

## Jones to Succeed Hill As Research VP

Dr. Thomas F. Jones, former president of the University of South Carolina and a widely known engineering educator and administrator, has been appointed MIT Vice President for Research, effective July 1.

Announcement of the appointment was made by MIT President Jerome B. Wiesner.

Dr. Jones, who has been a visiting professor at MIT for the past year, will succeed Dr. Albert G. Hill, professor of physics, who is retiring after 38 years of service to the Institute. As vice president for research, Dr. Jones will have administrative responsibility for sponsored research on the MIT campus.

Dr. Jones served as president of the University of South Carolina from 1962 to July, 1974. He was named Distinguished Professor of



Dr. Jones

the University in July, 1974, which title he continues to hold.

In the fall of 1974, Dr. Jones  
(Continued on page 5)

## New Professorship Honors Soderberg

MIT announced Sunday, June 22, the establishment of the Carl Richard Soderberg Professorship in Power Engineering in honor of one of its most illustrious teachers who also gained international recognition for his pioneering work in the design and development of turbine engines.

Chancellor Paul E. Gray made the announcement at a celebration at MIT's Endicott House in Dedham marking Dr. Soderberg's 80th birthday last February. Dr. Gray said the initial funding of the professorship had been contributed by two companies with which Dr. Soderberg has had a long relationship as inventor and researcher, United Technologies

Corporation (formerly United Aircraft Corporation) of Hartford, Conn., and ASEA-Stel-Laval of Sweden.

"Dr. Soderberg's distinguished career in industry and education has evidenced the innovative engineering and the attention to the development of young associates that we recognize and honor in the establishment of this chair," Dr. Gray said. "The Institute is pleased to join with ASEA and United Technologies in this manner in recognition of Dr. Soderberg's contributions to all three organizations."

Chancellor Gray said the chair would be filled by promising young  
(Continued on page 2)



Chancellor Paul E. Gray, right, reads congratulatory messages to Institute Professor Emeritus and Mrs. Soderberg.

## Travelers Like Independence, Variety, Survey Finds

The average MIT traveler is an independent-minded creature, preferring to arrive at his or her destination by air, for an average of one week to ten days, in self-selected accommodations—and liking the whole trip even better if it is paid for by the MIT Quarter Century Club's lottery.

These findings of the recent Quarter Century Club travel sur-

vey revealed the attitudes of 1,257 members of the MIT community, one quarter of whom have participated in MIT-sponsored travel programs on a regular basis. An overwhelming 90% of respondents said they would like to continue to benefit from the pre-arranged trips if, in their own words, "there were more bargains like the one to Japan," "there were more domes-

tic trips," and "fewer scheduling uncertainties or postponement of dates."

Comments about the travel agency responsible for arranging the trips were pro and con, with plane accommodations and baggage handling mentioned as areas of possible improvement and "bravos" for low fares, and winter weeks in warm lands.

Mentioned most often as preferred destinations were Hawaii, Paris, London, Italy and Scandinavia, although respondents failed to indicate an order of preference.

"Some destinations mentioned most often were even more exotic, such as Russia and China," according to Robert J. Radocchia, chairman of the board of the Quarter Century Club. "Ireland

and Greece and its islands were also mentioned along with domestic locations like California, Las Vegas and the Florida Keys."

One traveler who took the time to write in personal comments, asked, "Why not a golf tour?" Individuals who had never participated in MIT Quarter Century Club trips were even more specific  
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## TT Goes on Summer Schedule

Tech Talk will not be published Wednesday, July 2.

Beginning Wednesday, July 9, Tech Talk will be published bi-weekly during July and August. The reduced publications schedule is part of an economy drive that will also necessitate a cutback in total pages from 516 in 1974-75 to 400 in 1975-76.

Institute Calendar periods for the summer are: July 9-27, deadline July 3; July 23-August 10, deadline July 18; August 6-24, deadline August 1, and August 20-September 7, deadline August 15.

Weekly publication will resume with the issue of September 3, but most papers will be eight pages rather than 12 as they have been this year.

In order to make available the maximum space for news, space for classified advertisements and the positions available listings will be reduced. Classified ads will be limited to one page and ads will run on a first come-first served basis before noon on Friday. New positions available will be listed for two weeks only. Thereafter, positions that remain open will be listed by job number and title only, in the section that lists positions filled and positions on hold.



Getting ready for the Cambridge July 4th Bicentennial Parade (from left to right) Ernie Brogmus, a graduate student in management from Elmhurst, Ill., Marian Tomusiak, a junior in aeronautics and astronautics from Manchester, Conn., Charles Funk, a senior in humanities and science from Watertown, Mass., and Burton Richards, a graduate student in physics from Convent Station, N.J. construct a mini-Independence Hall, part of the MIT float which will show Ben Franklin discovering electricity.

## Float Planned For Cambridge Celebration

A float displaying re-enactment of Benjamin Franklin discovering electricity—complete with kite and key—will be MIT's contribution to the Cambridge July 4 Bicentennial Parade.

The parade, commemorating the 200th anniversary of General George Washington taking command of the Continental Army on the Cambridge Common, will be the largest parade in recent Cambridge history.

The MIT float is being constructed by members of the Alpha Phi Omega service fraternity. The

wood and chicken wire creation is approximately six by ten feet and is being built on a metal trailer base contributed by Physical Plant.

The float, capped by an MIT student playing Ben Franklin with a strobe light simulating lightning, will be pulled by a car in the parade.

"We thought it only appropriate that the MIT float depict some American historic moment closely related to science," according to Marian Tomusiak, service vice president of APO. "We picked Ben

## Pension Study Issued

By ROBERT C. DI IORIO  
Staff Writer

The nation's pension fund managers, who control a major share of the country's savings, have avoided investing in the money starved residential mortgage market more out of habit than for economic reasons, according to a report from the MIT-Harvard Joint Center for Urban Studies.

As a result, the study found, the nation's housing needs have not benefited from the potentially stabilizing effect of a flow of money from pension funds—one of the largest and most dynamic sources of capital in the US—nor have pension funds benefited by the less risky and better-balanced portfolios that would result from investments in mortgages.

The pension fund study is the latest in a series of Joint Center reports on issues in national housing policy. "We began this study," according to Bernard J. Frieden, the center's director,

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## Telephone Reminder

Beginning Tuesday, July 1, the MIT switchboard, connecting the main MIT number (253-1000) to all Institute telephones, will be closed from midnight to 7:30am.

During the hours the switchboard is closed, incoming calls will be answered by a pre-recorded message advising that if the call is of an emergency nature, it will be necessary to redial 253-1212 (Campus Patrol) or 253-1311 (emergency medical service).

# Summertime Music Festival Schedules Varied Program



Leading off the Summertime Music Festival will be Alexander's Feast.

MIT will present its fifth annual Festival of Summertime Chamber Music during July as a series of six concerts, including music of the Renaissance, the classical and romantic repertoire, and New Orleans Dixieland Jazz.

The concerts, sponsored by the MIT Music Section, will be held on consecutive Tuesdays in July with a special concert on Friday, July 18. Performances will be in MIT's Kresge Auditorium at 8pm. All concerts except the jazz concert are open to the public free of charge. Tickets for the jazz concert are \$2.50. They can be purchased by calling the Music Office at x3-3210 or TCA at x3-4885.

**Alexander's Feast**, a lively consortium of five musicians and singers, devoted to the performance of early music, will open the Festival on Tuesday, July 1, with a concert of Renaissance music and dance.

The Cambridge-based group, which has frequently performed at MIT since it was organized three years ago.

On the following Tuesday, July 8, there will be a recital by pianist John Buttrick, director of music at MIT. The program will include the Sonata in B Flat, Op. posth., by Schubert, Mozart's C Minor Sonata and shorter works by Beethoven and Chopin.

A former pupil of Beveridge Webster, Rudolf Serkin and Isidor Philipp, Professor Buttrick has performed for several years in annual European concert tours, in recitals, on the radio and as soloist with orchestras in major European cities. He is currently engaged in a project in Europe to record the complete Chopin Mazurkas and will return there next winter for a series with the BBC and an extensive tour of Germany, England, Switzerland and France in solo and chamber music concerts with violinist Abraham Comfort.

The third and fourth concerts on Tuesday, July 15, and Friday, July 18, will feature Abraham Comfort and John Buttrick.

The program for July 15 will include the Mozart Sonata in B Flat, K. 454, Schumann's Sonata in A-Minor, Op. 105, the Debussy Sonata and Beethoven's Sonata in C Minor, Op. 30, No. 2. On July 18 they will present the D-Minor Sonata of Brahms, Mozart's G Major Sonata, K. 301, and Max Reger's C Minor Sonata, Op. 139.

Messrs. Comfort and Buttrick, who performed together in last year's Festival, and who completed an extensive concert tour in Europe last winter, have been hailed by one Zurich newspaper as "the finest duo of this decade."

Abraham Comfort received his early musical training in Bulgaria and later in Israel, where he won the American Israel Cultural Foundation Competition in 1952. After numerous worldwide tours with chamber groups and with the Israel Chamber Orchestra as principal violinist, he was ap-

pointed to the post of Concertmaster of the Winterthur (Switzerland) Musikkollegium, where he serves as principal soloist and first violin of the Winterthur String Quartet.

The New Black Eagle Jazz Band will present a concert of dixieland jazz on Tuesday, July 22.

The group has performed to wide acclaim since 1971—in concerts, for clubs, at festivals—notably the New Orleans Jazz Festival and the "World Series of Jazz"—and on the radio and TV. The group has also made several records, one of which, "The New Black Eagle Jazz Band on the River," was nominated last year for a Grammy Award.

Pianists Nicholas and Trudy Van Slyck will perform an all Schumann program, in the final concert of the Festival, Tuesday, July 29.

Mr. Van Slyck, who is director of the Longy School of Music, studied composition with Walter Piston, and piano with George Reeves and David Bacon at Harvard University, where he received his undergraduate and master's degrees. He has been director of the South End Music Center, conductor of the Quincy Symphony and member of the faculty of the Harvard Graduate School of Education.

Trudy Van Slyck, a graduate of the Longy School of Music, studied piano in Germany with Helmut Roloff, where she was the recipient of the Adenauer Grant. In recent years she has performed as a soloist with the Boston Pops and Boston Civic Symphony.

## Obituaries

### Emery I. Valko, 72, Dies,

A memorial service was held Tuesday, June 24, at the MIT Chapel for Emery I. Valko, the internationally known scientist whose work in the early 1930s helped lay the foundation for modern polymer chemistry. Dr. Valko, 72, a senior research associate at the Department of Mechanical Engineering's Fibers and Polymers Laboratory, died unexpectedly Friday night, June 20.

A native of Budapest, Dr. Valko was a key member of a small group of scientists whose work in the late 1920s and early 1930s laid the foundation of modern polymer chemistry.

Dr. Valko and two other scientists published in the early 1930s a paper on the theory of rubber elasticity which has since become generally accepted as the mechanism of deformation of rubber-like materials.

One of his colleagues, the former Hermine Herminghausen, a fellow chemist, became his wife and survives him.

In 1938, as the political situation in Europe became more precarious, Dr. and Mrs. Valko left Germany. He accepted a position with Onyx Oil and Chemical Co. of

# Soderberg Chair Announced

(Continued from page 1)

members of the MIT faculty to enhance their career development in teaching and research.

Dr. Soderberg, a graduate of MIT in 1920, served on the Institute faculty for 22 years, from 1938 until his retirement in 1960, establishing himself as a prime mover in engineering education.

He was professor of applied mechanics from 1938 to 1942, professor of mechanical engineering from 1942 to 1959, chairman of the Department of Mechanical Engineering between 1947 and 1954, and dean of the School of Engineering from 1954 to 1959. He was appointed Institute Professor—the highest academic rank at MIT—in 1959.

He has maintained close contact with the School of Engineering since his retirement and is consulted frequently on educational and engineering matters. For example, at the request of Dean Gordon S. Brown, he served as acting head of the Department of Mechanical Engineering from February, 1965, to June, 1965, and as acting head of the Department of Naval Architecture and Marine Engineering from February, 1965, to June, 1966. He also advised Dean Alfred H. Keil and Professor David C. White, director of the Energy Laboratory, during the 1972-73 academic year in the early stages of the formation of the MIT Energy Laboratory and has continued to make his experience available to the program; development of this laboratory.

Dr. Soderberg is credited by many of his academic colleagues with having built one of the world's leading mechanical engineering departments—a department whose graduate program is ranked first in the nation according to the latest report of the American Council on Education.

In industry, first through his service in posts of increasing responsibility at Westinghouse and ASEA and later as a consultant, Dr. Soderberg has a long record of achievement in the design and development of turbine engines for Westinghouse, ASEA, United Technologies' Pratt & Whitney Aircraft Division, electric utilities and the power field generally.

Dr. Soderberg, who was born in

Sweden in 1895, was graduated as a naval architect from the Chalmers Institute of Technology in Göteborg, Sweden, in 1919. He came to the US that year on a fellowship from the Scandinavian-American Foundation and spent a year in advanced study of naval architecture at MIT and the University of Michigan. He received a bachelor's degree in naval architecture and marine engineering from MIT in 1920. He became a naturalized American citizen in 1927.

In 1922, after a year on the technical staff of the New York Shipbuilding Corporation, he joined the Westinghouse Electric and Manufacturing Company. He soon became development engineer for large electric machinery, a position he held until 1928.

He then returned to Sweden for two years to undertake development of large turbine generators for ASEA, and rejoined Westinghouse in 1930 as chief turbine engineer. He was in charge of the company's turbine division from 1931 until his appointment to the MIT faculty.

It was during this period that high pressure and high temperature turbines for power and propulsion were introduced. He developed analytic methods in dynamics and vibration of rotating machinery and made original contributions to theory of working stresses and metal failure through plastic deformation.

Beginning in 1941 and carrying through to the present, Professor Soderberg has been closely associated with the progress of Pratt & Whitney Aircraft and its parent corporation.

In 1945, he guided a small group of Pratt & Whitney's first research engineers in formulating the technical base for Pratt & Whitney's first original jet engine design. The product of this task force attack was the J57, which became one of the most successful aircraft engines ever built, making possible for the first time transoceanic jet flights and essentially opening up the jet age.

During the development of the J57, as it became evident that existing testing facilities were no longer adequate for this new level in technological advance, Soderberg became a driving force in the

establishment of Pratt & Whitney Aircraft's Andrew Willgoos Laboratory, the largest privately owned gas turbine altitude test facility in the free world.

In the early 1960s Soderberg took on an active role in encouraging Pratt & Whitney to explore the industrial applications of turbine engines. He served as an advisor during Pratt & Whitney's move into the adaptation of aircraft gas turbine engines for industrial and marine use such as electrical power generation, gas pipeline pumping and ship propulsion.

Soderberg also has been instrumental in forming advisory committees at United Technologies to guide management in areas such as solid and liquid rockets, space power and propulsion, nuclear power and propulsion, solid state and plasma physics and lasers. Presently he is serving on the company's scientific advisory committee.

Dr. Soderberg has received many honors, including a Certificate of Appreciation by the Army and Navy in 1948 for his World War II service as a member of the Office of Scientific Research and Development.

In 1951 he received the honorary degree of Doctor of Technology from Chalmers Institute of Technology and in 1952 he was awarded the John Ericsson Gold Medal of the American Society of Swedish Engineers. In 1955 he received the Exceptional Service Award in recognition of his services to the US Air Force in connection with the development of jet propulsion. In 1959, Tufts University awarded him the honorary degree of Doctor of Engineering. Also, in 1958, he was made Knight of the Order of the North Star by the King of Sweden.

Dr. Soderberg is a Fellow of the American Academy of Arts and Sciences, the American Society of Mechanical Engineers and of the Institute of the Aeronautical Sciences. His memberships also include the National Academy of Sciences, the National Academy of Engineering, the American Association for the Advancement of Science, the American Association of University Professors, the American Society for Engineering Education, the American Society of Naval Architects and Marine Engineers, the American Society of Swedish Engineers and the British Institution of Mechanical Engineers.

He is the author of numerous articles in American and European journals on dynamics, vibrations, design of turbines and generators, and gas turbines.

Dr. Soderberg and his wife, Stina, live in Cambridge and also have a home on Nantucket. They have two sons, both of whom have bachelor's and master's degrees from MIT, and a daughter. The children are C. Richard Soderberg, Jr., of Minneapolis, Minn., Lars O. Soderberg of Tulsa, Okla., and Mrs. Sven O. (Barbro) Dirke of Sweden.

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Peter I. Valko of Budapest, and three grandchildren.

In lieu of flowers the family has requested that donations be made to the E.I. Valko Fellowship Fund, care of Miss Dorothy Eastman, Rm. 3-154, MIT.

### Edward G. Bridges

Funeral services for Edward G. Bridges, a painter for Physical Plant who died suddenly June 23, will be held at 11am, Thursday, June 26, at Folsom Funeral Home, 63 Belgrade Avenue, Roslindale.

Mr. Bridges, 60, came to the Institute in September, 1957. He is survived by his wife, Marjorie; a daughter Peggy Coleman of Walpole; and two sons, Kent W. of Florida and Rodney G. of the Virgin Islands.

### Frederick R. Busby

Frederick H. Busby, 85, of Watertown, who was manager of the MIT Credit Union from 1957 until his retirement in 1960, died on June 22. Earlier in his career he had been employed by the Institute as an accountant. Mr. Busby received an SB degree in electrical engineering from MIT in 1912. He is survived by two daughters, Claire B. Coughlin of Tallahassee, Fla., and E. Jeanne Westphal of Watertown, and a sister Dorothy B. Creede of Arlington, Va.

# Working Group Lists Summer Projects

The Working Group on Office/Clerical Issues is involved in a number of summer projects and plans to meet on a regular basis through the summer months. On Sept. 11 the group plans to submit to John Wynne, vice president for administration & personnel, a series of recommendations in the areas of performance appraisal, communications, compensation and career paths.

At present, the Evaluation Subgroup, composed of representatives from the entire Working Group, is studying the data obtained from the Evaluation Questionnaire on the 1975 Biweekly Salary Review Process. Completed questionnaires were received from 1175 biweekly employees and their supervisors. An analysis and discussion of the complete data will be published in a future issue of *Tech Talk*. A small portion of that data which is of general interest appears at the right.

The Performance Evaluation Subgroup is studying the data and responses to the evaluation questionnaire and has three specific concerns. One, the timing of evaluations and how they interact with salary reviews; two, whether it is possible to define "merit" more clearly as it relates to the salary review; three, the need to refine the forms used in the evaluation process.

This subgroup also plans to look at the basic roles of "supervisors" and "supervisees" in order to support and strengthen the understanding and responsibilities of those roles. A recommendation will be made concerning the office/clerical classification system.

The Communications Subgroup has three areas of activity. Group members are investigating and assessing the effectiveness of such communications techniques as cable television, department meetings, and department or school newsletters. A second concern is the preparation of a proposal for a revised grievance procedure for non-union, non-academic members of the MIT community. Group members are trying to understand how grievance

procedures are handled at other institutions. They have also met with administrators involved in the present procedure. A third activity of the subgroup is the design of a supervisory/orientation program for new supervisors at MIT.

The current goal of the Compensation Subgroup is to fully understand MIT's program of pay and benefits. Members of the Personnel Relations and Fiscal Offices have met with the group and discussed the present program in detail. In the next few weeks attention will be focused on the overall fiscal aspects and implications of compensation, then on a priority ordering of the compensation package to guide the committee during a more intense period of study. The group wants to understand the current compensation program in order to form recommendations in regard to emphasis and possible new direction.

With the goal of promoting greater understanding of the Institute, its jobs and its opportunities for self-development, the Career Paths Subgroup is studying in chronological order all stages of the biweekly employee's career at MIT. At the stage of the initial job interview the subgroup has prepared recommendations on the nature of the job interview, the process of updating job descriptions, and the transfer of organizational information. The subgroup is developing recommendations on an initial orientation (2-3 weeks after hire), a followup orientation (4-6 months after hire), and a series of programs on topics related to effective job performance and personal development.

The Working Group welcomes comments and questions from the Institute community. If you don't know a member of the Working Group, several members' names are listed here along with subgroup affiliations. Performance Evaluation: Larry Beckely, x3-6103; Phillipa Bovet, x3-4382; Nancy Leonard, x3-3928. Communications: Pat Golding, x3-4561. Compensation: Jean Dzengeleski, x3-2934; Dan Langdale, x3-4971

Career Paths: Ann Gordon, x3-4401; Dave Mauriello, x3-6850. Evaluation Questionnaire: Kathy Jones, x3-2701

## HIGHLIGHTS OF THE EVALUATION QUESTIONNAIRE

Please note that all figures used are percentages and are based on responses to the Evaluation Questionnaire on the 1975 Biweekly Salary Review Process. These figures do not necessarily reflect the opinions of the entire Institute community, but of the 1175 persons who replied.

### Who Answered the Questionnaire

- 47.6 Biweekly, Clerical and Secretarial
- 14.6 Biweekly, Other
- 12.9 Administrative Staff
- 10.4 Faculty
- 5.2 Academic Staff
- 4.8 DSR Staff or Technical Staff at Lincoln Laboratory
- 3.7 Exempt
- 0.8 No position given

### Where They Work

- 58.0 Academic Department and/or Center or Laboratory
- 24.7 Administrative Department
- 17.3 Lincoln Laboratory

### Biweeklies' Use of the Evaluation Forms

- 41.6 Used more open-ended form (Performance Review)
- 36.5 Used more structured form (employee Utilization Analysis)
- 18.7 Did not use forms
- 3.2 Used other form

### The Forms' Effectiveness

- 32.7 Actively promoted open discussion
- 32.3 May have encouraged open discussion
- 21.0 Had no effect
- 12.5 Forms not used
- .9 Acted as a barrier to open discussion
- .6 May have discouraged open discussion

### General Reaction to Review Process

- 19.4 } Very satisfied
- 62.9 }
- 43.5 } Satisfied
- 26.2 } So-So
- 7.1 } Dissatisfied
- 10.8 }
- 3.7 } Very dissatisfied

### Tech Talk Supplement

- 50.6 Read it through carefully
- 27.1 Looked it over quickly
- 16.7 Studied it thoroughly
- 5.6 Did not read it

### You Were Told All You Needed to Know to Participate in the Review Process

- 25.0 } Strongly agree
- 70.7 }
- 45.7 } Agree somewhat
- 19.9 } Neither agree nor disagree
- 7.2 } Disagree somewhat
- 9.5 }
- 2.3 } Strongly disagree

### Should There be a Formal Performance/Job Discussion Separated in Time From Salary Review Increase Discussions?

- 62.2 Yes
- 21.7 No
- 16.1 No opinion

# AOC Lists Diverse Schedule

A panel discussion on the human brain by three leading members of the MIT faculty; an expanded look at findings from the 1974 MIT Alumni Survey; and an exhibition by MIT's Gymnastics Team will highlight this year's Alumni Officers Conference scheduled for September 12 and 13.

Approximately 3,250 alumni officers and 1,100 department heads and faculty members have been invited to the two-day conference, which opens Friday evening with four receptions in Stratton Student Center. Plans for MIT's recently announced Leadership Campaign will be presented by Howard W. Johnson, Chairman of the Corporation, at a dinner later that evening in duPont Gymnasium.

President Jerome B. Wiesner will elaborate on the "leadership" concept of the capital fund-raising campaign at the opening session of Saturday's program in Kresge Auditorium. He will be followed by Vice President Constantine B. Simonides, who will review 1974 Alumni Survey findings, and Chancellor Paul E. Gray, who will comment on the quality of life at MIT and curriculum development issues as found in the survey.

James A. Champy, executive vice president of the Alumni Association will discuss the broader implications of the survey as they relate to upcoming alumni programs and the new organizational structure of the Association.

Immediately after the formal morning program in Kresge, alumni officers will adjourn to the Student Center, where they will re-group into five discussion sections. These groups, composed of representatives of the administration, faculty and Alumni Association Office, will provide a forum for alumni officers to question fellow leaders on a variety of alumni-related programs and activities.

A box luncheon on Kresge Mall will be followed by the presentation of the traditional bronze beavers to those few alumni who have demonstrated exceptional service to MIT during the year. Presidential citations will be presented to a small number of alumni organizations in recognition of exceptional group achievement.

At the conference's Saturday afternoon session, Professor Hans-Lukas Teuber, head of the Department of Psychology, will moderate a panel presentation on the relationship of the physical structure of the brain to human behavior.

This presentation, which will also feature John R. Ross, professor of linguistics, and Walle J.H. Nautia, Institute Professor and professor of psychology, is intended to provide alumni leaders with an insight into a specific area of knowledge. According to Richard A. Knight, secretary of the Alumni Association, it will also "provide alumni with a sense of the excitement and breadth of ongoing research here on campus."

The conference will conclude with an exhibition by MIT's Gymnastics Team and a cocktail hour in the Sala de Puerto Rico.

Chairman of the conference is George J. Schwartz, '42, an independent business consultant from Newton, Mass.

# Health Sciences Fund Lists Biomedical Research Grants

Dean Irwin W. Sizer, president of the Health Sciences Fund, has announced the award of grants to support 17 research projects, including nine new projects and eight continuing for a second and final year, from the Fund for fiscal 1976.

Altogether grants totaling \$400,000 have been awarded. This sum includes awards to nine graduate students—five of whom are new and four continuing—previously announced.

New recipients of support for collaborative projects between MIT and the Boston biomedical community are:

Dr. John S. Barlow—Massachusetts General Hospital—a study of

## Lambe Honored

The American Society of Civil Engineers recently named Professor Thomas W. Lambe, Edmund K. Turner Professor of Civil Engineering, this year's recipient of the Karl Terzaghi Award. The award recognizes Professor Lambe's contributions to knowledge in the fields of soil mechanics, subsurface and earthwork engineering, and subsurface and earthwork construction. The ASCE established the award in honor of the late Karl Terzaghi, who was a member of the MIT faculty from 1925 through 1929 and who is generally recognized as the father of soil mechanics.

the vestibulo-oculomotor system as an inertial guidance system for maintenance of gaze during lateral displacements of the body. Dr. Barlow's research is in collaboration with Professor L.R. Young's Man-Vehicle Laboratory of the Department of Aeronautics and Astronautics.

Professor Gordon L. Brownell—Department of Nuclear Engineering—the detection of early thrombi by use of iodinated fibrinogen and gas detector systems. Professor Brownell will collaborate with the Laboratory of Nuclear Science and the Orthopedic Service at the Massachusetts General Hospital.

Professor Murray Eden—Department of Electrical Engineering—the development of a test for donor-recipient histocompatibility, which is a modification of the mixed lymphocyte culture test and will significantly shorten the time needed to assay histocompatibility. Dr. Bernard Carpenter, head of the Tissue Typing Laboratory at the Peter Bent Brigham will collaborate in devising the new measure.

Dr. Robert M. Glickman—Chief of Gastroenterology, Beth Israel Hospital—a study of the surface of human lipoproteins by ultrastructural methods. Dr. Robert Lees of the Arteriosclerosis Research Center at MIT is collaborating on this project.

Dr. Kurt J. Isselbacher, Chief Gastrointestinal Unit, Massachu-

setts General Hospital—a study of the mechanisms involved in increased nutrient transport by malignant cells. Collaboration will be with the Cell Culture Center at MIT.

Dr. Edmund Lowrie—Peter Bent Brigham Hospital—the use of sorbents to remove metabolic wastes in the therapy of chronic renal failure. This research is in collaboration with Professor Clark Colton of the Department of Chemical Engineering at MIT.

Professor Alexander Rich—Sedgwick Professor of Biophysics—the development of a molecule which will specifically inhibit the polymerization of sickle cell hemoglobin molecules. Dr. David Nathan of the Harvard Medical

School will collaborate on the clinical evaluation and development of these inhibitors.

Professor Toyichi Tanaka—Department of Physics—the development of experimental models of cataract formation to assess the role of protein aggregation in different types of lens opacification. This work is in collaboration with Dr. Leo T. Chylack, Jr. of the Harvard Medical School.

Professor Richard J. Wurtman—Department of Nutrition and Food Science—a study of the chemical changes that occur in brains of experimental animals following the induction of "strokes." This research is in collaboration with Dr. Nicholas Zervas, of the Harvard Medical School.

## GSC Seeks Help For Orientation

Students who would like to help with Orientation '75—the day-long orientation program for entering graduate students—are being sought by the Graduate Student Council.

The purpose of the orientation, scheduled for Thursday, Sept. 4, is to aid incoming students in learning the "ins and outs" of MIT and to introduce new graduate students to members of the MIT community and the Graduate Student Council.

The entire MIT student community is invited to participate. Students are invited to come and

mingle with the new arrivals and at least 20 to 25 people are needed to serve as hosts, hostesses, food and coffee servers and table movers.

A tentative schedule of Orientation '75 events includes a coffee and doughnut social in the morning, a picnic luncheon, departmental open houses and a reception with the Academic Council.

Those interested in participating or contributing ideas for the orientation are asked to call the Graduate Student Council office, x3-2195.

# THE INSTITUTE CALENDAR

June 25  
through  
July 13

## Seminars and Lectures

### Tuesday, July 1

Wave-Excitation in a Tokamak by External RF Sources\* - K. Theilhaber, G. Plasma Theory Seminar, 11am, Rm 36-261.

### Tuesday, July 8

Parametric Excitation of Ion-Cyclotron Harmonic Waves\* - D. Watson, research associate, Plasma Theory Seminar, 11am, Rm 35-261.

## Community Meetings

Women's Forum\*\* - Meetings Mon, 12n, rm 10-280.

The Wives Discussion Group\*\* - 2:15-4pm, Stu Ctr West Lge. Babysitting in Stu Ctr Rm 473.

Graduate Orientation\*\* - Meeting of graduate student committee on housing & community affairs Wed, July 9, 4pm, Walker silver rm.

## Social Events

24 Hour Coffeehouse\* - Enjoy relaxing conversation, piano

playing, games, inexpensive food, candy & drinks. Summer hours: Sun-Thurs, 11am-12m; Fri & Sat, 11am-2am; Stu Ctr 2nd fl lge.

Cocktail Cruise of Boston Harbor - Sponsored by MIT Over 30 Singles's Club. Thurs, June 26, Ives Rowes Wharf promptly at 5:30pm, return 8pm. Cost: \$2. New members always welcome. Info: Alice, x3-3400.

Ad-Hoc Over 30's Singles Club - Lunchtime meeting in Stu Ctr East Lge (small dining room off Lobdell), Fri, 12:30-1:30pm. New members always invited. Look for the table with the red balloon. Erica, x3-2117 or Marty x8-1206 Draper.

## Movies

The Mouse that Roared\*\* - LSC. Fri, June 27, 7:30pm, air conditioned Rm 26-100. Admission \$.50, ID required.

Capricious Summer (Menzel) - Film Society. Fri, June 27, 7:30 & 9:30pm, Rm 6-120. Admission \$1.

Where Eagles Dare\*\* - LSC. Sat, June 28, 7:30pm, air conditioned Rm 26-100. Admission \$.50, ID required.

Baiju Bawra - Sangam. Indian movie with English subtitles. Sun, June 29, 2:30pm, Rm 26-100. Admission \$.50 with ID.

Mr. Smith Goes to Washington\*\* - LSC. Fri, July 11, 7:30pm, air conditioned Rm 26-100. Admission \$.50, ID required.

The Given Word (Duarte) - Fri, July 11, 7:30 & 9:30pm, Rm 6-120. Admission \$1.

Kelly's Heroes\*\* - LSC. Sat, July 12, 7:30pm, air conditioned Rm 26-100. Admission \$.50, ID required.

## Music

Alexander's Feast in Concert\* - MIT Summer Concert Series. Performing music and dance of the Renaissance. Tues, July 1, 8pm, Kresge. Free.

John Buttrick, Pianist, in Concert\* - MIT Summer Concert Series. Performing works by Schubert, Schumann, Mozart and Chopin. Tues, July 8, 8pm, Kresge. Free.

## Dance

Folkdancing - International: Sun, 7:30-11pm, Sala. Balkan: Tues, 7:30-11pm, Stu Ctr Rm 491. Israeli: Thurs, 7:30-11pm, Sala. Noon dancing: Fri, 12n-1:30pm, Kresge Oval in good weather, otherwise Bldg 7 Lobby.

## Exhibitions

June Faculty Club Art Exhibit\* - Works by John Fitch.

Drawings from Life by Sheila Murphy\* - During June, Faculty Club Lge.

Works from the MIT Art Collections\* - Sat, May 17-Wed, July 16, 10am-6pm daily & Tues 6-9pm, Hayden Gallery. Free.

Hayden Corridor Gallery Exhibit\* - Selections from the William Barton Rogers book collection and a selection of balloon prints from the Theodore N. Vail collection. Sat, May 17-Wed, July 16, Free.

July Faculty Club Art Exhibit\* - Works by Irene Morey.

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.

MIT Historical Collection\* - Permanent exhibition, open Mon-Fri, 9am-5pm, Bldg N52, 2nd floor.

Freshmen are encouraged to attend departmental lectures and seminars. Even when these are highly technical they provide students one means to learn more about professional work in a department and field.

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

Send notices for July 9 through July 27 to the Calendar Editor, Room 5-111, Ext. 3-3279, before noon Thursday, July 3.

# Pension Funds Could Aid Mortgage Market

(Continued from page 1)

"because we were concerned with the causes and cures of the recurrent housing slumps that keep adding to the country's backlog of unmet social need. By the time we were finished, we were persuaded that pension fund investments were not only failing to make a housing contribution, but were very questionable even in terms of the funds' own objectives." Dr. Frieden is a professor of city planning at MIT.

Even the minor share (about 2.5 percent) of their \$215 billion assets the funds do devote to residential mortgages represents a substantial decline since 1965, said Dr. Kenneth Rosen, a research associate at the Joint Center and the author of the report.

"This disinvestment by the pension funds has occurred despite the chronic shortage of mortgage capital and the increasing availability of mortgage-based securities suitable for pension funds and other institutional investors."

Why have pension fund managers been avoiding such an obvious and important outlet for investment capital?

The MIT-Harvard study found three main reasons:

1. Most private pension funds have delegated management to a small number of large commercial banks located in the nation's financial centers. The trust departments of these banks have been traditionally attracted to stocks and bonds as investments and tend to neglect the alternative investments presented by the mortgage market.

2. Reinforcing the commercial banks' predilection toward stock and bond investment is the need on the part of the pension fund investor to measure the performance of the manager. This performance-measuring need has led to an overemphasis on short-term portfolio gains, which in turn has led to heavy use of relatively volatile common stocks.

3. Pension fund obligations are tied to salary levels, and the increasing indexing of pension fund benefits to the cost of living

has created a strong desire on the part of managers to find assets which they believe to be a hedge against inflation. Traditionally, investors have viewed common stocks as such a hedge.

Why do fund managers view mortgages unfavorably?

Dr. Rosen said the answer he found in dozens of interviews with managers was that they were not fully aware of new developments in the mortgage market—developments such as GNMA (Government National Mortgage Association) pass-through securities which are backed by the full faith and credit of the US government, the Guaranteed Mortgage Certificate (GMC), which represents an interest in a pool of conventional residential mortgages administered by the Federal Home Loan Mortgage Corp., and the mortgage-backed bond (MBB), which is issued by a savings and loan association on the open capital market.

In addition to this lack of information managers also feel "uncomfortable" and "unable to manage" a mortgage portfolio, Dr. Rosen reported.

Although economic arguments were often advanced by managers in an effort to explain why they avoided investing in mortgages, Dr. Rosen said a careful analysis "suggests that these (economic) factors account for only a small portion of the observed portfolio allocation."

Assessing the economic considerations of yield, liquidity, risk, information-transaction costs and inflation hedge, Dr. Rosen made these points:

**YIELD**—"In the past 10 years mortgages have been roughly comparable in terms of total return (interest payments plus capital gains of losses) to high quality corporate bonds and common stock investments. The slightly higher return on common stocks was primarily the result of the higher risk that one must assume in making these investments. The higher returns on stock investments diminish when an adjustment for higher risk is made. In

the last few years the element of risk has been all too evident as mortgage and bond portfolios have outperformed stock portfolios."

**LIQUIDITY**—"Although pension fund managers perceive liquidity as important, this need is difficult to justify. Most pension funds have very long-term obligations and have positive cash-flows. As a result their liquidity needs are small."

**RISK**—Risk of default is non-existent with GNMA-backed mortgage securities and small with FHA- and VA- insured mortgages. The market-value risk due to interest rate fluctuations is the same for mortgages as with corporate bonds, an often used instrument of fund managers. "Alleged concern over risk cannot explain pension fund portfolios. If they were selected to minimize risk they would be diversified over various types of assets. Instead they are concentrated on relatively risky common stocks."

**INFORMATION-TRANSACTION COSTS**—The difficulties of originating and evaluating mortgage investments are often mentioned by managers as obstacles of investment, but the services of mortgage bankers and of the FHA and VA reduce these costs considerably, Dr. Rosen said. "The investor need not originate or service mortgages. Further, the abundant information available on stock investment is often not especially useful."

**Inflation hedge**—Investors have traditionally viewed common stocks as a hedge against inflation but recently they have provided no safety at all in this respect. The conventional mortgage and corporate bonds also do not rate well as inflation hedges. However, index-linked mortgages tied to a measure of inflation would go a long way to meet this need.

How can the interest of pension funds in the mortgage market be stimulated? Dr. Rosen had these comments:

"There are several approaches that might be taken to increase the share of mortgages in pension portfolios. First, corporations should take a more active role in the management of their pension

# Aldrich Wins New Award

An MIT graduate student, David C. Aldrich of Liverpool, N.Y., has been awarded a fellowship worth \$7,000 for his master's degree studies in nuclear engineering.

Aldrich and a graduate student at Iowa State University, David W. Joos, were the first recipients of the newly-established John W. Simpson Westinghouse Fellowships in Nuclear Engineering.

The fellowships were announced by Dr. J. Ernest Wilkins Jr., president of the ANS, and John W. Simpson, officer-director of the Westinghouse Electric Corporation, Pittsburgh, and a former president of the ANS.

As part of his grant, Aldrich will be employed this summer in the Pressurized Water Reactor Systems Division at Westinghouse in Pittsburgh.

Aldrich received an SB in civil engineering from MIT in 1974.



The sprinkler on Kresge Plaza was a hot weather delight for Neil Gillis, 2½, of Somerville, who visited the campus recently with his father, Joseph, a teacher in the Somerville schools. —Photo by Calvin Campbell

## Crews to Vie at Henley

MIT's second varsity heavyweight crew will compete in England's internationally famous Henley Regatta, July 3-6.

The crew, Coach Peter A. Holland and Joseph F. Landquist, the boat rigger from Physical Plant, took off from Logan at 9pm Monday, June 23.

Also making the trip to Henley are four other MIT oarsmen who qualified to compete as a four by bettering the time of 6:49 over 2,000 meters. The time trial was held on the Charles River last Tuesday, June 17.

The second varsity crew qualified by virtue of its victory at the recent Intercollegiate Rowing Association regatta in Syracuse.

The second varsity eight includes:

Anthony S. Foti of Jamaica Plain, Mass., the coxswain; Brian E. Wellendorf of Tuscon, Ariz., stroke; Craig W. Christensen of New Canaan, Conn., No. 7 oar; Thomas R. Crawford of Dhahran, Saudi Arabia, No. 6; Thomas B. Higgins of Delaware Water Gap, Pa., No. 5; Charles F. Jung of Randolph, Wisc., No. 4; Douglas M. Johnston of Auburn, N.Y., No. 3; Joseph L. Healey of Issaquah, Wash., No. 2, and Mitchell S. Seavey of Framingham, Mass, bow oar.

The MIT four will be Thomas Strat of Fort Lee, N.J.; coxswain; Gary G. Piantedosi of Burlington, Mass., stroke; James J. Gorman of Greenfield, Mass., No. 3; John G. Everett of South Easton, Mass., No. 2, and Peter D. Beaman of Hampton, N.H., bow oar.

Contributions from MIT alumni are underwriting the expenses of the second varsity's trip to Henley. The MIT four's expenses are being provided by the US Olympic Committee under a special program.

A very important member of the MIT contingent is the boat rigger, Joe Landquist of Brockton, Mass.

"We're not taking our own shells," Coach Holland explained, "and it's very important that each rowing position be adjusted to each individual rower's preference. That's Joe's job and it's an important one."

This is the first time since 1969 that an eight-man crew from MIT has gone to Henley. A lightweight crew reached the semifinals that year. A four-man MIT crew competed in 1973, finishing second in the final.



OFF TO HENLEY where two MIT crews will compete in the famous regatta are John G. Everett, left, of South Easton, Mass., a senior civil engineering student at MIT, who will row in the four, and Joseph F. Landquist of Brockton, Mass., a member of the MIT Physical Plant Department, the boatman who keeps the MIT shells and oars in tune.

## Travel Survey Results

(Continued from page 1)

in their suggestions: "A steamer trip to the Alaska coast"; "More than one lottery for 'The Trip' per year"; "Music, museum, architecture and garden tours starting from London, Paris or Amsterdam"; "Cancellation insurance"; and "Combined tours with the Harvard or Boston University communities."

Among the least popular items in the survey were planned tours and meal plans with "everything included." More than half of the persons responding to the first category opted for "low cost, optional tours," while 629 requested an all-American breakfast

rather than mid-day meals or late-night suppers.

Other requests made of the Quarter Century Club—which has been offering trip packages for over four years—were for more home mailings and advertisements in *Tech Talk*, as well as increased publicity about MIT's Community Service Fund.

In response to the survey, Mr. Radocchia said commitments have already been made for trips to Greece, Vienna and Istanbul. He added that the Rumania trip—one of the most successful in recent years—will be repeated, and a new tour to the Canary Islands will be offered next April.

## Jones Appointed Research VP

(Continued from page 1)

came to MIT as visiting professor. He has been associated with the MIT Division for Study and Research in Education and the MIT Center for Advanced Engineering Study. As vice president for research, he will retain the title of visiting professor in the Division and in the Department of Electrical Engineering and Computer Science.

A native of Tennessee, Dr. Jones received the BS degree from Mississippi State and both the SM and ScD degrees in electrical engineering from MIT, in 1940 and 1952.

He was on the MIT faculty in the Department of Electrical Engineering from 1947 to 1958. His research was concerned with computers, nuclear instrumentation and missile systems. From 1958 to 1962, Dr. Jones was head of the Purdue University School of Electrical Engineering.

Dr. Jones is a fellow and vice president for education of the Institute of Electrical Engineers. He is a fellow of the American Association for the Advancement of Science, and a member of the

National Academy of Engineering. In 1969-70 he was president of the Southern Association of Land Grant Colleges and State Universities. From 1966 to 1972, he served on the National Science Board.

Dr. Jones and his wife, the former Mary Butterworth of Somerset, Mass., will make their home in Arlington, with two of their five children, Andrew and Katherine.

Dr. Hill, who served as vice president for research from 1970 to the present, was born in St. Louis, Mo., in 1910. He received the BS degree in 1930 from Washington University, and the MS degree in 1934. After receiving a PhD in physics in 1937 from the University of Rochester, Dr. Hill became an instructor in physics at MIT in 1937.

Dr. Hill joined the Radiation laboratory at MIT when it was established in 1940 to develop radar. He eventually became head of the laboratory's largest technical division, devoted to transmitter components. In 1946 he was appointed associate professor of physics and associate director of the Research Laboratory of Electronics, which grew out of the wartime Radiation Laboratory. The following year he was promoted to professor of physics and in 1949 he became director of RLE.

In 1951 Dr. Hill was one of the organizers of the Lincoln Laboratory and served as its director from 1952 to 1955, during which time he was responsible for the design of air defense systems utilizing modern electronic devices—SAGE (Semi-Automatic Ground Environment) and DEW (Distant Early Warning). He returned to teaching and research on the MIT campus in 1955.

Early in 1956 Dr. Hill was called away from MIT to serve as director for the Weapons Evaluation Group and vice president and director of research for the Institute for Defense Analyses in Washington. He resumed teaching physics at MIT in 1959. In 1965 he

became also a lecturer in MIT's Department of Political Science.

Dr. Hill is the recipient of the Presidential Certificate of Merit (1948), the Air Force Distinguished Civilian Service Medal (1955), the American Ordnance Association Distinguished Civilian Service Award (1956) and the Secretary of Defense Distinguished Civilian Service Medal (1959). In 1955 Washington University awarded him its Distinguished Alumni Citation.

A fellow of the American Physical Society, Dr. Hill served as secretary-treasurer of its New England section from 1949-53. He is also a fellow of the American Academy of Arts and Sciences and the Institute of Electrical and Electronic Engineers, and is a member of the American Academy of Political Science, the American Society of Physics Teachers and the Operations Society of America.

Dr. Hill will continue his service to MIT as a senior lecturer and professor emeritus in physics and consultant to the President and Chancellor. As consultant to the President and Chancellor he will assist them and their associates in research and academic matters. Dr. Hill will continue to serve as chairman of the Energy Laboratory Advisory Board.

Dr. Hill lives in Boston.

## CU Nominations

Nominations are being sought to fill a vacancy on the Supervisory Committee of the MIT Employees Federal Credit Union.

The primary function of the Supervisory Committee is to make, or cause to be made, such audits, and to prepare and submit such written reports as are required by federal regulations. Any interested credit union member is invited to submit his or her name for the vacancy. Please drop a note to the Board of Directors, care of Joseph R. Cullinan, Secretary, Rm. E19-563, telling a little about yourself and explaining why you are interested in serving as a member of the Committee. All applications received by July 9, 1975 will be considered.

tax-free donations gratefully accepted. 25 Windsor St, x3-4293.

An Introduction to Multics—Course offered by IPC User Services Group. Mon, July 7-Fri, July 11, 9:30am-12n. Intended for new Multics users. Fee: \$10. Pre-register: Lynne Penney, Rm 39-427, x3-6320.

Subjects Needed—For 3 psychological experiments with pay: students general psych experiment; subjects w/knowledge of French for sleep experiment; French students, bilingual Canadians & Americans. July, x3-6047.

## Placement

The following companies will be interviewing during the time period covered by the current Institute Calendar. Those interested may sign up in the Career Planning and Placement Office, Mon-Fri, 9am-3pm, Rm 10-140, x3-4733.

Careers Advisory Service, University of London—Anne Avant, staff member of the Service, is visiting Fri, June 27, 2pm. This is an opportunity for British students who have not been in touch with the employment situation in Britain for some time to meet with Mrs. Avant.

Equipment Group of Texas Instruments—Recruiting Thurs, July 10. Needs 105 engineering graduates who want to become involved in high technology, state-of-the-art design, development and manufacturing of electro-mechanical systems. Products range from airport surveillance and airborne radars to missile guidance and control and electro-optical systems.

## Graduate Studies

### College Work-Study Program

Applications are now available in the Student Employment Office, Rm. 5-122, for the Graduate College Work-Study Program which begins September 2, 1975. To qualify for work-study employment, a graduate student must be a US citizen or permanent resident, a full-time degree candidate, and must have financial need. The Student Financial Aid Office will determine your financial need by comparing your total resources with the following budgets for tuition and living expenses:

	9 months	12 months
Single	\$6,400	\$ 8,550
Married	7,150	9,550
Married/1 child	7,900	10,550
Married/2 children	8,300	11,100

Whatever the difference between your resources and the above figures is the amount you will be eligible to earn under the program.

Jobs will be available beginning September 2nd; job descriptions will be posted in the Student Employment Office and the Graduate Office as of that date. For further information contact the Student Employment Office, Rm. 5-122, or the Graduate School Office, Rm. 3-136.

## MIT Club Notes

Bridge Club\*—ACBL Duplicate Bridge. Open pairs Thurs, 7pm. Stu Ctr Rm 473. Steve, 782-2756.

MIT/DL Bridge Club\*\*—ACBL Duplicate Bridge. Tues, 6pm. Stu Ctr Mezzanine Lge.

MIT Diet Workshop\*\*—Will be continued another 10 wks. Meetings Thurs, 12n, Stu Ctr Rm 491. New members welcome.

Space Habitat Study Group\*—Meetings Wed, 7:30pm, Rm 24-407. Info: M. Gaffey or B. Hazelton, x3-1917.

Strategic Games Society—Sat, 1pm-1am, Walker Rm 309 & 318. Offers opponents and discounts on merchandise to members plus gaming & periodical library. Help needed for SUMERCON & WINTERCON. Info: Paul Bean, 266-6108 or Robert Sacks, 494-8889. Origins I Avalon Hill Games Convention info: Paul Bean.

Student Homophile League\*—MIT Gay Lounge (Rm 50-306) open for lunch and most evgs; call ahead, x0745 Dorm. Meetings 1st & 3rd Sundays each month, 4pm, Rm 50-306. For info, talk, help in coming out, call Tom at the Hotline, x5440. (Hotline is being moved and is temp out of commission!)

MIT Tae Kwon Do Club\*\*—Meetings & workouts Tues & Thurs, 5-7pm, Stu Ctr Rm 491.

Tech Squares\*\*—Square dancing Tues, 7:30pm, Sala. Admission \$1, at door.

Tiddlywinks Association\*—Meetings Tues & Thurs, 8pm, Stu Ctr Rm 473.

## Religious Activities

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

Campus Crusade for Christ\*—Family time Fri, 8-9pm, Rm 37-252.

Roman Catholic Mass\*—Sun, 10am, Chapel.

Summer Bible Study Group\*\*—Tues, 12:30-2pm, Rm 13-5002.

## INSTITUTE NOTICES

### Announcements

Student Addresses—The Information Center, Rm 7-111, would like to remind all students to update their address cards for the summer.

Official Notice—Applications for advanced degrees in Sept, 1975, must be returned to the Registrar's office, Rm E19-335, by Fri, June 27.

Revised Travel Policies, effective July 1, 1975, are being mailed to department heads and administrative officers. Maximum per diem allowed domestically has been increased to \$25 per day.

Latin American Teaching Fellowships—Teach in Latin American University. Computer science assignments available in Mexico, Costa Rica, Brazil and especially Venezuela. Non-Spanish and non-Portuguese speaking candidates invited to apply. Salary range \$1,000-\$1,500/month. x3-5226.

HoToGAMIT 7—Anyone interested in helping with HoToGAMIT 7, call Gail, TCA, x3-4885, evgs. Use your summer free time constructively. (Well, it keeps you off the streets!)

Freshman Picturebook\*\*—TCA will be putting together the next Picturebook during week of July 28 (evgs). Want to help? Call x3-4885 or come by TCA office, Stu Ctr Rm 450, that week.

TCA Summer Hours—Open approx 12n-2pm, occasional evg hrs. Call ahead to see if open, x3-4885.

MIT Family Day Care Program—Openings for homes in Eastgate & Westgate. If you live on campus & can provide day care in your home for children from infancy thru 5 yrs, call or stop by Child Care Office, Rm 4-144, x3-1592.

Student Furniture Exchange—Open Tues & Thurs, 10am-2pm. Buy and sell to students,

## 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, Thursday, July 3. They will be printed on a first come, first served basis as space permits.

### For Sale, Etc.

F 3 spd bike, gd cond, \$30. Niti, x3-3625.

Cinelli track bike, 21" 531-DB frame, Campagnola hubs, cranks, etc; Cinelli track bars, stem & lugs, Fiame rims. Matt, x3-2551.

Dbl bed frame w/polished wd hd & fbrds, \$25; sgl bed vinyl padded hd & fbrd, \$10. Call, 354-3713, evgs, kp try.

TV, b&w 19", \$80; stroller, \$25; baby cot. Michel, x3-7826.

Shoes, nw, \$5/ea; yel sndls, 8SS; bone flats, 7½S; navy flats, 7½S. Call, 862-1935, evgs.

Fbrglas 9½' sailboat w/trlr oars, ctrbrd, tiller, no jib, \$250 firm. Don, x3-6094.

Entire wardrobe sum dresses, mostly Lord & Taylor, sz 10, 12, some 14, about 3 yrs old, all cleaned, \$5-\$10/ea. Susan, x3-4003.

Custom 11' surf rod, gd cond, \$35. Randy, x3-7069.

Waterbed htr & matt, \$40; also want box spr for qn sz bed. Rick, x7411 Linc, lve msg.

Koni shocks, b nw, for Honda 450, 500, maybe 350, \$45; 2 hlmts, XL & S, best; exercise bike w/tension cntrl & odometer, \$45. Call, 924-0772.

Tower typwrtr, \$25; Harv dbl bed frame & Jrdn Marsh box spr, \$20; solid DR tbl, \$20; lg desk, \$20. Dorothy, 524-1755.

Girl bike, Sears 3 spd, almost nw, best. Kim, x7418 Linc.

Everything for sale: refrig; beds; furn; rugs; TV; phono; fan; typwrtr; etc. Call, 625-9289, evgs or wknds.

Moving: girl full sz bike, \$10; wigs, \$10; old rcrds, best; 18 prs drapes, all colors, \$3/pr; solid mpl desk, ½ pr. \$55; w/mtch Chr. \$5. x3-6286.

Moving: sofa; dryer; AC; dishwasher; buffet; rocker; changing tbl; sled; frpl screen; rug; wine making equip; ice axe; dressers; 12" spkrs; sm items. x3-1580.

Chrome 14" reverse rims, 4, \$40 or best. Ron, x465 Linc.

Sinks, 24x66, dbl bowls: Youngstown, \$30, Universal, \$40; gas stoves, 24x36: Caloric, \$60, Hardwick, \$50. Anthony Polowzanski, x8-3531 Draper.

Refrig, old but runs, free; Kenmore elec broom, \$12. Jan, x7384 Linc.

Span LR set: couch, loveseat, Lane oak coffee & end tbls, 2 lamps, exc cond, \$250; BR set; 9 drwr dresser, mirror, chest, nitetbl, bkshlv/hdbrd, box spr, matt, \$145; formica dinette for 6, \$40. Agha, x3-7199.

Sealey posturpedic matt & box spr w/frame, \$250 nw, yr old, exc cond, \$100; Kenmore vac clnr, exc cond, \$30; Zenith 23" color TV, wint medit cab, natural colors, \$180; crib, \$15. Taleb, x3-7199.

F Raleigh Sprite 5 spd bike, 26", exc cond, lg dbl bsks, case-hrdned chains & padlocks, \$75 or best. Call, 547-4465, aft 6pm.

Coleco pool, 15' diam, 4' deep, compl w/all access, \$150 nego. John, x3-2363.

SCM elec typwrtr, \$75; blu point Siamese kittens, \$20. Perry Cohen, x3-4913.

Sony TC-155 tape deck, \$100 or best; 12 tapes, \$35; AR trntbl, yr old, \$70 or best; Lafayette SA-700 stereo amp, 37.5 W/chnl, \$90 or best. Paul, 536-5146, evgs.

F Phillips 3 spd bike w/side bsks, \$25; 1 snow, F78x14, almost nw, \$15; port typwrtr, \$5; stereo trntbl, \$40. Arye, x3-7511.

AC, Fedders 8000 BTU, 12 amp, used 1 seas. Sharon, x3-5656.

Huge mtl desk; books; rcrds; misc. Call, 494-8181.

Free, 24 cases (2,160) of 10 oz Pepsi throw away bottles. Bill Bradford, x8-3393 Draper.

Rondar '70 505 sailboat, sails & rigging gd, hull fair, anxious for sail. x3-3368.

Above ground 20' diam pool frame, nds liner, 4' deep, free if take away. Toni, x3-7725.

Big playpen, \$15; baby carseat, GM, \$10; baby folding carbed, \$10. Call, 484-8509.

Furn: bureau, \$25; formica coffee tbl, \$20; roll-away bed, \$20; child's low chr, \$5; port BBQ set, Campecue, \$10; port iron, \$5. Call, 494-8669.

Tech Aeroservice flying club mbrship, \$65; Universal ignition harness, 4 cyl, \$4.50. Mark, x7856 Linc.

Raleigh Sprite 5 spd bike, \$45; 10 W/ch stereo sys w/BSR 310X trntbl, \$160; nego. Ken, 247-8691.

Mustang 260 CID eng, auto, 55 K, \$65. GC Newton, x3-4641.

DR tbls: 1 seats 4-6, 1 seats 6-8; factory Singer sew mach; sofabed; dbl bed; best. x3-5780, evgs.

New shoes, nvr worn, stylish, sz 8½-9½, orig \$40-\$50, now \$15-\$20. Steve, x8318 Dorm, evgs.

Fake zebra fur bdsprd & bolsters, turn bed into couch, \$10; hrdry & travel case, \$10; deep prpl evg gown w/gold brocade, sz 10, \$30; b&w Zenith TV & std, \$25; many others. Faith, x3-5809.

JBL Lancer 99 (Athena) ldsprks, 2, exc cond, \$300. Carol, x3-7001.

Remington food warmer, nvr used, \$10; Rem shaver, best mdl, perf, \$5; Sears comb grill/waffle iron, lk nw, \$15. Larry, x3-4749.

Asst 3" coleus seedlings, \$.15; bound copies June, 1947 NYT, \$3. Call, 494-8418, evgs.

TV, 21" tbl mdl; P & E slide rule. x3-7235.

Loveseat, \$50; platform rocker, \$35; rock chr, \$15. Richard, x3-6742.

DR tbl w/4 chrs, \$15; tbl w/3 chrs, \$8; desk lamp, \$5; player, \$3; b&w TV, \$6; typwrtr, \$6; htr, \$1; toaster, \$1; baby carriage, \$8; baby bed, \$8. Kitamura, x3-4315.

Dresser w/mirror, dark hrdwd, gd cond, \$35. Dave, x3-2634.

Elec typwrtr, Smith Corona, 12" carriage, hrdly used, \$110. Call, 354-3353, evgs.

Fedders 8,300 BTU AC, 12 amps, 115 V, \$100 firm; old reuphol chr, \$15. Linda, x3-7023.

TV, 19" b&w w/std, gd working cond, \$25. Mark, x3-7729.

Make brass rubbings in Eng, 1 roll blk, 1 roll red vlvtr rubbing paper & carry case for both, \$12; suitcase whls, \$5. x3-1996.

Tbls: 1 K, 1 wd. x3-4361.

Sofa, 2 pc, \$5; mirror, \$5. Call, 923-9236, evgs.

Moving: must sell all furn, incl dbl bed, \$25; TV; broiler, \$10/ea; sm refrig, \$15; sev rugs; much more. Call, 876-2471, kp try.

Refrig, \$65; washer, \$40; gas stove range, \$90. Call, 666-9877, 9:30am-4:30pm.

Dbl bed, best. Call, 491-6587.

Nearly nw super firm twnd bed w/frame, orig \$170, now \$85. Call, 492-1638, evgs.

African violets. Lee-Or, x3-2454.

### Vehicles

'63 Valiant, 6 cyl, 3 spd, conv, v reliable car, \$175 or best. Call, 924-9119, aft 6pm.

'68 Camaro, std trans, runs great, must sell, \$750 firm. Call, 776-1133.

'68 Merc Montego MX, 302, 4 dr, auto, p st & br, gd cond, \$290 or best. Joe, x7124 Linc.

'69 Dodge Monaco, 4 dr wgn, eng & body exc cond, stereo radio, 54 K, \$1,000 or best. Pereira, 776-0584.

'69 Volvo 164, 4 dr sed, auto, p st, radio, radials & 2 radial stud snws, \$1,200 or best. Jacquelyn Stymfal, x3-5696.

'69 VW camper, pop top, 6 K or rebilt eng, gd cond, \$2,000 or best. Call, 861-9155, aft 6pm.

'69 Opel, gd for parts, best over \$100. Mike, x3-7734.

'70 VW sed, exc cond, \$1,200 or best. Pat, x3-4561.

'71 Dodge Coronet deluxe wgn, ac, p st & br, hvy duty cool sys & frame hitch, exc cond, \$1,250 or best. Tom King, x8-3846 Draper.

'72 Vega Hatchback, std, 30 K, 24 mpg, mint cond, Herb, x5721 Linc.

'73 Ford Torino, auto, lo mileage, exc cond, best. Bill, x366 Linc.

'73 Toyota Celica GT, auto, vinyl top, amfm stereo, radials, exc cond, 40 K, best over \$2,000. Dale, x3-4132.

'74 Datsun Little Hustler truck, 4 spd, camper shell, leath boot, cstm int, dock bumper, Baja front bmpr, am radio, side moldings & mirrors, org. Call, 891-1151, aft 5pm.

'73 Yamaha 250 DT 3, enduro, bought 12/31/73, exc cond, must sell now, w/ sacrifice, \$650 w/tools, manual. Stephen, x182-183-221 Bedford.

### housing

Arl, sub 8/1-6/30, 2 BR hse, K, LR, DR, B, study, furn, 1 car gar, chldrn ok, \$400 & util. Call, 646-4882.

Back Bay, BR sub, all or part of 7/15-8/31, Marlboro by Mass, nego. Call, 267-2780.

Belmont, 5 rm 1st fl apt, nr T, stores, immed occup, adults, \$260. x7492 Linc.

Bkline, ctn 2 BR apt in priv home, nr T, LR, bkfst rm, K, washer, nw B, no pets, fully furn incl K utensils, pkg, ideal visit fac w/child, avail aft 7/1, \$325 incl all util. x3-1661.

S Bos, 4 fam Carson Bch home, gd income, ocean view, cab K, ww, exc buy, \$45,000, 7¼% mortgage take-over psbl. Tom, x8-1231 Draper, 4-12.

Camb, H Sq, BR apt avail 8/1, lse, sm BR, K w/pantry, lg LR w/frpl; for sale: platform bed w/dressers; bkcses; tbls & chrs; leath top desk; more. x3-7580.

Camb, H Sq area, rm & B in priv home for rent, priv entr. Call, 491-4258, evgs.

Camb, Westgate, sum sub furn effc apt 7/19-8/30, \$161 incl util. Marie, x3-3364.

Camb, Eastgate, BR sum sub w/fall opt, \$200. Harold, x3-5607.

Camb, Westgate, sub compl furn BR apt, LR, \$190 incl util. Kim, x3-2526.

Camb, sub now w/Sept opt, lg BR apt, mod K w/disp, nr BU Bridge, S&S, \$205 incl ht, hot wtr, off-st pkg. x3-2223.

Canton, 3 BR twnhse condo, garage, ac, dw & disp, gas, carport, pool, tennis, easy commute, \$38,900. Call, 344-0624.

Hyde Park, Cleary Sq area, 4 rm mod apt, ww, new cab K w/stove & refrig, nw tile B, nr T, qt cpl pref, \$200. Call, 743-9254.

Melrose, 3 BR apt avail 7/1, 15 min MIT, \$195. Call, 662-7854.

W Newton Sq, lg 5 rm apt, avail 7/1, reas rent, util xtra, no chldrn or pets. x5700 Linc.

Som, Beac St bus, 2 BR, K, LR, B, balc, carpet, dw, Indry & pkg facil, several closets, avail now, \$265 incl ht & hot wtr. Ramos, x3-3259.

Som, sum sub w/opt, top fl qt 2 BR apt, mod, dw & disp, ac, pkg, nr Inman & H Sq, discounted to \$250. Sharon, x3-1696.

Som, MIT apt, sum sub w/opt, BR, pkg, \$230 + elec. Berman, 494-8155.

Wtrtwn, 2 BR mod apt, ac, nr T, avail 7/1, \$240 incl ht, hot wtr, pkg, Ron, x3-4364.

Winchester, furn Victorian hse in gd nhrhd, 20 min MIT, 5 BR, lg K, appl, B, 2 frpl, avail 8/1, \$425. x3-4965.

Dennisport, deluxe winterized home, for rent July & Aug, 5 min walk beach, 2 spac BR, lg LR, DR. Call, 862-8452.

Winnepesaukee, sm lakefront cottage, Meredith, NH, rowboat, dock, mooring, slps 4-6, \$165/wk. Joan F, x3-2697.

Nr Rangley, Me, nw beaut 3 BR contemp on huge lake, superb view, mtn wldrness, swim, hike, fish, canoe incl w/rent. x8-2577 Draper.

London, Hampstead, sm apt, 2 BR (1 sm), LR, K, v pleasant blk of flats w/grdn, avail now, approx £950/yr,

## Staff Classification Study

Distribution of the results of the year-long staff classification program began this week.

Over the next week or two, staff members will receive letters notifying them of the details of the new Salary Administration Program resulting from the study, and of the classification and salary range into which their positions fall.

The study was undertaken as a means of assuring equity in salary administration across the broad range of administrative responsibilities throughout the Institute. Conducted by peer group committees, the study encompassed all administrative, academic administrative and library staff positions at MIT.

Altogether, some 510 positions reviewed during the study were grouped into 230 classifications. These classifications were later grouped into nine levels, each with an associated salary range determined after surveying other universities and business firms with comparable positions.

Materials being distributed now include each individual's classification and level, a description of the classification for his or her position, background information on the survey, listings of the staff and faculty members who participated, the classifications determined, and the salary bases for each of the levels.

Specific information concerning the levels of any or all classifications will be available to any staff

shorter rental psbl. E.B. Skolnikoff, x3-3140.

### Animals

Free newborn guinea pigs, 2, avail 4-5 wks. x3-2032.

AKC gldn rtrvr pups, 6 wks, top Eng-Amer bloodlines, both parents hip & eye clearance. x7210 Linc.

Free to gd home, b&w f kitten, 6 mos. Claire, x3-1525.

### Lost and Found

Found: grey (blk & wht striped) wool jckt-shirt. Call, 492-1638, evgs.

### Wanted

Responsible f grad desires free rm in exch for services, no babysitting. E. Wheeler, x3-1496.

Bike, m 3 spd, working. D. Dern, x3-2716.

Venezuelan f, 21, frosh bio stu, nds summer housing, wl pay. Mike, x3-3407.

Daytime pkg space nr H Sq. Call, 391-6854, aft 5pm.

Used Mustang conv, gd cond, auto. Bill, x366 Linc.

Ride for 4 chldrn to MIT Day Camp from Winchester, wl pay gas. x3-4881.

Ride to Schenectady or Albany, 7/3. Larnie, x8-3045 Draper.

Pinball machine. Ed, x3-3740.

Can take 2 riders rnd trip to Buffalo, NY, lve H Sq 1pm, 7/3, rtn early 7/6, must share exp. Don, x3-3550.

Auto tape deck. Mark, 868-4890.

F 10 spd bike, gd cond, lite, under \$100. Margie, x8280 Dorm.

Ross 16" child bike. x3-7009.

Sm grp of sgl prof people & grad stus looking for 4-5 BR hse in Bel/Arl/Wtrtwn area for Sept, refs avail. Jean Ward 876-6860.

Ride to/from Utica, NY area July 4 wknd, for 1 child & 1-2 adults, share exp. Barb, 494-8316.

Alum canoe, exc or v gd cond, 10-14' long. Sarah, x3-5763.

Furn BR apt, walk distance MIT pref, for sr visit fac & wife, 9/1-12/31. E & P Sci hdqtrs, x3-3381.

Prsn(s) to do non-profit feasibility study on wind & solar energy for res home Bos area. Call, 277-9757, aft 5pm.

member or other employee to review in consultation with their department heads or personnel officers.

The study was conducted under guidelines and policies set by a steering committee chaired by Chancellor Paul E. Gray and composed primarily of members of the Academic Council with responsibility for most of the staff members affected. A subgroup of the academic council will maintain a continuing review of the Salary Administration Program and will continue to assess its overall impact and effectiveness.

A standing Classification Review Committee now has been appointed to evaluate newly created positions, and consider requests for reclassification or review. One of the committee's first tasks will be to evaluate a number of positions that were not prepared in time to be considered in the earlier analyses.

Any staff member, and any department head or other supervisor on behalf of a staff member, may request a review of his or her classification. Staff members considering requesting a review are encouraged to discuss their situations with their department head or other supervisor as a first step. A description of the position and any additional information which might be helpful in the review process should accompany each request. Such requests should be filed through the staff member's personnel officer.

Working f, 2, desire to housesit or sub, Bos area, July-Aug. x3-6121.

Bunk beds, Design Research or similar type. Call, 643-7125.

QST Mag bef '30; old ARRL Handbooks & other radio books & mags. Ed, x8762 Dorm, evgs.

Nd rm for occupancy early Aug, wl stay thru academic yr, upper limit \$120. R. Hester, x0238 Dorm, aft 9pm.

Apt, 2 or 3 BR, pref nr H or Cent Sq, beg Sept. Nina Cahan, Hinman Box 18. Dartmouth College, Hanover, NH, 03755.

Responsible MIT cpl want to house-sit for all or part of sum, refs avail. Paul or Donna, 494-8219, aft 7pm.

Lectures on the Icosahedron, by Felix Klein, nw or used, or info on where to find. N. Kerzman, x3-4384.

### Roommates

Rmmate for 3 BR 1st fl apt, Allston, share w/working f. Call, 862-0958, 6-10pm.

Camb, rmmate in 4 BR apt, 6 min walk MIT, avail now w/opt, \$85. x3-2489.

Rmmate for lg apt nr Cent Sq, sum sub w/opt, \$105. Call, 492-2085.

F rmmate, 23+, share spac 2 BR duplex, Camb btwn Cent Sq & BU Br, avail 9/1, bsmnt wash/dry, dw, safe bldg, gd Indrd, no smokers or pets, \$130 incl ht, off-st pkg. Janet, x3-7726.

### Carpools

Ride wanted, Reading to MIT, daily. Rich, x8-3959 Draper.

Ride, MIT-Everett, 5pm, daily. Al, x3-4760.

### Miscellaneous

Singing & piano lessons, qual tchr, B MUS, ARCT, reas rates, free intro lesson. Call, 729-7591.

Wl woman who wrote to Sandy Taylor in NH six mos ago about a housing situation pls contact her. x3-1493.

Wl type theses, term papers, etc, IBM Correct Selec. Phyllis, x3-4237.

Sailboat, 28', avail for charter to exp sailors, 8/3-8/10, \$275; 9/1-9/6, \$210. Butman, x7351 Linc.

Exper sec'y wl type theses, reports, manu, etc, fast & accurate, x3-3761.

Wl type correspondence, gen or tech, IBM Selec. x3-1713.

Typing, theses, manu & reports, IBM Selec. x3-2511.

Wl type theses, other papers. Hedy, x3-7719.

# 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.

Persons who are not MIT employees should call the Personnel Office on extension 3-4251.

Employees at the Institute should continue to contact their Personnel Officers to apply for positions for which they feel they qualify.

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

Virginia Bishop 3-1591  
Mike Parr 3-4266  
Phillip Knight 3-4267  
(secretary - Joy Dukowitz)

Sally Hansen 3-4275  
Jack Newcomb 3-4269  
Evelyn Perez 3-2928  
(secretary - Susan Bracht)

Ken Hewitt 3-6512  
Carolyn Scheer 3-6511  
(secretary - Ellen Schena)

**Admin. Staff, Operations Manager, Medical Dept.** will be responsible for coordination of ongoing operations management functions: act as liaison with medical, administrative and support personnel to define priorities and requirements. Bachelor's degree and 3 years management experience required. Bachelor's degree and 3 years management experience required. MBA, MS or experience in Health Management field preferred. A75-38 (6/25).

**Spons. Res. Staff, Asst. Director, Center for Information Systems Research, Sloan School,** will provide coordination, liaison and administrative assistance to director and faculty of recently established Center: liaison and presentation to corporate and other research sponsors; preparation of newsletters, research proposals; coordination of Institute administrative activities (space, personnel, accounting). Bachelor's degree with working administrative experience required. Familiarity with computer systems, writing and presentation skill, ability to work as team member also necessary. D75-114 (6/25).

**Spons. Res. Staff** will work on Electronic Systems Lab projects on application of Modern Control Theory to optimize traffic flow in a freeway corridor: develop mathematical models, performance criteria, static and dynamic algorithms. Ph.D. majoring in modern control theory, extensive knowledge of theory, algorithms, practice of mathematical programming techniques, stochastic control and nonlinear filtering required. Prior experience with freeway and signalized arterial mathematical models and other transportation problems necessary. D75-115 (6/25).

**Spons. Res. Staff, Programmer,** will develop software systems in educational research for Artificial Intelligence Lab. Do machine language system programming on PDP 11/45 and LISP programming on PDP10. Familiarity with LISP, LOGO, PDP10 and PDP11 assembly language and experience in designing similar software systems required. Experience in operating system and language design and implementation desirable. D75-111 (6/18).

**Spons. Res. Staff, Engineer, in Energy Lab** will work with policy and engineering groups on the impact of regulation on technology development and other technology/policy studies. Ph.D. in relevant engineering field, graduate training in economics, management and public administration, and experience in technical and policy research and interdisciplinary research programs, operation and management required. Knowledge of the US Govt. organization and structure desirable. Applicants should have demonstrated oral presentation and writing skills. D75-112 (6/18).

**Spons. Res. Staff in Energy Lab** will have responsibility for development and maintenance of comprehensive energy data base: develop and recom-

mend policies and procedures on data development, assimilation and data base maintenance; assume technical responsibility for directing data assimilation and development; management of software development; documentation; develop contact with energy related community. Training in computer software systems, knowledge of data and analytical techniques used in energy field and training or experience in economics required. D75-113 (6/18).

**DSR Staff, Biophysicist, in National Magnet Lab** will supervise day-to-day operation of Low Field Lab where magnetic fields produced by the human body are measured, perform specific lab measurements, design lab equipment. Experience with low-frequency electronics, magnetics, heart and lung physiology required. Must be available for occasional evening and weekend work. 40 hr/wk. D75-8 (1/22).

**Spons. Res. Staff in Lab for Nuclear Science** will do postdoctoral research on medium energy nuclear structure with electrons, photons and pions at Bates Linear Accelerator, Middleton. Experience in experimental work in particle or nuclear physics, preferably including use of electro magnetic probe, Ph.D., required. Position is for 1 year, but may be extended. D75-106, D75-107 (6/11).

**Spons. Res. Staff in Lab for Nuclear Science** will do heavy ion physics research including instrumentation development, operation and data handling with MIT groups, using Brookhaven Nat'l Lab facilities (NY). Ph.D. in Physics plus 3 years experience in nuclear instrumentation and interpretation of nuclear reaction data required. Position is for 1 year, but may be extended. D75-105 (6/11).

**Acad. Staff, Asst. to the Director, Center for Advanced Engineering Study,** will have responsibility for all business and personnel affairs of Center: manage financial resources (oversee budget preparation, proposals; carry out financial studies); hire Center personnel; act as Center EEO rep. (monitor affirmative action activity), and as liaison with Personnel Office; participate in special Center, School and Institute activities and committees. Bachelor's degree in social science or science, and management experience required. C75-14 (6/11).

**Spons. Res. Staff Engineer in Energy Lab** project on advanced gas turbines using advanced cooling methods. Candidates should be experienced in advanced testing techniques of turbomachines (i.e., hot blow-down, shock tunnel facilities), in mechanical and aerodynamic design of advanced cooled turbines and analysis of their performance. SM in Mech. Eng., or Aero/Astro, plus minimum of 3 years related experience required. D75-100. (6/4).

**Spons. Res. Staff in CAES** will be responsible for development of innovative curricula for technical education at post-high school level as part of 5-yr research and development program sponsored by Imperial Organization for Social Services, Iran. Initial emphasis will be on curriculum development for grades 13, 14 in electrical, mechanical, civil engineering technology, manufacturing materials technology. Advanced degree in engineering technology, manufacturing materials technology. Advanced degree in engineering or technical education and curriculum development required. Industrial training experience desirable. Some overseas travel required. D75-101 (6/4).

**Admin. Staff, Asst. to Director, Office of Sponsored Programs** will have responsibility for administration of sponsored projects; proposal review, grant and contract negotiations, post-award administration. Will represent OSP in academic depts. and labs in sponsored project matters. Bachelor's degree in business administration, or equivalent combination of education and experience, and experience in sponsored program administration in university environment required. A75-37 (6/4).

**Spons. Res. Staff, Tech. Asst., in Cell Culture Center** will perform technical work relating to production and quality control of tissue culture medium including mycoplasma testing and tissue culture procedures. Bachelor's degree in Biology or Chemistry required. D75-102 (6/4).

**Spons. Res. Staff, in Research Lab of Electronics** will perform system programming for symbolic computation in plasma dynamics. SB in Elec. Eng. and Computer Science, experience in symbolic computation programming and in use of assembler language and computer graphics systems required. Familiarity with plasma physics and knowledge of ITS computer system desirable. D75-103 (6/4).

**Spons. Res. Staff, Programmer, in Humanities** will have responsibility for hardware/software systems maintenance for computer music project: maintain PDP-11/50 and diverse peripherals; oversee student design and construction of special purpose digital

hardware: develop applications software for music research. BS in computer science, or equivalent, experience with PDP 11 DOS systems required. D75-95 (5/28).

**Spons. Res. Staff, temporary, Computational Linguist** in the Research Laboratory of Electronics will be involved in development and implementation of parsing programs, testing and interfacing to morphological and phonological programs. Must have extensive background in English language parsing or understanding systems, and experience with implementation of natural language processing programs, and be able to interact effectively with other programmers and linguists. Temporary for 4 mos. D75-93 (5/28).

**Spons. Res. Staff Systems Programmer, in Humanities** computer music project will assume major responsibility for maintenance of existing system software on PDP-11/50 under DOS or RSX. May develop a music score editor using high resolution vector graphics or develop new operating system support for the special needs of an interactive music system. BS in computer science or equivalent experience with PDP 11 DOS systems required. D75-94 (5/28).

**Admin. Staff, Alumni Regional Representative** for Boston District will be responsible for all Alumni Assn. programs in metropolitan Boston area including Alumni Fund, Club activities and Alumni Relations programs generally. Position requires interaction with alumni, MIT faculty and administration. MIT degree or extensive knowledge of the Institute also necessary. Will report directly to Executive Vice President of the Alumni Assn. A75-35 (5/21).

**Spons. Res. Staff, Biomedical Technical Asst. in Physics** department Biophysics Lab will assist in sample separation of proteins from animal and human lenses; determine properties of isolated proteins, and evaluate biochemical effect of metabolites and catarogenic agents on intact lenses and in vitro lens preparation. BS in Biochemistry or Medical Science, experience in biochemical techniques (chromatography, spectroscopy, substrate and product analysis), and physical chemistry of proteins required. Will be trained in electronics, laser light scattering, and computer. D75-91 (5/21).

**Admin. Staff, Graphic Designer, in Design Services** will have responsibility for all publications of Alumni Assn. Formal education in typography and design as well as considerable experience in graphics design required. A75-32 (5/14).

**Acad. Staff, Tech. Asst. in Nutrition and Food Science** will perform specialized and routine chemical analyses on body fluids using spectrophotometric and fluorometric methodology. Primary responsibility will be in operation and maintenance of Mass Spectrometer; will also use Technicon Auto Analyzer and automated Beckman amino acid analyzer. MT (ASCP) or BS in chemistry, with minimum of 2 years experience in clinical chemistry procedures required. C75-9 (5/14).

**Admin. Staff, Programming Analyst, Information Processing Center** User Services Group will provide programming information and debugging help to users; produce user documentation, conduct seminar, workshops, short courses, implement and maintain software such as debugging compilers, utility tools, plotting packages. Bachelor's degree, preferably in computer science, or equivalent, strong experience with large time-sharing systems, PL/1, Fortran and system control languages required. Communications and documentation skills also necessary. A75-30 (5/7).

**Spons. Res. Staff Economic Advisor at the Joint Center for Urban Studies** will advise the Presidents of MIT and Harvard on the state of the economy and labor force of Cambridge, and prospects for future economic development; evaluate proposals in fields of health, education, housing, transportation, and community development in view of their impact on the advisory committee of faculty and administration members from both institutions. Doctoral degree or equivalent experience in urban economics, manpower, community development required. Ability to work effectively with local government and university officials. Ability to plan and conduct research. 75-753-A (7/17).

**Spons. Res. Staff, Project Manager, for Center for Transportation Studies** research group involved in federally sponsored demonstration project in Integrated Metropolitan Transportation Systems which includes implementation and operation of computerized dial-a-ride system, integration of DAR and conventional fixed route services, development and evaluation of special services for transportation disadvantaged areas. Mgr. will also supervise several graduate students. Masters degree in transportation systems or urban planning with solid transportation background required. Familiarity or experience with conventional transit services effectively with

citizens groups, political leaders, and to make frequent site visits. D75-81 (4/30).

**Admin. Staff, District Officer, in Resource Development,** a major role in capital campaign will be support of volunteers in New England. District Officer will identify and enlist campaign leadership, and assist in making presentations to donors. College degree required as well as effective communication skills - oral and written -, and presence to interact effectively with corporate and financial officers. Background in creative marketing, public relations or similar field helpful. Candidates must have either a close familiarity with MIT or comparable familiarity with Boston leadership community. Extraordinary opportunity for dynamic person with opportunity to become deeply involved in MIT leadership campaign. A75-26 (4/16).

**Admin. Staff, director, Development Office** will have overall responsibility for MIT's central development services; supervise a support staff of 15 people and report to Director of Resource Planning. Minimum 5 years professional fund-raising experience is required preferably in university environment, with emphasis on top-level support functions including prospect identification, evaluation, research, funding strategy development, proposal writing. Demonstrated ability to direct a staff also necessary. (MIT has recently launched a \$225 million, 5 year capital campaign). A75-27 (4/23).

**Admin. Staff, Alumni Regional Representative for NY Area** will be responsible for Alumni Assn. programs in metropolitan NYC area, including the Alumni Fund, Club activities, administrative support for the Educational Council, Alumni Relations programs generally, and various other MIT activities; manage NY regional office. Position requires interaction with alumni, MIT faculty and administration, residence in NYC as well as some other travel. MIT degree or extensive knowledge of the Institute is also necessary. Will report directly to the Executive Vice-President of the Alumni Assn. A75-23 (4/16).

**Spons. Res. Staff, Electrical Engineer, in Lab for Nuclear Science** will work on operation and modification of Bates Linear Accelerator rf system. Minimum of 5 years experience in design and operation of high power microwave transmitter systems is required. Experience with digital systems and computer control systems helpful. Flexible work schedule required to accommodate round-the-clock operation. D75-70 (4/16).

**Spons. Res. Staff, in Lab for Nuclear Science (Linear Accelerator Lab, Middleton, MA.)** will provide instrumentation development, operation and data handling support for research group in electron scattering and other programs. Strong EE or Physics background at BS level, or equivalent, minimum 5 years experience in nuclear instrumentation including Scintillation, Solid State and Multi-wire Proportional Counters, Nanosecond digital and Analogue Electronics, CAMAC required. PDP 11/45 experience helpful. D75-55 (3/26).

**Spons. Res. Staff, Economist/Econometrician in Energy Lab** will participate in projects on development and application of models of domestic and international energy production and utilization: develop and apply econometric procedures to estimate energy models; assist in model formulation and development of energy data and accounts in US and other industrialized countries, supervise junior staff and students, perform related duties as required. Ph.D. Economics, specifically mathematical economics and econometrics, experience in application of functional specifications, such as translog and generalized Leontief, familiarity with economic accounts of at least one foreign industrialized country required. D75-48 (3/5).

**Spons. Res. Staff, temporary in Project MAC Planner Group** will write and implement programs in PLASMA and LISP. Experience in these languages required. Position runs Sept.-Dec. 1975. S75-1 (2/26).

**Spons. Res. Staff in the Energy Lab** must have a minimum of 5 yrs experience in defining, securing, organizing and supervising student theses, research and staff; Ph.D. in Mechanical Engineering required. 74-359-A (5/1).

**Technical Assistant, Acad. Staff, in Nutrition and Food Science,** will perform specialized and routine chemical analyses on body fluids. Operate and maintain mass spectrometer, Beckman automated amino acid analyzer; assist in new methodology development; occasionally supervise other lab personnel. BS, chemistry, biology or medical technology and minimum 2 years experience in clinical chemistry required. C75-4 (2/5).

**Exempt, Dental Hygienist, in Medical Dept.** will perform initial examination

and charting, prophylaxis, periodontal treatment, plaque control. Take and process x-rays; screen emergencies. Registered Dental Hygienist required, preferably with AB or BS in Dental Hygiene. Previous work experience, including periodontal care preferred. E75-22 (6/25).

**Inpatient Staff Nurse, Exempt, in Medical Department** will primarily do bedside nursing and will assist with first aid treatment in emergency clinic. Mass. Licensed RN required. Emergency Room or ICU experience desirable. Rotating shifts: 3pm-11pm and 11pm-7am. E75-12 (6/18).

**Accountant, Exempt or Staff** will perform internal cost audits of research contracts and grants, coordinate accounting, cash flow and audit functions with Office of Sponsored Programs, MIT departments and schools. Prepare billings and varied fiscal reports as required. General business education and 3-5 years accounting experience, or BA in Accounting, or equivalent combination of education and experience required. E75-21 (6/18).

**Exempt, Admin. Asst., Office Mgr. in Libraries** Microreproduction Lab will be responsible for office management, financial and statistical, security, personnel and purchasing functions of Lab. Duties include supervision of 4 employees and of the processing of all requests, maintenance of accounting records, assistance in analyses and budget preparation; handling of classified materials. Will perform other related duties as required. Administrative skill and an interest in microfilm applications are required. E75-19 (5/28).

**Tech. Asst. V in Psychology** will handle technical and data analysis aspects of neurohistological work including small animal surgery; perfusion and preparation of brains for histological procedures (silver stains, normal cell and fiber stains); microscopic analysis of results; graphical reconstructions. Experience in histological procedures including a knowledge of cytoarchitecture of small animal brains and reconstruction techniques required. B75-237 (6/11).

**Tech. Asst. IV programmer, part-time, temporary, in Architecture** will program graphic data from land use maps and building space-behavior maps; assist in development of innovative graphics programs relating to site and design prediction; catalogue computer routines for replication. Familiarity with SPSS, Multics, Architecture Machine, desirable. 20 hrs/wk. Position runs through 5/31/76. B75-190 (5/14).

**Secretary V for large Civil Engineering research group** will supervise and coordinate work of secretaries and other group members. Perform general secretarial duties: type and compose correspondence; schedule and organize meetings; arrange extensive foreign and domestic travel; arrange visitor housing; monitor accounts; payrolls; maintain files. College and/or secretarial school training and secretarial experience required. Discretion, ability to interact well with people at all levels necessary. Non-smoking office. B75-274 (6/25).

**Admin. Asst. V in Architecture** will perform secretarial duties relating to elderly housing project; prepare student payroll, assist in preparation of grant proposals. Secretarial skills, flexibility, experience with Federal grants and MIT accounting procedures required. Position begins 9/2/75. B75-257 (6/18).

**Sr. Secretary V in Office of the Director, Arteriosclerosis Center** will arrange complicated schedules; maintain extensive telephone contact within MIT with medical institutions and patients; review and type final draft manuscripts; file. Excellent typing and machine transcription skills, ability to work in high-pressure, hospital-like setting with little supervision required. 37 1/2 hr/wk. B75-223 (5/28).

**Secretary IV-V in Harvard-MIT Program in Health Science & Tech.** will perform varied administrative and secretarial duties in Program's administrative office. Must have organization and secretarial skills, and be able to work independently. Shorthand and knowledge of MIT accounting procedures desirable. Command of English language necessary. Non-smoking office. 37 1/2 hr/wk. B75-234 (6/4).

**Secretary IV to Harvard-MIT program in Health Science and Technology** will perform secretarial duties for inter-institutional research group working on health care technology project: transcribe from oral and machine dictation; arrange travel; administer grant, edit and type manuscripts; Excellent secretarial skills including shorthand/speedwriting and interest in health care required. College training, familiarity with medical/technical subjects desirable. B75-252 (6/11).

(Continued on page 8)



"HELLO RUTH, We love you dearly," read the "diploma" presented to Ruth Dawson at a retirement party in her honor last week. Miss Dawson, administrative assistant for investments in the Comptroller's Accounting Office, has been with MIT for 34 years. Left to right above are: Paul V. Cusick, vice president for fiscal relations, Miss Dawson, Thaddeus W. Kowilcik, personnel administrator in Accounting and Joseph R. Cullinan, Payroll accounting officer. Other presents given Miss Dawson were a watch, suitcase and Revere bowl.



A WHITE RABBIT was the surprise highlight last week at a retirement reception at the Faculty Club for G. Edward Nealand, director of purchasing, who is leaving MIT after 29 years. The rabbit, a symbol of Mr. Nealand's nickname, "Bunny," was one of three gifts which included a painting by Andrew Hamilton, foreman of laboratory supplies, and a handsome grandfather clock. Shown above left to right are: Mrs. Nealand, their daughter, Mrs. Judith Shaw, Mr. Nealand and Paul V. Cusick, vice president for fiscal relations.

—Photos by Calvin Campbell

## Positions Available

(Continued from page 7)

**Secretary IV** to Material Science and Engineering research group will handle general secretarial duties including shorthand dictation, monitoring of project accounts. Must be able to speak and write Spanish to assist in international program. Excellent secretarial skills, ability to organize work required. B75-271 (6/25).

**Secretary IV** to Material Science and Engineering faculty member will type technical papers, reports, class material from machine dictation; maintain files; monitor OSP accounts; arrange meetings and travel; do some library research. Excellent typing, command of English language, proofreading skills required. Shorthand, MIT experience desirable. B75-273 (6/25).

**Secretary IV** to two physicians in Medical Dept. will schedule and prepare materials for examination; transcribe case histories, reports and correspondence; answer phones; coordinate calendars for clinic and infirmary coverage. May assist other secretaries as required. Excellent typing skill, familiarity with medical terminology (or willingness to learn), experience with machine dictation required. B75-278 (6/25).

**Secretary IV** to Economics faculty member specializing in economics of oil and energy will type correspondence and manuscripts from machine dictation; arrange travel and meetings; act as liaison with other research centers; handle phones. Ability to manage office independently, excellent typing skill required. B75-277 (6/25).

**Secretary IV** to Oceanography faculty and staff in Earth and Planetary Sciences will perform general secretarial duties: type correspondence; arrange meetings, file. Handle complicated foreign travel and shipping arrangements; monitor research accounts. Ability to work independently, typing skill, good judgment necessary. Knowledge of Institute procedures helpful. B75-279 (6/25).

**Secretary IV** to Director and Administrative Officer, Division for Study and Research in Education will perform general secretarial duties; arrange appointments; maintain calendar; place large volume of telephone calls; take and transcribe dictation. Ability to interact with and assist a wide variety of people, to relay messages accurately, to organize and follow through on work required. Shorthand, secretarial experience or training also necessary. B75-263 (6/18).

**Secretary IV** to several Mechanical Engineering faculty members will type varied material; arrange travel, appointments, coffee seminars; maintain accounts. Excellent secretarial skills including shorthand/machine dictation, technical typing and the ability to interact well with people required. Possible job-sharing opportunity. B75-253, B75-255 (6/18).

**Secretary IV** in Research Lab of Electronics will perform secretarial duties for several faculty and staff; transcribe and type technical material from shorthand notes; type charts, tables; verify report references; arrange report formats; arrange appointments and travel; independently reply to correspondence. High school training,

or equivalent, plus 3 years secretarial experience required. B75-267 (6/18).

**Secretary IV** to Assistant Directors, Development Office will maintain calendars, files, telephone; type error-free reports and correspondence including material for senior Institute officers. Initiative, mature judgment, discretion and a sense of teamwork desirable. Excellent secretarial skills, ability to interact with Institute personnel at all levels necessary. Shorthand helpful. B75-268 (6/18).

**Secretary IV** in Political Science will handle duties related to student job placement involving contact with students and other university representatives; perform secretarial and administrative duties for publication (*Journal of Interdisciplinary History*), possibly including some editorial work. Will also type manuscripts, do library research. Excellent typing, college training and 3 years office experience required. Ability and willingness to assist people required for job placement activities. Shorthand helpful. Position begins 9/1/75. B75-238 (6/11).

**Secretary IV** to Mechanical Engineering faculty member will type correspondence, proposals, class material from tapes; answer phones; file; may do occasional secretarial work for other staff and students. Typing skill, command of English language and ability to use dictation equipment required. Knowledge of medical, biological, and engineering terminology helpful. B75-242 (6/11).

**Secretary IV** for Sloan School Senior Executive Program and Urban Executives Program will make living arrangements for participants, schedule classes, order and prepare program materials; handle routine correspondence; maintain records; handle program announcements; Typing, shorthand/speedwriting skills, initiative ability to follow through on details required. B75-244 (6/11).

**Secretary IV** to two faculty members in Center for Space Research will handle volume typing of correspondence, reports; arrange travel and meetings; act as student and staff contact. Organization and technical typing skill required. Ability to work independently also necessary. B75-248 (6/11).

**Secretary IV** to Lab for Nuclear Science research group including faculty, students, staff will type and edit reports, manuscripts which include technical material; arrange appointments, travel; maintain files and budget records; answer phones. Excellent typing skill, flexibility required. 32½ hr/wk 9am-4:30pm. B75-245 (6/11).

**Secretary IV** to two Civil Engineering faculty members: type and edit course material, correspondence and technical reports; answer phones; maintain files; monitor accounts; arrange travel. Typing skill required. Must be able to type technical material or be willing to learn. B75-229 (6/4).

**Secretary IV** in Harvard-MIT Program in Health Sciences and Technology will perform general secretarial duties: type, file, arrange travel and meetings; edit and proofread reports; write and/or suggest replies to office correspondence. Excellent typing skills plus 5 years secretarial experience required. Shorthand/speedwriting, familiarity with MIT procedures desirable. B75-214 (5/28).

**Secretary IV**, part-time, in Architecture Solar Energy Lab will perform general secretarial duties; compile

bibliographies. Will be trained to provide information on Lab's activities to callers and visitors. Typing skill and ability to deal with people required. 15-20 hrs/wk. Position begins 8/1/75. B75-193 (5/21).

**Secretary IV** to two Mechanical Engineering faculty members will handle general secretarial duties including large volume of technical typing; make travel arrangements; monitor sponsored accounts; arrange seminar coffee hours. Excellent technical typing skill, ability to set priorities required. B75-170 (4/30).

**Secretary III-IV** in Chemical Engineering will type correspondence, class materials, reports, including technical data; maintain student records; act as receptionist, arrange appointments and travel. Fast, accurate typing, organization skill required. Technical typing experience preferred. B75-265 (6/18).

**Secretary III-IV** in Purchasing Dept. will handle varied secretarial duties including typing of correspondence and forms, filing, record keeping; answer phones; greet visitors; answer inquiries regarding purchasing procedures; research billing problems. Accurate typing, initiative required. B75-259 (6/18).

**Secretary III-IV** in Medical Department Radioactivity Center will have responsibility to contact radium patients for participation in MIT studies. Work requires some evening work (compensatory time off during regular work week). Will maintain equipment and supply records; compose and type memoranda; interview patients; process requisitions, travel vouchers. Excellent telephone manner, ability to relate to elderly people, typing skill required. Some college helpful. 37½ hr/wk. B75-247 (6/11).

**Secretary III-IV** in Meteorology will handle general secretarial duties for faculty member and staff; type correspondence, manuscripts, including technical material; arrange travel, monitor accounts; maintain small library. Position offers opportunity for independent work and expanded responsibility. Excellent typing and organization skills required. College training preferred. Position begins 8/15/75. B75-209 (5/21).

**Secretary III** to Subcontract Administrator in Office of Sponsored Programs will process requisitions and change orders; verify accurate; obtain additional information and signatures as required. Type letters, purchase orders; arrange meetings; answer phones; maintain signature list. Experience with financial records; purchase orders, accounts receivable, payable, typing skill required. B75-275 (6/25).

**Secretary III** to three faculty members, Organizational Studies Group, Sloan School, will handle correspondence, manuscripts, reports, course material; arrange travel, answer phones. Secretarial training including good typing skill required. B75-280 (6/25).

**Secretary III**, part-time, in Alumni Assn., Records Office, will process address changes; prepare records for computer file; answer phones; assist other secretaries as required. Good typing, telephone manner, accuracy with detail required. Familiarity with machine dictation helpful. 25 hrs/wk. B75-251 (6/25).

**Secretary III** in Treasurer's Office will perform general secretarial duties under supervision of Admin. Asst: open and distribute mail; greet visitors; answer phones; type correspondence.

Shorthand and machine dictation skills, facility with figures required. Knowledge of investments helpful. B75-258 (6/18).

**Secretary III** in Operations Research Center will assist three persons in headquarters office: maintain calendar; type reports and correspondence; monitor accounts; answer phones; coordinate seminars, workshops, assist with other general office functions. Technical typing skill, or willingness to learn, flair for figures, ability to work with detail required. B75-270 (6/18).

**Library Gen. Asst. III** in Science Library will perform general stacking and circulation desk routines: sort, distribute, reshelve materials; charge and reserve books; interpret procedures and answer inquiries for users; compile statistical data; supervise student assistants. Clerical aptitude, accurate typing, ability to work without supervision required. College training desirable. Night schedule (Summer, M-Th, 1-9, Fri, 10-6; Winter, M-Th 4-12, Fri, 1-9). May alternate other night schedule with other assistant, and may work occasional days in summer. B75-187.

**Computer Operator IV** in the Office of Administrative Information Systems will operate IBM Model 145 and associated peripheral equipment under DOS/VS. Must have good knowledge of DOS job control, multiprogramming experience and ability to follow standardized operating instructions. Minimum 1 year experience required. 12 midnight-8am shift. B75-195 (5/21) 4pm-12midnight shift B75-251 (6/11).

**Keypunch Operator III** in Comptroller's Acctg. Office will keypunch data input for Account Reporting System (accounts payable, receivables, travel advances, journal entries); verify and balance batch input. 2-3 yrs. keypunching experience required. Knowledge of Inforex key-to-disk entry system helpful. B75-215 (5/28).

**Sr. Clerk IV-V** in Comptroller's Acctg. Office will tabulate research expenditures and cash flow for sponsored research projects; assist in data collection for cash forecasts; maintain daily cash balances; prepare monthly billings and fiscal reports; handle all aspects of interim and final audits. Interest in and aptitude for figures, 2-3 years accounting experience required. Good typing desirable. B75-254 (6/18).

**Sr. Clerk IV** in School of Humanities and Social Science, Oral History Lab will transcribe from dictation equipment, index, catalogue and file related materials. Transcribing experience, excellent typing required. Archival experience and/or scientific background required. B75-272 (6/25).

**Sr. Clerk IV** in Office of Personnel Relations will provide comprehensive clerical and statistical support to Wage and Salary section. Duties include data collection, computations and extensions; develop charts, graphics, summaries. Perform varied clerical duties related to unemployment compensation program: process claims, act as liaison with Institute departments. Will also provide general clerical assistance as required. A flair for working with figures, initiative and typing skill required, as well as an interest in learning basic APL programming desired. B75-246 (6/11).

**Clerk III** at MIT Press will assist in taking phone orders, greet visitors, distribute mail; assist secretary and staff with typing. Excellent typing skill, ability to use dictation equipment, familiarity with office procedures required. Secretarial school

training desirable. B75-261 (6/18).

**Cook** at Endicott House, Dedham, Mass, will cook breakfasts 6 days a week and assist in luncheon, dinner preparation; prepare dinner 1 night per week; assist in preparation and serving of large functions; wash utensils used in cooking and clean kitchen. Expertise in preparing and presenting attractively a variety of breakfast foods and in baking, preparing desserts and hors d'oeuvres required. Must be punctual, reliable; will begin work at 6am when preparing breakfast. Own transportation required. 40 hr/wk. Irregular schedule. H75-62 (6/4).

**Machinist A**, temporary in Lab for Nuclear Science will set up and operate commonly used machine tools with minimum supervision, working to close tolerances from blue prints, specs., verbal instruction or sketches; make tools, dies jigs and fixtures as required; may direct and train lower-grade machinists; machine parts for nuclear physics experimental apparatus. May carry jobs from preliminary stages to complete assembly (planning sequence, selecting tools and equipment); make precision angular layouts, measurements; use shop mathematics. Minimum of 5 years applicable machinist experience required. Temp. for 3 mos. 40 hr/wk. H75-59 (6/4).

**Instrument Maker** temporary, in Lab for Nuclear Science must have all qualifications for Machinist A and demonstrated mechanical ingenuity and experience in construction, adjustment and repair of a wide variety of instruments and experimental apparatus related to scientific and research work; may direct and train other machinists; duties include machine and assembly of precision parts, mechanical movements; make cameras, collimators, scattering chambers; work with all standard machine tools and instruments. Must have secured formal apprenticeship (3 yrs), and have 10 addl. years experience working to close tolerances on precision instruments and/or intricate mechanical devices. 40 hrs/wk. H75-60, H75-61 (6/4).

**Technician B (EM)** in Lab for Nuclear Science at Brookhaven Nat'l Lab., L.I., N.Y. will assist in laboratory or research work; operate experimental and technical equipment. Experience in use of lathes, milling machines, power tools, familiarity with wiring equipment, and ability to modify piping and associated hardware required. Familiarity with gas flow and vacuum equipment desirable. Graduate from 2 year day technical school, or equivalent, ability to work without supervision and to travel, as necessary, to other locations (MIT, Fermi, Nat. Lab., Batavia Ill.) and work there for varied time intervals required. Must work extended shifts including nights, weekends, and be prepared to relocate at end of project. MIT transfers only. H75-55 (5/21).

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

B75-250	Secretary III-IV
D75-109	Spons. Res. Staff
B75-243	Secretary IV
B75-230	Clerk III
D75-108	Spns. Rs. Staff (cncl'd)
H75-63	Glassware Washer
C75-7	Acad. Staff
C75-12	Acad. Staff
C75-13	Acad. Staff
B75-206	Secretary V
B75-186	Secretary III
B75-212	Secretary IV-V
B75-205	Sr. Clerk III
B75-249	Secretary III
D75-92	Spons. Res. Staff
B75-252	Secretary IV
A75-16	Admin. Staff