms w/ww, gd nbrhd, lg bkyard, pkg, nr bus, off Rt 9, nr 128 & Pike, avail now, $285 + util. Call, 237-2309, lve msg.

BR apt avail 7/1 w/opt, 10 min walk MIT, $110. Call, 864-1627.

Highland Lake, Stoddard, NH, lkfront cottages, all facil, row boat, priv bch, 2 hrs Bos. Call for info, x8-1566 Draper.

Winnepesaukee, lkfront cottage in Meredith, NH, priv, fishing, woods, frpl, slps 4-8, avail late June, July, Aug, early Sept. Joan F, x3-2697.

Island nr Portland, Me, 3 BR hse nr beach, avail Aug. x3-3706.

Ludlow, Vt, on bus to Bos, mod old farm, 6 BR, 3 B, sauna, mod K w/dw, wash & dry, 11 acres, secluded, views, $550/mo + util. x3-4771.

Weston, S Vt, 3 BR mod log chalet, secluded cntry road, tennis, golf, fish, ride, $300/mo. Sureau, x477 Linc.

Rehovot, Israel, hse avail for rent 9/74, nr Weizmann Institute, 20 min Tel Aviv. Marian, x3-4710.

Animals

Labrador dog, 1½ yrs, frndly w/chldrn, no papers, free; 6 tiger kittens, free. George, x3-2398.

Free f kittens, 1 blk, 1 wht & gray. Call, 862-0248.

Lving area, must find home for beaut kitten, free; also asst furn, cheap. Call, 266-3887, evgs.

Fluffy gray m kitten, wht markings, 6 wks, shots, free to gd home; v affect f cat, yr, unusual gray-tan markings, nds gd home, wl pay to have spayed if desired. Sylvia, x3-1961.

Free New Zealand wht pet rabbit. Jeff, 494-8273.

Lost and Found

Lost: 6/6, blk wallet btwn Stu Ctr & Green Bldg, pls keep $ as reward but return wallet & ID. C. Gebhard, Rm 54-1424, x3-2450.

Wanted

Bike, cheap. Neville, x3-2334.

Rmmates, 2, Cent Sq apt, qt, gd lndlrd, 3 BR, LR, K, B, furn, chamber music on Sun, am gd bio stu, avail now or 9/1, $120 incl util. Sue, 864-6841, evgs to 12.

Sev tennis rackets, softball glove for rt handed person, wl pay. Mike Perlmutter, x3-3697.

Furn hse to rent, prof cpl, Wellesley area, for approx 1 yr, beg 8/74. Call, 527-3617, evgs.

Microscope. Eugenia, x3-5935.

Rmmate, sum sub 6/15-8/31, own BR sunny 3rd fl apt, exc view Charles, share K & B w/1 m rmmate, $99, nego. Call, 494-0235.

Rmmate, sum & beyond, f or m, own BR, pleasant nbrhd nr T, park w/tennis, pkg, laundromat, avail 7/1 or sooner, $70. Call, 254-7014.

Used airline shipping kennel for lg dog, 70 lbs. Caroline T, x3-2054.

F rmmate, v nice Lex hse, fully furn priv rm, should have own car, 15 min H Sq, $95 + util. Call, 861-8095, bef 11am or aft 6pm.

F to share sm Camb apt w/2 others, no tobacco. Ellen x3-7554.

Alcohol stove for boat, 2 brnr. Kathy, x3-4801.

Person for pt-time child care, 3 nice kids 6-10, Lex on bus to H Sq, live-in or financial arrangement. Jim, x3-2360.

Responsible cpl w/child wl drive your car to west coast late July-early Aug, ref avail. Lily, x3-2281.

Wl buy pennies at 5% above face value. Jerry, x3-1859.

F stu wl share Back Bay apt w/stus for fall term. Beth, 536-0546.

Eng-speaking penpal from foreign cntry for 12 yr old girl. Michelle, x3-6121.

M rmmate, share lg Bel hse on T, 20 min bike, $75 + util. x0481 Dorm.

Neat cpl or slg to hsesit Newton home, June-Aug, references. x3-6397.

Stu to assist in development of inputs to math programming mdl of water supply in developing cntry; some training in water resources helpful, 6/15-9/1. Prof David Major, Rm 1-280, x3-1991.

F rmmate, 7/1-8/30 w/opt, 4 BR hse nr Bri Ctr & reservoir, $75. Michelle, 783-0768.

Wl drive your car to west coast end July, pref Seattle. Jeff, x3-7528.

Yng married cpl w/nice cat seek apt in nbrhd w/trees, pref Bkln, Bel, Newton, suburbs. Abby, x3-6732.

F rmmate, working 23+, share 10 rm hse w/4 f, Som, priv BR, LR, K, DR, study, washer, beaut yard, pkg, $85 + util. Poppy, x3-1657.

MIT m stu to participate in 1 & 4 mo nutritional studies. Info, Miss Miller, x3-6337.

Footlocker, med sz or lg. Alfred, x3-3317.

Working mother nds live in or out child care for 6 mos old, 2 dys/wk + occasional evgs, Nahant ocean front home. Mrs. Jacobs, x3-1659.

F rmmate, share 6 rm duplex in Wtrtown w/prof woman & 8 yr old boy, lg frpl LR, $125 + util. Bernie, x8-1376 Draper.

Bike, 18 or 20" frame 10 spd, f pref. Diane Gilbert, 494-9820.

Rmmate, lg Weston hse, plenty land, $115. Donna Marie, x196-548 EDC.

Rmmate, exc loc btwn Inman Sq & Broadway, 6 min walk Cent Sq, 4 BR, K, LR, spac bsmnt storage, sunny porch, yard for pet, $60 w/4 people. Dick, x3-4170.

Carpools

Person to share driving, Fox Hill sect Burl, hrs flex. Saul, x3-7551.

Miscellaneous

Learn to sail: b nw Pearson 30, Marblehead Harbor, wkday, wkend, evgs. Call, 522-1506.

Theses, dissertations, papers, typing on IBM, $0.80/page. Violet, x3-2424.

Child art lessons, 9 wk, ages 7-11, Tues & Wed, 9:30-11am, limited to 6, mural painting, nature drawing, motion sketching, begins 6/18, 19. Mrs. Parrillo, 643-4261.

F interested in learning to tune their cars sought for Sun all-day class, psbly 6/30, class morn, shop aft, $25. Allison, x3-6767, lve msg.

Off-loom weaving taught to 10-12 yr olds, June & July. Stu, x3-1418.

Positions Available

This list includes all non-academic jobs currently available on the MIT campus. Duplicate lists are posted each Tuesday preceding Tech Talk *publication date on the Women's kiosk in Building 7, outside the Office of Minority Affairs, 10-211, and in the Personnel office E19-239, on the day of* Tech Talk *publication. Personnel interviewers will refer any qualified applicants on all biweekly jobs Grades I-IV as soon as possible after their receipt in Personnel. Employees at the Institute should continue to contact their Personnel Officers to apply for positions for which they feel they qualify.*

Virginia Bishop	*3-1591*
Mike Parr	*3-4266*
Philip Knight	*3-4267*
(secretary – Joy Dukowitz)	
Sally Hansen	*3-4275*
Jack Newcomb	*3-4269*
Evelyn Perez	*3-2928*
(secretary – Mary Ann Foti)	
Dick Higham	*3-4278*
Pat Williams	*3-1594*
Claudia Liebesny	*3-1595*
(secretary – Dixie Chin)	

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

DSR Staff in Meterorology will work on diagnostic studies of Climate of the past. Candidate should have an interest in climatic change and have a willingness to acquire some knowledge of data processing technique on the global scale and radiative transfer theory. Ph.D. in physics, atmospheric, ocean, or earth sciences required. 74-650-A (6/12).

DSR Staff Dietitian will work with

dietary research associated with arteriosclerosis. Teach weight control and fat modified diets to patients, and follow-up with these patients. Candidate must be a registered dietitian with a BS in Food & Nutrition and several years experience (including arteriosclerosis dietary research). 74-643-A (6/12).

Administrative Officer – Academic Staff for the Division for Study and Research in Education will be responsible for fiscal and all other purely administrative functions, prepare proposals and other written materials, review and edit other documents which are issued from the Division. As a member of the Divisions Executive Committee, participate in formulation of operational decisions and policy. Plan requirements for space, personnel, and other resource needs. Bachelor's degree and 3-4 years experience in general and academic administration required, preferably at MIT. Writing competence and some familiarity with the field of education *research* quite essential. 74-667-R (6/12).

DSR Staff Physicist in the Research Laboratory of Electronics will work on development of radio interferometry. The project will combine development of computer-controlled electronic systems and participation in the observations. Ph.D. Physicist with several years experience in radio astronomy or allied field required. 74-626-R (6/5).

Technical Assistant – Academic Staff in Nutrition and Food Science will perform biological assay of toxic and carcinogenic effects, and the development of naval methods for assessing carcinogenic potential. BS in Biology required. 40 hour work week. 74-635-R (6/5).

Managing Editor – Administrative Staff for the *Technology Review* (Alumni publication) will commission articles; review submitted articles; edit articles for publication; write reports of papers, seminars, meetings; assist with the management of the magazine and participate in all editorial activities. Familiarity with current science and engineering, events essential. 4-5 years editorial experience required, preferably on material relating to science and/or engineering, with background in one or more fields of science, engineering, related social science as well as in writing and science journalism. 74-591-R (5/29).

DSR Staff with the Energy Laboratory will work with an international project to assess global alternative energy strategies; participate in formulation and evaluation of regional energy assessments. MS in Management, Economics or Engineering with emphasis in energy, technology assessment and long-term implications of growth necessary. International program management or equivalent experience desired. Demonstrated writing and speaking skills essential. Extensive international travel required. 74-601-A (5/29).

DSR Staff in the Energy Lab will assist in the construction of a mathematical energy model for US supply and econometric model building and analysis of energy sectors. BS degree in Economics with econometrics and mathematics background desired. Experience in FORTRAN programming and use of Econometric Software Package necessary. Communication skills important. 74-602-A (5/29).

DSR Staff in the Energy Laboratory will prepare and coordinate various proposals for the Waste Heat Management Group. Assist in fund raising activities for facilities and research; prepare plans for construction of new facilities. Develop predictive models based on analytical and experimental techniques and of operational simulation models for economic assessment. Ph.D. required; experience in fluid mechanics (analytical and experimental), water resources management; ability to conduct independent research important. 74-604-A (5/29).

DSR Staff for the Energy Lab will develop a metal-air fuel cell pre-prototype and conduct research into powdered metal electrodes. MS in electrochemistry or chemical engineering; knowledge of electro-chemistry, semi-conductors; experience in fluid mechanics, academic or industrial exposure to metal-metal oxide systems required. 74-605-A (5/29).

DSR Staff at the National Magnet Laboratory will design, supervise construction of electrical cryogenic and vacuum systems for operation of Alcator Experiment. Design and fabricate electronic circuitry, mechanical structures and vacuum systems for high temperature plasma diagnostic experiments; supervise technical personnel. MS in Physics or EE. Minimum one year experience in operation of high temperature plasma physics experiments and diagnostic equipment; and solid state electronic design required. Work schedule will require evening and weekend work. 74-448-A (5/22).

DSR Staff Director of Vehicular Testing for the Energy Lab will design, supervise, administer program for testing 200-500 private vehicles operating on varying methanol-gasoline mixtures to evaluate driver reaction, gas mileage, and maintenance difficulties. Ph.D. in ME with minimum 5 years' industrial experience required. Extensive experience in assembly and disassembly of internal combustion engines and administrative experience required. 74-606-A (5/29).

Project Leader/Systems Analyst – Administrative Staff will investigate the information needs of the Medical Department, coordinate the needs and develop the system. Responsible for data acquisition and clerical processing of source documents to the finished reports. Minimum 5 years experience in System Analysis, System Design, PL/1 and 370 BAL Programming for management information system. Familiarity with medical data systems preferred. 74-419-A (5/22).

DSR Staff in Electrical Engineering will develop and construct specialized electronic circuits to interface with electrical/electronic equipment such as an electric power system physical scale model, a transmission system simulator, measurement systems for underground power transmission, and automated electric power meter readers. MS in EE required; experience in the design, construction and testing of electronic circuits and computer interface equipment and in the operation of switching surge simulators necessary. 74-333-A (5/22).

Area Systems Coordinator – Administrative Staff in the Office of Administrative Information Systems will analyze and develop solutions to business problems; provide systems support; direct and coordinate the work of systems analysts and/or programmers as needed. Applicants should have business and administrative experience, analytical ability, and knowledge of programming. 74-563-R (5/22).

DSR Staff Engineer in Earth and Planetary Science will supervise the design and implementation of electro-optical data acquisition systems for astronomical application; develop a solid state imager as a photometric data system; maintain, modify, and update slow-scan silicon vidicon photometer system; act as technical consultant to student projects. Degree or strong background in EE; extensive experience in analog and digital circuit design and mechanical hardwork design. 74-429-A (5/15).

DSR Staff Engineer in the Energy Laboratory will work in the Sloan Automotive Laboratory. Participate in basic and applied research programs on combustion problems related to performance and emission characteristics of automotive engines. Research will be experimental and theoretical. Ph.D. in Mech. Engineering or equivalent academic training, with good background in combustion, thermodynamics and fluid mechanics required. Experience in design and operation of optical, electronic and spectroscopic instrumentation used in basic aerodynamic, combustion and engine related experiments important. Ability to work closely with faculty and students essential. 74-415-A (5/15).

DSR Staff at the Laboratory for Nuclear Science will design, develop, and maintain the operating system of the IBM 360/65 in the laboratory's computer facility. Assist users with special projects. Degree in computer science, physics, or mathematics; programming experience, particularly 360 Assembly Language required. 74-361-R (5/1).

DSR Staff in the Energy Lab must have minimum of 5 yrs experience in defining, securing support, organizing and supervising research in heat transfer related to energy production and utilization. Familiarity with MIT; experience in supervising student theses research and staff; Ph.D. in Mechanical Engineering required. 74-359-A (5/1).

Administrative Staff – Special Events Director for the MIT Alumni Association will organize, coordinate, and promote alumni convocations in major cities throughout the US. Individual with imagination, organizational abilities, leadership and interpersonal skills required. MIT degree or knowledge of the Institute is desirable. 74-348-A (4/24).

Administrative Staff – Project Manager, Resource/Alumni Data Systems. Will report to the Director of Resource Planning to take full responsibility for development, production coordination and operation of computer systems in support of the Resource Development and Alumni Offices. A minimum of five years professional EDP experience required, including at least three years of systems analysis. Familiarity with MIT systems will be helpful. Will evaluate overall assignment, define group staffing needs and, when approved, be expected to recruit, train, and supervise staff. 74-412-A (5/8).

Administrative Staff – Associate Director of the Alumni Fund will be responsible for Staff support to alumni boards and committees engaged in the annual solicitation programs. Duties require extensive interaction with senior alumni and corporation executives throughout the country, at MIT. Individual must be an alumnus/alumna of MIT. Position entails a moderate amount of travel. 74-347-R (4/24).

Marketing Director – Administrative Staff at the MIT Press must have experience and skills in some or all of the following areas: direct mail, scientific/technical, international, research and planning, trade and library relations. Innovation, creativity, adaptability for goals; ability to work as part of a publishing team in a university environment. Please submit resume with educational background; accompanying letter must describe in detail marketing methods in achievements. 74-313-R (4/17).

DSR Staff in Nutrition and Food Sciences will coordinate the specialized analytical services of the department; advise and assist in the development and application of analytical methods and manage the mass spectrometry laboratory. BS or MS in chemistry or related field and experience in operating a mass spectrometer required. 74-302-R (4/10).

DSR Staff in the Laboratory for Nuclear Science will participate in fundamental particle research at major accelerators and in data analysis. Candidate must have Ph.D. in high energy physics or a related field with experience in scintillation counter and spark chamber techniques and familiarity with large computer data analysis. 74-220-A (3/13); 74-221-A(3/13).

Assistant Director – Administrative Staff in the Development Office will direct developmental support of MIT's senior officers and Resource Development Staff. Participate in developing funding goals; write background briefs, memoranda, proposals, ad hoc statements; direct funding projects. Minimum 3 years formal experience in development required, preferably in a university environment. Professional individual, tactful, imaginative, skilled in writing is needed. 74-327-A (4/17).

DSR Staff in the Laboratory for Nuclear Science will participate in fundamental particle research at major accelerators and in data analysis. Candidate must have a Ph.D. with a minimum of two years experience in high energy physics. Detailed knowledge of bubble chamber techniques is essential. 74-222-A (3/13); 74-223-A (3/13).

Applications Analyst – Administrative Staff at the Information Processing Center will work in the Application Services group to advise users on procedures and techniques in setting up a statistical problem for computer solution. The equivalent of a master's degree in statistics or social science with statistical training is required; experience in programming and solving problems is essential. 74-403-R (5/8).

DSR Staff Systems Programmer at Project MAC will perform system analysis and system programming on a research version of Multics operating system. SM or EE degree required; 2-3 years programming experience in the supervisor of some advanced operating system required. Ability to contribute to research and work with students important. 73-1234-R (11/14).

Applications Programmer – Administrative Staff in the Office of Administrative Information Services will translate detail program specifications into computer code; test codes and document program for operational use; review specifications; develop program flow charts; test and debug programs; perform other duties as assigned. Minimum 2 years experience in Business applications programming required. 74-279-R (4/3). 74-573-R (5/29); 74-574-R (5/29).

Systems Analyst – Administrative Staff in the Office of Administrative Information Systems will develop under direct supervision, solutions to business problems; prepare, design, and program specifications for new programs and for modifications to existing systems. Applicants should have business and administrative experience, analytical ability and familiarity with computers. 74-391 (5/8).

Computer Operator IV in the Office of Administrative Information Systems will operate the IBM 370/135 Computer and monitor system performance via console messages. Report operational problems, take corrective action where called for; process production and testing as scheduled. Minimum 1 year operations experience, preferably IBM 360 or 370, DOS multi programming or DOS/VS environment required. 74-620-R (6/5).

Assistant Computer Operator III in the Office of Administrative Information Systems will assist the computer operator: set up and operate computer peripherals; perform routine maintenance on peripheral units; handle input and output media as instructed; operate free-standing off-line equipment. High school graduation or its equivalent, mechanical aptitude and ability to follow detailed instructions. 74-618-R (6/5).

Keypunch Operator III in the Comptroller's Accounting Office will keypunch accounts payable invoices and all input for the Journal Voucher System, on an Infarex Key-to-Disk entry system. Responsible for verifying and balancing all data entered. Minimum 1 year experience required; previous key tape experience desirable. 74-418-A (5/15).

Assistant Food Production Supervisor – Exempt in Food Service will assist in all areas of daily production, inventory and quality control, purchasing and a sanitation program. Will assume full responsibility in the absence of the Food Production Supervisor. Degree or experience in food production, knowledge of menu planning, food production, quality control, food purchasing required. Must be able to work irregular hours and weekends, 3 days 7am-4pm; 2 days 10:30am-7:30pm. 74-454-A (5/22).

Accounts Payable Assistant Supervisor – Exempt in the Comptroller's Accounting Office will coordinate work assignment of clerks processing invoices for payment. Review invoices; supervise processing for payment of graduate awards and fellowships; assist with decisions on section matters and reviews. Bachelor or Associates degree in Accounting, 1-3 years applicable experience required. 74-651-R (6/12).

Assistant Unit Manager – Exempt will assist with the administration and operation of a Food Service Facility. Assist in the supervision of personnel, planning and monitoring daily operations, maintaining standards within the system. Will handle administrative duties in personnel, payroll, budget and purchasing areas. A degree or experience in administration of a food service unit required. Ability to communicate and work with all levels of the MIT community important. 74-453-A (5/22).

Application Programmer – Exempt or DSR Staff will work with the space plasma group in the Center for Space Research. Work includes the reduction and analysis of satellite data, computer graphics, numerical analysis. Knowledge of FORTRAN IV, familiarity with I/0 on an IBM 360/370, strong mathematical background required. Familiarity with assembly language, small computers, operating experience on a large computer system desired. 74-665-R (6/12).

Registered Nurse Practitioner – Exempt in the Medical Department's Emergency Clinic will be responsible for physical assessment, treatment, and counseling of ambulatory patients. Candidate must have completed an Adult Practitioner course or Physician Assistant course and have prior Emergency Clinic or ICU experience. Permanent 4pm-12am. 74-582-R (5/29).

Technician – Exempt or DSR Staff in the Center for Cancer Research will supervise the animal room: insure proper feeding, watering, housing of small animals; maintain records; immunize animals, bleed and collect sera, transplant tumors, perform immunochemical techniques involved in purification of antigens and antibodies, prepare hapten protein conjugates. BS required, MS in Immunology preferred. A conscientious individual with good manual dexterity required. Ability to work with details important. 37½ hour work week. 74-598-R (5/29).

Assistant Editor – Exempt will report and write about activities and events at MIT for *Technology Review's* alumni audience. Describe educational developments, student and alumni activities, etc. Training and/or experience in newspaper and magazine writing about people and events typical of those in the MIT community required. Ability to conduct interviews, write news and feature stories, plan photo essay important. 74-590-A (5/29).

Dental Hygienist – Exempt Staff in the Medical Department will perform initial examination and charting, prophylaxis, periodontal treatment, plaque control. Take and process X-rays, screen dental emergencies. Candidate must be a Registered Dental Hygienist with an AB or BS degree in Dental Hygiene and high academic standing in college. Previous experience in periodontal care is preferred. 8:30-5pm. 74-593-R (5/29).

Pantry Supervisor – Exempt in MIT's Food Service will be responsible for the unit serving areas, flow of food and utensils, portion controls and sanitation program for area. Will supervise the pantry employees. Technical knowledge of food production, ability to work with deadlines under pressure, ability to train personnel required. Must be able to work irregular hours and weekends. 4 days 10:30am-7:30pm. 74-455-A (5/22).

Senior Secretary V for the International Nutrition Planning Program Director, Center for International Studies will coordinate project accounts; manage correspondence; handle office management responsibilities. Excellent typing essential; dictaphone, secretarial and office management experience required. 74-589-A (5/29).

Senior Secretary V (Part-time) will handle a vareity of secretarial and administrative details at the President's home at Watertown. Schedule appointments for Mrs. Wiesner and for the President's House at 111 Memorial Drive; arrange travel, transcribe correspondence, maintain extensive files. Work closely with Dr. Wiesner's secretary; act as liaison for Dr. Wiesner with other MIT offices, community agencies and businesses. Keep payroll and other records; attend meetings when required; write and address invitations for Institute events. Excellent typing and shorthand skills required. Knowledge of the Institute desirable. Discretion, honesty and tact essential to deal with confidential matters and to work in a private home. 25 hour work week; mid-day schedule preferred. Available after 8/1/74. 74-315-R (5/8).

Secretary IV or Senior Secretary V for the Freshman Advisory Council, Office of the Dean for Student Affairs, will have direct interaction with students, faculty and staff on a wide range of personal, administrative and quasi-academic matters and will be responsible for all clerical tasks within the FAC Office. This is a JOB-SHARING OPPORTUNITY for two people willing to accept joint responsibility for one full-time position; preference probably will be given to applicants who present themselves as a team. All proposals which provide for responsible handling of the job between 9 and 5, M-F, and which appear generally feasible will be considered. Applicants must be personable, highly service-oriented, meticulous about details, and reasonably unflappable. Typing skills must be good or quickly improvable. Each applicant must be or have been an MIT employee or student, or spouse of an employee or student, or be able to demonstrate comparable familiarity with the Institute. The FAC is a non-smoking office. 74-633-R (6/5).

Secretary IV or Senior Secretary V to the Director of a new Special Laboratory will assist in all aspects of developing the new lab; organize the Director's schedule and set up the office systems. Some College and 3-5 years secretarial experience; excellent typing and shorthand required. Ability to organize, establish priorities important. 40 hour work week. 74-368-R 5/1).

Secretary IV or Senior Secretary V for Vice President in the office of the President and Chancellor will handle a variety of duties in a very busy office. Arrange and coordinate complicated appointment and meeting schedules; maintain communications among many people and offices of the Institute. Excellent typing, shorthand, organizational skills and command of language are essential; ability to anticipate, recognize and organize priorities and work as part of a team, resourcefulness for handling complex situations, discretion, tact, and good judgment important. 37½ hour work week. 74-343-R (5/24).

Secretary IV or Administrative Assistant V at the Sloan School of Management will handle general secretarial duties for faculty in the Management Science group. Assist in coordinating office assignments; teaching loads and schedules; organize seminars, meetings; monitor accounts. Good typing, organizational skills required; previous MIT experience desirable; college background in math, economics, marketing, helpful. 74-644-R (6/12).

Secretary IV to two professors and affiliated staff and students at Project MAC will handle all secretarial duties for the office. Type and update technical notes, arrange meetings, schedule conferences. Excellent technical typing skills are important. Ability to transcribe dictation from tapes desired. Interest in using PDP-10 computer terminal in documentation and program preparation and distribution. 74-655-R (6/12).

Secretary IV in Nutrition and Food Science will handle general secretarial duties for a professor in the area of food toxicology; prepare purchase requisitions and shipping documents. Good typing, shorthand, dictaphone skills required. Knwoledge of biological and/or chemical terminology, previous experience helpful. 74-656-R (6/12).

Secretary IV in the Real Estate Office will transcribe shorthand dictation; order supplies; maintain inventory and records; occasionally assist with figure work; handle other general office duties. Good typing, shorthand skills required; ability to organize, and to work with figures important. 74-663-R (6/12).

Secretary IV for a group of faculty in the Center for Materials Science and Engineering will type technical reports and scientific work; maintain order records and accounts. Good typing and shorthand, ability to work independently required. 74-666-R (6/12).

Secretary IV in Mechanical Engineering will handle general secretarial duties for several professors in thermo-

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Positions Available

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dynamics. Type technical reports and manuscripts; maintain accounts. Excellent typing required, technical typist preferred; knowledge of office procedures; ability to organize, set priorities important. 74-256-R (6/5).

Secretary IV in the Planning Office will handle all the Director's phone calls and coordinate his busy appointment calendar. Type correspondence, (draft some from verbal instruction), type reports for publication. Excellent typing, dictaphone, organizational skills essential. Previous experience required. Ability to work independently important. 74-628-R (6/5).

Secretary IV to two professors in the Organizational Studies Group at 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. 74-629-R (6/5).

Secretary IV to two Biology professors will handle all general office duties; type technical material from dictaphone; independently perform other office functions. Strong typing and dictaphone skills required; some accounting and organizational ability preferred. Previous experience essential. 74-584-R (5/29).

Secretary IV in Biology will handle general secretarial duties for two labs. Type technical manuscripts for publication; maintain student files; monitor office accounts and supplies. Accurate typing required; ability to work independently, establish priorities, organize work important. 74-585-R (5/29).

Secretary IV to an Economics professor will type manuscripts, correspondence; transcribe dictaphone tapes; schedule travel and appointments; act as liaison with other MIT research centers. Excellent typing, dictaphone skills required. Ability to organize and establish priorities important. 74-569-R (5/29).

Secretary IV will be responsible for secretarial support for full-time physicians in the Medical Department. Schedule appointments; transcribe patient case histories, correspondence and reports. Excellent typing skills required; shorthand and knowledge of medical terminology preferred. Previous secretarial experience important. 74-581-R (5/29).

Secretary IV in Civil Engineering will handle a variety of general secretarial duties. Type technical manuscripts and statistical tables and charts, set up format and proofread; independently answer some correspondence; maintain records and student files. Technical typing skill, previous experience, familiarity with shorthand required. Ability to work on many projects simultaneously important. 74-406-R (5/8).

Secretary IV for the editor-in-chief and two acquisitions editors at the MIT Press. Type letters from tapes and rough drafts; independently acknowledge receipt of manuscripts and proposals; prepare expense accounts; good typing, attentive to details, maturity and tact essential. 74-386-R (5/8).

Secretary IV in Project MAC will type technical manuscripts, class notes and correspondence for two professors. Maintain documents on the PDP/10 computer, answer some correspondence independently. Good typing, knowledge of office procedures, ability to organize and establish priorities required. 74-596-R (5/29).

Secretary IV in Chemical Engineering Headquarters will handle secretarial duties for the Department Head and Administrative Assistant. Ability to establish priorities and to work with a minimum of supervision essential. Excellent typing, shorthand and organizational skills required. Familiarity with MIT procedures helpful. 74-444-R 5/22).

Secretary IV in Mathematics will handle all general secretarial duties; type correspondence, class notes, quizzes; technical reports and manuscripts; maintain mailing lists; will also do some filing and dictaphone work. Excellent typing and/or previous experience in technical typing required. Ability to work under pressure with careful attention to detail important. 74-564-R (5/22).

Secretary IV to the Executive Officer of Chemical Engineering will handle general secretarial duties; maintian petty cash account; make travel arrangements; receive visitors. Good typing, shorthand, and dictaphone skills required; previous experience (MIT preferred) or secretarial schooling; ability to work independently, maturity, tact essential. 74-398-R (5/8).

Secretary IV to the purchasing staff of the Laboratory for Nuclear Science. Type purchase orders, correspondence; maintain records. Will also be responsible for processing articles for publication which involves communication with publishing firms. Reconcile invoices of publishing orders; distribute reprints; maintain files and records of theses and article publications. Excellent typing, organizational ability, independent judgment, initiative required. Library and/or cataloguing experience highly desirable. 74-362-R (5/1).

Secretary IV to the Institute Secretary for Foundations will be responsible for budget accounting, file maintenance; research in reference materials, maintain communications and smooth relations with top level offices of the Institute. Excellent secretarial skills, ability to organize and to use discretion required. Knowledge of MIT desirable. 74-332-R (4/24).

Secretary IV in the office of the Institute Secretary for Charitable Trusts will monitor the office budget; arrange appointment schedules and travel; type correspondence and proposals from dictaphone and handwritten copy, set up and maintain files; act as liaison between the office and other sources inside and outside MIT. May occasionally conduct research on charitable trusts and foundations. Excellent skills, organizational ability, professionalism essential. previous experience required. 74-293-R (4/10).

Secretary III-IV (Temporary/nine month job) in the Humanities Department will work in Kresge for the Music Section and Dramashop. Act as liaison between students and music organizations at MIT; responsible for concert productions – programs, tickets and distribution, publicity, and some bookkeeping. An experienced typist with interest in music and/or drama is desired. Sept. through May. 74-638-R (6/12).

Secretary III-IV in the Center for Cancer Research will handle general secretarial duties; maintain log books and financial records, assist with payroll procedures; type correspondence. Good typing skills required; knowledge of MIT procedures desired. 74-639-R (6/12).

Secretary III-IV to three professors in Nuclear Engineering will type technical reports, manuscripts, class notes, correspondence. Will also assist with admissions-related work, maintain files, schedule appointments. Good typing required; shorthand desirable; organizational skills, maturity, tact, ability to work independently important. 74-623-R (6/5).

Secretary III or IV in OSP Patent Administration will handle all secretarial and reception duties for the office; maintain records; responsible for bookeeping for petty cash account and office expenditures. Good office skills; ability to work independently in one-person office important. 74-626-R (6/5).

Secretary III-IV in Resource Development will handle all secretarial duties for the Institute Secretary. Plan travel schedules make arrangements; assist in gathering and collating information on corporations. Previous experience; excellent typing required; shorthand preferred but not essential. Ability to organize and work independently important. 74-579-R (5/29).

Secretary III-IV will handle secretarial duties in the Child Care Office; help to interview applicants seeking child care; maintain accounts, tuition payment records; compose and type correspondence, promotional literature; edit material for grammar and format; keep statistics. Good typing, ability to establish priorities and work independently essential. Knowledge of accounting procedures, particularly MIT's, very helpful. 74-594-R (5/29).

Secretary III will handle general secretarial duties for several Energy Lab staff members. Type proposals, reports, correspondence (some technical); handle some classwork-related activities, good typing, dictaphone skills required; ability to work for several people and to determine priorities important. 74-603-R (5/29).

Secretary III-IV Part-time in the Center for Space Research will type correspondence, minutes of meetings, progress reports and occasional papers in the Director's office. Good typing, shorthand and dictaphone skills required. Approx. 20 hrs. flexible. 74-595-A (5/29),.

Secretary III in the Industrial Liaison Office will be responsible for records and invoices for publications handled by the office. Type correspondence and copy for monthly publications listing. Good typing skills, ability to work independently and handle light bookkeeping required. 74-642-R (6/12).

Secretary III in the Sloan School of Management will type correspondence, reports, manuscripts, for three faculty. Prepare material for classes, maintain records, handle general functions of one-person office. Good typing with experience in technical typing required. Math background helpful; ability to work independently important. 74-653-R (6/12).

Secretary III in the Electrical Engineering Graduate Office will type correspondence, reports, and a variety of similar materials from dictaphone or rough copy. Maintain student files and records using an on-line interactive computer system. Accurate typing, willingness to learn the use of an interactive computer system. 74-659-R (6/12).

Secretary III Part-time for the Libraries will handle general secretarial duties in an administrative office. Type correspondence, reports, manuals; assist with statistics and flow charts and in maintenance of manuals. Good typing skills required. 20 hour work week: flexible. 74-660-A (6/12).

Secretary III in the Office of Administrative Information Systems will handle general secretarial duties: maintain inventory of technical manuals, program test logs, files; type memos, reports, documents. Excellent typing, dictation skills required. Knowledge of English grammar and general office procedures important. 74-617-R (6/5).

Secretary III to three professors in Ocean Engineering will type correspondence, proposals, reports; maintain files; make travel arrangements and schedule appointments. Good technical typing skills required; some accounting knowledge helpful; previous experience preferred. 74-624-R (6/5).

Secretary III in the Institute Information Services News Office will type and process news releases; file releases and photographs; handle requests for news releases, biographical sketches and pictures; perform other general secretarial duties. Fast, accurate typing required. Pleasant telephone manner and good command of the English language, ability to work under pressure important. 74-631-R (6/5).

Secretary III in the Research Laboratory of Electronics will take shorthand, handle correspondence, make appointments; type course notes, problem sets, quizzes, some involving technical typing; will maintain a small library for journals and technical reports. Some secretarial experience or schooling required. 74-634-R (6/5).

Secretary III will work with an Industrial Liaison Officer in providing services to approximately 15 companies; distribute Institute publications, arrange travel and meetings; compose and type correspondence; maintain mailing lists. Assist with special projects. Secretarial schooling or previous experience preferred. Good typing required; shorthand or speedwriting preferred. 74-452-R (5/22).

Secretary III in Physical Plant will handle applications for use of the Student Center, Kresge and the Chapel; maintain files of records; type Student Center Committee correspondence; handle billing of LSC movies, events, weddings, good business skills required. Ability to deal effectively with students, visitors and others who use the facilities. 74-608-R (5/29).

Secretary III Earth and Planetary Science headquarters will process graduate admissions applications; handle editing and production of department publicity; frequently handle secretarial duties for the Department Head. Excellent typing; ability to edit, and work with students and other personnel in a busy office. 74-609-R (5/29).

Secretary III in the Humanities Library will handle general secretarial duties for the library; maintain payroll records; participate in interlibrary borrowing operation; assist with some bibliographic searching. Speed and accuracy in typing required; ability to work with detail important. Library experience helpful. 74-441-R (5/22).

Secretary III in Aeronautics and Astronautics will assist the Undergraduate Officer with student registration and various other office duties; type correspondence and technical reports for two professors. Good command of English, ability to organize and work with details required. 74-433-R (5/22).

Secretary III in Physics Undergraduate Office will handle all general secretarial duties for several courses; responsible for the Greater Boston Physics Calendar. Good typing (some technical); ability to occasionally work under pressure important. 74-401-R (5/8).

Secretary III in Earth and Planetary Sciences will assist with general secretarial duties for a professor and research group and handle all office duties for another staff member. Excellent typing needed for heavy typing load (technical typing helpful), will compose some correspondence, arrange committee meetings. Ability to handle details essential. 74-321-R (4/17).

Secretary III in Chemical Engineering will type quizzes, reports, technical manuscripts, proposals for three associate professors. Will arrange appointments, file, act as receptionist for the office. Dictation from tapes; technical typing experience preferred. Prompt, dependable, able to accept supervision and follow through on details. 74-162-R (2/20).

Administrative Assistant V in the Provost's Office will assist in the administration of a student teaching program for MIT undergraduates. Coorinate the schedules of high school classroom placements; assist in teaching a weekly seminar and a high school class (probably in math). Background in learning theory, cognitive development, math-science. Experience with educational research, statistical design techniques, high school age students, as well as background or experience in structuring a student teacher-supervisor relationship required. Mass. Teacher certification strongly desired. 74-627-R (6/5).

Administrative Assistant V in Earth and Planetary Sciences will perform administrative tasks for a group of oceanography professors; coordinate with the Woods Hole Oceanographic Institution and several MIT departments on the administration of the joint degree programs; act as liaison between departments; prepare and monitor accounts and budgets. Institute experience desirable; ability to anticipate problems, work independently and make administrative deicisons required. 74-561-R (5/22).

Library General Assistant III Part-time in the Rotch Library will process slides and photographs (research for identification); assist with classification, collection maintenance, circulation; type cards and labels. Background in history of art/architecture required; knowledge of French, Italian, or German required. Accurate typing; ability to work with details important. 25 hour work week. 74-649-R (6/12).

Technical Typist III-IV Part-time in Mechanical Engineering will handle variety of typing; reports, class notes, proposals, some correspondence. Excellent typing required; ability to do technical typing preferred. Good command of English important for answering phones. 25 hour work week, flexible. 74-389-A (5/8).

Senior Clerk III in the Planning Office will be responsible for operating the IBM Mag Card typewriter or similar equipment in this busy administrative office. Above average typing skills required. Previous experience preferred, but will train willing candidate. 74-570-R (5/29)

Senior Clerk III in the Personnel Benefits Office will answer general questions about employee benefits; maintain various files; type correspondence and benefit forms. Ability to handle a heavy volume and variety of clerical duties under pressure essential. Skill and experience in dealing effectively with people, and to establish priorities required. Interest in medical plans, insurance, pension plans, helpful. 74-587-R (5/29).

Senior Clerk IV in the Comptroller's Accounting Office will type correspondence and bills for Institute benefits; maintain data logs for the computer system. Good typing, knowledge of 10 key adding machine required. 74-588-R (5/29).

Statistical Typist II-III in the Comptroller's Accounting Office, Grants and Contracts Section, will type billings to industrial and governmental sponsors, grant reports. Excellent typing required. 74-645-R (6/12).

Clerk-Typist II or Senior Clerk III will assist with a variety of clerical duties at the Haystack Observatory, Westford, MA: maintain records, prepare various forms, handle administrative details of shipping and receiving, occasionally cover for other secretary. High school business courses, typing, bookkeeping; two years applicable experience required. 40 hour work week, must have own transportation. 74-592-R (5/29).

Clerk II in the Office of Administrative Information Systems will operate computer output processing equipment (burster, decollator). Rotate and maintain computer stock; deliver computer output. High school graduation or equivalent, ability to follow directions required. 74-619-R (6/5).

Clerk-Typist II in the Information Processing Center will distribute publications; maintain and update collections of reference manuals, mailing lists. Good typing needed for training in the use of the MTST and technical/statistical typing. Ability to deal with people important; (lot of public contact in this job). 74-572-A (5/29).

2nd Class Engineer must have a Mass second class Engineer's license or higher. Individual must be willing to work on any shift. 37-182-R (11/24).

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 control required. Some experience on turbine-driven refrigeration equipment is desirable. 74-422-A (5/29).

Reactor Operator Trainee IV in Nuclear Engineering will serve as shift operator on the MIT Reactor after passing A.E.C. Operators' Examination. Two years of technical college education or its equivalent background will be necessary for preparing for operators' licensing. Knowledge of electronic circuits would be helpful. Ability to work under pressure of emergencies important. 40 hour work week. 74-560-R (5/22).

Cook at Endicott House, Dedham, MA. will cook breakfasts 6 days a week and make desserts for lunches and dinners. May also occasionally prepare lunches and cook dinner one night a week. Expertise in cooking and presenting a variety of breakfast foods, desserts, hors d'oeuvres required. Maturity, dependability, honesty important. Must be willing to work a very irregular and demanding schedule. Will begin at 6am when preparing breakfasts; will need own transportation. 40 hour work week. 74-658-R (6/12).

Animal Caretaker will clean cages and equipment; feed and water animals following standard or special diet procedures; maintain supplies; performs other related duties as directed. High school graduation or equivalent; minimum one year experience in animal caretaking required. 74-597-A (6/12).

Dormitory Maintenance Mechanic will perform a wide variety of duties related to the servicing, maintenance, repair and renovation of dormitory buildings and associated equipment. Duties fall within the lower skilled range of duties performed by tradespersons. Accept orders, assign priorities, direct work. Familiarity with all common hand tools and small power tools, minimum 3 years experience in maintenance and repair of building fixtures and accessories required. 8am-4:30pm. 74-252-R; 74-253-R (5/29).

Senior Stock Clerk in Graphic Arts will perform all stock room functions; initiate orders for stock; keep reserve stock room records; check requisitions for descriptions. Must have full knowledge of commercial printing paper including: types, finishes, grains, properties, etc. Must be able to use power cutter and work from material cards. Graduation from high school or its equivalent and two years applicable experience required. 40 hour work week. 74-350-R (5/22).

Photographer B at the Graphic Arts Service will assist in photographic work under direction or supervision; carry through darkroom and finishing work without supervision and assist in camera work. Operate Automatic Processors, Color and Black/White Copy Cameras, Graphic Arts Cameras, Photostat Cameras. Bind, mask slides; mix chemicals. Minimum 2 years applicable experience in the field is required. 40 hour work week. 74-425-R (6/5).

Laboratory Assistant Part-time in Physics will wash laboratory glassware and apparatus in a research laboratory. 6 hour work week. M,W,F,3-5. 74-614-R (6/5).

Campus Patrolwoman/Patrolman Minimum 10 years experience required in all phases of law enforcement to include knowledge of court procedures and case preparation, investigation of criminal and other complaints and reporting on same. Rotating shift/40 hour work week. 74-94-A (2/6) .

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

74-451-R	Lib. Gen. Asst. III
74-607-R	Messenger I P.T.
74-447-R	Sr. Sec. V
74-401-R	Sec. III
74-567-R	Sr. Clerk III
74-566-A	Lab. Asst. P.T.
74-430-R	Sr. Clerk III
74-399-A	Sec. III
74-150-R	Admin. Staff
74-358-R	Jr. Diet Aide II
74-381-R	Accts. Pay. Clerk II-III
74-328-A	Tech. Asst. V
74-443-A	Sec. IV
74-396-R	Gen. Helper
74-274-A	Admin. Asst. V
74-600-R	Sec. III
74-417-R	Sr. Clerk III-IV
74-357-R	Admin. Asst. V
74-599-R	Lib. Gen. Asst. III
74-298-R	Admin. Asst. V
74-446-R	Sec. III
74-277-R	Ad. Staff– Ast. Wrtr/Rchr.
74-583-R	Sec. IV
74-580-R	Sec. III-IV

The following positions are on HOLD pending final decision:

74-409-R	Admin. Staff Photojrnlst
74-153-R	DSR Staff