Massachusetts Institute of Technology



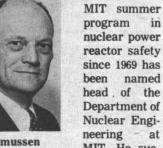
June 11, 1975 Volume 19 Number 48

Rasmussen Named Head Of Nuclear Engineering

director of the

Dr. Norman C. Rasmussen, a member of the nuclear engineering faculty since 1958 and

Rasmussen



nuclear power reactor safety since 1969 has been named head , of the Department of Nuclear Engineering MIT. He suc-

ceeds Dr. Edward A. Mason who

took a leave of absence in January

when he was appointed to the

Nuclear Regulatory Commission by President Ford. Dr. Kent F. Hansen, professor of

nuclear engineering, has been serving as acting head of the department since January.

Dr. Rasmussen's appointmenteffective July 1-was announced by Professor Alfred A.H. Keil, Dean of the School of Engineering.

"We are indeed fortunate," Dean Keil said, "to have a man of Dr. Rasmussen's caliber at the helm of the best department of nuclear engineering in the country. His academic work, his re-

(Continued on page 2)

Arthur Solomon Appointed New Director of JCUS

at

Professor Arthur P. Solomon of the Department of Urban Studies and Planning at MIT and a widely

recognized authority on housing and urban affairs has been appointed director of the MIT-Harvard Joint Center for Urban Studies. Announcement of the



Solomon

appointment was made jointly by MIT President Jerome B. Wiesner and Harvard President Derek Bok

A native of New Haven, Conn., Professor Solomon was graduated from Brown University in 1961, received a master of arts degree from Trinity College in 1968, and a doctor of philosophy degree from Harvard University in 1971. During the interval between his undergraduate and graduate education he was director of Manpower and Economic Development at the United Planning Organization, Washington, D.C., and a staff member of President Johnson's (Continued on page 4)

Dinner Honors 117 Retirees



Dorothy Earle of Campus Housing and Leonard Whaley, manager of East Campus, converse with

President Wiesner at retirement dinner. See story - and other pictures on page 5.

Government Blunders' Caused Recession

By BARBARA BURKE

Staff Writer

Government blunders are to blame for the 1972-75 recession, Robert M. Solow, Institute Professor and professor of economics at MIT told returning alumni and their families on Alumni Day, Friday, June 6.

Professor Solow discussed lessons to be learned from the recession in a morning panel moderated by Provost Walter A. Rosenblith, in which five professors from different fields discussed ways in

which science and technology can help solve society's problems.

He criticized President Ford and his advisors for "clinging to the mindless optimism that always characterizes American presidents in their approach to economics."

If the government had responded more quickly, and in a more realistic fashion, the recession would have been much less severe. he said.

Other speakers on the panel were Frank Press, head of the Department of Earth and Planetary Sciences and Robert R. Shrock Professor of Geophysics; Herman N. Eisen, professor of immunology; Myron Tribus, professor of engineering and director of the Center for Advanced Engineering Study; and Donald A. Schon, Ford Professor of Urban Studies.

Dr. Press recommended that more money and attention be devoted to earthquake prediction and earthquake engineering in the (Continued on page 3)





Judith Ungermann, of Marblehead, a secretary in the Department of Earth and Planetary Sciences, placed seventh in the Greater Boston Speed Typing Contest last week. Mrs. Ungermann who types 100 words a minute, decided to enter the contest on her own, as did seven other MIT women: Michelle Jarrabet, of civil engineering, Janice Thompson and Marguerite Ampolo, both of Lincoln Laboratory, Roberta Caruso, of chemical engineering, Gloria Marshall of Project MAC and Mary DeGon and Margery Van Moortel, both from the Medical Department. Five men-one of whom won-were also among the 135 competitors.



Left to right: Andrea Carter and Antoinette, Susan Kern and Heidi, Karen Gilman and Andrew, Jim Brau and Daniel, Martha Schecter and Peter, Ora

Agmon and Tal. and in the pool Mary Brau waits to catch her son Benjamin.

-Photo by Calvin Campbell

Babies Take to the Water in Novel lass

Fetal kicking-so familiar to expectant mothers-is part of a newborn's automatic response to water that gives them an ideal head-start as swimmers. Trained adults need only follow up where nature has led the way.

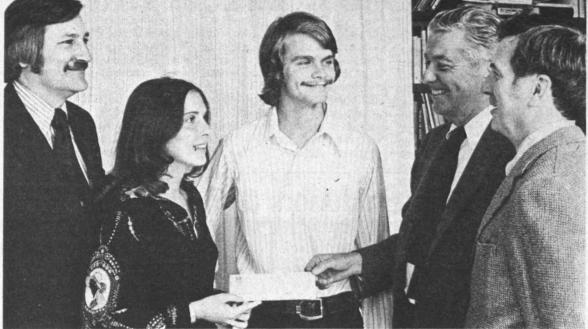
And this is exactly what is taking place in the Alumni Pool

every morning at 10am for the next two weeks.

Mary Brau, a day-care provider in MIT's Family Day Care Program, who has practical experience in this area-she taught her son, Benjamin, to swim last year at age three-is instructing an introductory course for infant swimmers ranging in ages from seven months to three and one half vears.

This type of swimming class, still a rarity, is offered for the first time at MIT to members of the Family Day Care Program under the auspices of the Child (Continued on page 3)

ULSP Undertakes Railroad Study



RAIL STUDY FUNDED—A study of the impact of rail service abandonment on New England towns by MIT and Wellesley students in MIT's Urban Legal Studies Program has been supported by the Union Pacific Foundation. Arthur Z. Gray, Foundation president, presents a check to Michelle A. Polito of Wellesley, one of the students who will make the

The impact of railroad line abandonment on a number of New England towns will be studied by students from MIT's Urban Legal Studies Program under a grant from the Union Pacific Foundation to the Center for Transportation Studies.

The summer field work project will involve students from MIT and Wellesley through MIT's Office of Law-Related Studies, headed by Professor J.D. Nyhart, and the MIT Center for Transportation Studies, headed by Professor Paul O. Roberts. The students will be the primary researchers.

Students on the project are Clyde Mitchell, an MIT physics major from Morristown, N.J., Michelle A. Polito, a Wellesley College political science major from Medfield, Mass.; Thomas F. McKim, an MIT civil engineering student from New Castle, Pa., and Beth Lambert from Wellesley College, an economics and political science major from Canton, Mass. All of the students are members of USLP's Planning Board. A fifth member of the Planning Board is Robert J. Steininger III, a junior in chemistry from South Milwaukee, Wisc.

Mitchell is student director of the Urban Legal Studies Program. Among the questions the proj-

ects will seek to answer are these: —How important to the railroads is branch line abandonment?

-Are the operating costs of spur lines the major costs to the rail-road?

-Might rail freight depots be regionalized and served by a trucking network to increase profitability?

--Would the application of an integrated piggyback system be more profitable or will the increases in cost and their complexity overwhelm increasing productivity?

study. Clyde Mitchell, center, a student director of the USLP, also will work on the study. The project will be coordinated through MIT's Office of Law-Related Studies, headed by Prof. J.D. Nyhart, right, and MIT's Center for Transportation Studies, headed by Prof. Paul O. Roberts, left.

-Photo by Calvin Campbell

The student investigators will use government census data, shipment waybills and MIT cost models and will survey public needs and attitudes through interviews with local authorities and interest groups. Because the major emphasis of the Urban Legal Studies Program is community involvement, this last aspect of the project will be emphasized.

Professor Joseph F. Vittek Jr. of the Department of Aeronautics and Astronautics at MIT, is the faculty adviser for the study, along with James Sloss, senior lecturer in the civil engineering department.

The \$13,000 grant was presented by Arthur Z. Gray, president of the Union Pacific Foundation, who lectures regularly at MIT in conjunction with the Fall Seminar on the Legal Profession and the IAP Introduction to Law Seminar.

Title IX Guidelines Called 'Anticlimactic' for MIT

By PATRICIA M. MARONI Staff Writer

The long-awaited Federal guidelines insuring equal access for both sexes to physical education classes and facilities were pronounced "anticlimactic" this week by MIT's director of women's athletics, Mary Lou Sayles.

In a recent interview Professor Sayles said the regulationssigned by President Ford last week and released by the Department of Health, Education and Welfare under Title IX of the Education Amendments of 1972have already been integrated into MIT's total athletic program. She also called on the Association for Intercollegiate Athletics for Women (AIAW) to step up its campaign to retain control over women's sports in light of increasing pressure from the N.C.A.A. and the Big Ten Universities for a voice in policy matters.

"Title IX has initiated a lot of action, but MIT has been committed right along to the same quality of opportunity for men and women, mainly because sports here are so uncommercial," she said.

With nine intercollegiate clubs and five varsity teams for 600 women students, MIT was attuned to athletes' civil rights long before Congress began studying the issue three years ago.

"Good practice time, equipment, uniforms, the number of contests per season, and scheduling privileges have all been made equal to those of the men. If someone decides she wants to form a team that we don't have here, she need only speak up and MIT will do everything possible to make it a reality," Professor Sayles said.

In general, the Federal guidelines against discrimination require that 16,000 public school systems and 2,700 colleges and graduate schools grant equal opportunity to women or suffer losses in Federal funding. In the contact sports, such as football, basketball, and ice hockey, separate teams must be provided if a significant segment of women students want them. In other sports, like tennis, track, swimming and golf, a school with only one team would have to allow members of the other sex to try out

Although women have a higher winning percentage than men at MIT, Professor Sayles favors the separation of competitive sports with respect to sex.

"Women should compete with women because they cannot yet compensate for their physiological differences from men. It's generally accepted that male college track stars are faster than Olympic women runners simply because of the construction and dimensions of their hip joints." personnel for women.

"It's thought that women must prove themselves worthy of good coaching before more full-time personnel can be hired to train them, but when you play by the men's rules, you learn quickly that athletes perform and win only because good sound coaching is already established," she said.

MIT will take on two new part-time women's coaches next year in basketball and tennis. But that's not enough, according to Pat Schettig, new president of the Women's Athletic Council, student governing body for women's athletics at MIT.

"We had been promised a new full-time coach for next year," she said, "but with equal opportunity came equal budget cuts. The percentage of basketball games eliminated from the men's schedule was also eliminated from the women's schedule, even though the two schedules are not comparable in number of games. We suffer more lost play time."

Ms. Schettig, a senior from Nyack, N.Y., majoring in life sciences, has been playing tennis since she was seven and basketball for nearly as many years.

Despite the odds, the basketball team, in its first year as a varsity team, managed to beat top-ranked University of Chicago in the first MIT Invitational Basketball Tournaments last January. High scorer Kathy Roggenkamp racked up enough points to retain her status as highest season shooter in the history of MIT basketball—men's or women's.

"The concept of 'counting women in' to college athletics may remain somewhat of a revolution to those who prefer to remember MIT as an all-male school," Professor Sayles said, "but little by little, we're winning in every field.

"Fencing and tennis now have the best record in women's sports at MIT, but with two national sailing titles behind us, an undefeated volleyball team, and a crew that's ranked with the top ten in the country, we don't hesitate to tell anyone that we win more contests than the men at MIT."

Haug Appointed Visiting Professor

Dr. Albert Haug, from the Technical University of Berlin, has been appointed visiting professor of physics at MIT for three months, effective May 1, 1975.

Dr. Haug received his undergraduate degree in electrical engineering and the Doctor of Physik degree from the Technical University of Munich in 1941 and 1945 respectively.

After his three months at MIT's

Rasmussen to Head Nuclear Engineering

(Continued from page 1)

search and his activity in recent years in connection with the issues of nuclear safety and the environmental impact of nuclear power are unsurpassed."

The Department of Nuclear Engineering, formed at MIT in 1958, has grown dramatically and is on the threshold of new expansion. Starting in September the department will offer for the first time a bachelor of science degree in nuclear engineering. An enrollment of 20 to 30 sophomores is expected at the outset and 100 undergraduate students is the projected figure after five years. cized the study's actuarial base and said not enough knowledge exists on which to make conclusions.

The draft report, published in August 1974, has come to be called the Rasmussen Report:

Dr. Rasmussen, 47, who was appointed to the Defense Science Board for a four-year term last year, has been a consultant to government and industry on nuclear power. In addition to the AEC, Dr. Rasmussen has consulted for the NEPIA, the insurance pool that insures reactors; the New York State Atomic and Space Development Authority, Brookhaven National Laboratory Safety Review Committee, Richard P. Mueller and Associates, Inc., Princeton University, Burns and Row, Inc., and the State of Vermont.

school in September 1950 in the Department of Physics and received his PhD in physics in 1956. His graduate work was done under Professor Robley D. Evans in the field of low energy nuclear physics. Dr. Rasmussen was an instructor in the physics department from 1956-58.

In July 1958 Dr. Rasmussen was appointed assistant professor of nuclear engineering at MIT. He became an associate professor in 1961 and full professor in 1965.

His academic work has included teaching subjects in nuclear physics, reactor physics, reactor physics laboratory, reactor operations and radiation shielding. He wrote the sections on Nuclear Physics and Solid State Physics for the book, Modern Physics for Engineers, on which he collaborated with Otto Oldenberg. His early research was in the area of radiation detection, the interaction of radiation with matter, high-resolution gammaray spectra, the analysis of spent reactor fuel, studies of the use of captured gamma rays in activation analysis and the use of gamma-ray spectroscopy in the safeguarding of nuclear materials. More recently, his main area of interest has been reactor safety. Dr. Rasmussen and his wife, the former Thalia Tichenor, make their home in Sudbury. Their son Neil has just completed his junior year at MIT where he is studying electrical engineering. Arlene, their daughter, has just finished her first year at Keene State

College in Keene, N.H.

In addition, the department announced in March that it had reached an agreement with Iran's Atomic Energy Organization to train up to 54 Iranian graduate students in nuclear power engineering over the next three years.

The recent \$3 million study Dr. Rasmussen directed for the Atomic Energy Commission addressed the public risk from nuclear power plant accidents. It received worldwide attention and became immediately a subject of controversy. Proponents of nuclear power expansion cited the study's findings as evidence of what they had believed all along-that the public risk from a nuclear power plant failure is vastly smaller than from other more common occurences, such as storms or airliner crashes. On the other hand, opponents of nuclear power expansion critiHe is a member of the American Association for the Advancement of Science, the Institute of Nuclear Materials Management and the American Nuclear Society. He was chairman of the Society's Northeastern Section in 1966.

In 1968 he received an honorary ScD from Gettysburg College where he was graduated cum laude in 1950 and in June 1970 he was elected a Fellow of the American Nuclear Society.

A native of Harrisburg, Pa., Dr. Rasmussen attended grade school in Hershey and high school in Gettysburg. He served in the Navy from June 1945 to August 1946 and entered Gettysburg College in September 1946.

He entered the MIT graduate

"If however, this new law gives women equal opportunity, equal attention and equal encouragement from the first grade on, the physiological differences could become less acute and women could overcome them."

Resisting pressure to include a clause on equal spending of college athletic funds, drafters of the new regulations, Professor Sayles said, "had seriously shortchanged the thousands of women who want to compete and win on the same terms of excellence as men."

MIT's total athletic budget has never been broken down between men's and women's teams. Professor Sayles said that as best she could determine, the \$820,000 allocated for this year would be spent equitably but she would still like more full-time coaching. Francis Bitter National Magnet Laboratory, Dr. Haug will return to his position as professor of theoretical physics at the Technical University of Berlin.

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Frank Perkins to Head **Civil Engineering Department**

Professor Frank E. Perkins of the Department of Engi-Civil neering has been named acting head of that department and will replace Pro-

fessor Peter S.

Perkins

Eagleson, who, upon his request, has been relieved of responsibilities as department head.

Professor Eagleson will spend the upcoming academic year as a visiting associate at the California Institute of Technology.

The announcement was made by Alfred H. Keil, Dean of the School of Engineering, who said that Professor Eagleson's sabbatical leave would become effective September 1.

Professor Perkins, special assistant to the Dean of Engineering for special education programs since 1973, has participated in several studies of engineering education in the United States. In the words of Dean Keil, this experience has made him "intimately familiar with the broadening scope of the School of Engineering and the need to find a balance between engineering sciences, technologies, and systems engineering.'

As associate head of MIT's Water Resources Division in civil engineering until 1973, Professor Perkins had special responsibility for the academic programs of that division. His professional contributions to his field have been specialized in developing computer applications for water resources and training practicing engineers in their use.

He received all his degrees from MIT-the SB in 1955, the SM in 1959 and the ScD in 1966. Prior to his

New Directions For Air Research

Directions for future university research in air transportation were discussed at a workshop in Washington, D.C., June 2-4, organized by the MIT Flight Transportation Laboratory and the Northwestern University Transportation Center.

Thirty-two representatives of airlines, airports, manufacturers, government agencies and banks spoke at the workshop, which was sponsored by the Civil Aeronautics Board, the Department of Transportation and the National Aeronautics and Space Administration.

According to Nawal K. Taneja, assistant professor of aeronautics and astronautics, who served as workshop director, the major appointment to the teaching staff 10 years ago, while still a graduate instructor, he was awarded the Goodwin Medal for effective teaching.

Professor Perkins (of Brockton) will assume his duties as acting department head July 1, continuing his activities as special assistant to the Dean on a limited basis

Professor Eagleson (of Brookline), a nationally recognized authority in coastal processes and theoretical hydrology, was appointed head of MIT's Department of Civil Engineering in 1970.

During his tenure as head of the Department of Civil Engineering, Professor Eagleson expanded the scope of the department towards systems engineering, with particular respect to the environment, transportation, and construction.

A "visual happening" in the Lobby 7-one of the Special Alumni Day activities. -Photo by Calvin Campbell

Swim Classes (Continued from page 1)

Care Office. Twelve children are taking the class, along with 12 adults, all members of the program, who will receive instruction on water safety skills such as elementary forms of rescue and mouth-to-mouth resuscitation.

Mrs. Brau, a registered Red Cross Water Safety Instructor in charge of the program, is the wife of James Brau, a graduate student in physics who is also an instructor in the program. Their sons, Benjamin, who is now three and a half, and Daniel, one and a half, are participants as well.

The classes that began on Monday, emphasize a progressive game-method sequence for instruction-a method taken from the text "Teaching an Infant to Swim" by Virginia Hunt Newman.

The games-important to learning primary skills and coordination-include ring-around-a-rosy that ends with "voluntary" head immersion, blowing bubbles and picking up poker chips off the bottom of the pool. These games will eventually be linked to practiced arm strokes and a rhythmic flutter kick

The method being used relies on patience and repetition, and is based on the fact that children under five years old have little fear of the water.

If the current course, which only serves to introduce the children to the water, is successful, the Child Care Office hopes to continue the program at a later date. It is expected that in six weeks of daily instruction, children can learn a modified crawl.

13 Class Reunions Follow Alumni Day

(Continued from page 1) United States. The Chinese, he said, recently were successful in predicting a large earthquake one year in advance, one day in advance, and one and a half hours in advance. He estimated that the predictions saved almost 50,000 lives.

Professor Eisen discussed the "remarkable specificity and diversity" of antibodies, and outlined some of the scientific questions being debated about them.

Great advances in immunology have made diseases like smallpox a thing of the past, he said. "Now, applications of immunology are being intensively explored in relation to diseases such as cancer and cardiovascular disease."

Professor Tribus discussed the gaps between engineering as it has traditionally been taught in universities, as it is practiced in industry, and as it should be-but too often is not-used by government agencies in making decisions.

Professor Schon discussed ways in which government and society perceive problems and attempt to respond to them-for example, the adversary model, in which different segments of society fight for a bigger slice of the pie; and the Skinnerian model, in which the government attempts to control behavior by granting or withholding funds.

More than 2,000 people-900 alumni and their families-attended the Alumni Day Program, which began Thursday with a

concert at the Boston Pops. Following the panel discussion Friday morning, class gifts and pledges totaling \$2,148,120 were presented to President Jerome B. Wiesner from the classes of 1915, 1925, 1935 and 1950. This included a special donation of a \$100,000 scholarship fund from the Mitchell B. Kaufman Charitable Foundation. The Mitchell B. Kaufman Memorial Scholarship Fund will be used for minority students, especially American Indians and Mexican-Americans.

The morning program also included talks by Dr. Wiesner; Howard W. Johnson, chairman of the Corporation; Luis A. Ferre, retiring president of the Alumni Association; and Howard L. Richardson, incoming president of the Alumni Association. The association is celebrating its centennial this year.

The afternoon program included a "visual happening" with dancers and balloons, presented by the Center for Advanced Visual Studies, directed by Professor Otto Piene; a memorial service; lectures and seminars presented by various departments; and a reception.

A record 13 classes held reunions this year, with picnics, clambakes, dinners and parties, which lasted through Sunday. The Department of Architecture and the Department of Civil Engineering also held special reunion programs and dinners.

Class Gifts Nearly \$3 Million

Class gifts and pledges totaling \$2,148,120, including a \$100,000 scholarship fund for minority students, were presented to MIT President Jerome B. Wiesner by four reunion classes at the 1975 Alumni Day of the Massachusetts Institute of Technology, Friday, June 6. Of the total \$473,590 represents cash gifts received this year.

The Class of 1915, celebrating its 60th reunion, gave a total of \$140,670. Of that, \$100,000 was given by the Mitchell B. Kaufman Charitable Foundation to establish the Mitchell B. Kaufman Memorial Scholarship Fund to be used for scholarships for minority students, especially American Indians and Mexican-Americans.

Two hundred ninety-one members of the Class of 1925 contributed a total of \$508,150 collected over the past five years. In addition, 24 members of the class have bequeathed MIT a total of \$2,250,000.

The Class of 1935 collected \$719,100 from 295 classmates over the past five years. The Class also announced completion of a unique 10-year program totaling \$1,427,150.

The Class of 1950 contributed \$780,200-a record gift for the 25th reunion class-part of which will go to the Class of 1950 Financial Aid Fund. The money was contributed by 667 classmates, over the past five years.

Research Results In New Metal Products Company

The MIT Development Foundation, Inc., has announced that another "Route 128" technical

Development Foundation, Inc., in dent inventors." order to develop a commercial The Foundation operates as a business based on this MIT separate corporation, organized

assistant director, Center for Materials Science and Engineering; Lee Martin, President, NIBCO, Inc.; William C. Wright, President, Fall River Foundry Co., Inc.; Richard S. Morse, President, MIT Development Foundation, Inc., and John O. Flender, Treasurer, MIT Development Foundation, Inc. In commenting on this latest new enterprise organized by the MIT Development Foundation, Dr. Jerome B. Wiesner, president of MIT, stated: "Never has a greater need existed for the application of science, technology and innovative management to fulfill the urgent demands of society. This new organization will hopefully demonstrate the ability of the academic, industrial and financial communities to cooperatively expedite the public use of scientific research and development."

points made included the following.

First more research is needed on understanding consumer behavior. Information is needed on why people fly, or don't fly; where and when they fly; and consumer response to price change.

Second, improved methods are needed for evaluating the impact of future technological developments in the commercial air transportation industry. Third, more research is needed on air cargo, which one panelist said could develop into the "bread and butter" of the air industry.

Throughout the workshop, Professor Taneja said, almost all the panelists pointed out that further research must be directed not only to improving methodology but also to improving the quantity and quality of data that planners and forecasters have available to them.

enterprise-a metal products company-has been formed as the result of research carried out at MIT.

Wendell T. Hess, president of the new company, Rheocast Corporation, said that financing had been completed and operations initiated at 14 Tech Circle in Natick, Massachusetts.

Die cast copper and bronze products such as hardware, fittings and industrial components will be produced by a novel patented process developed by Professors Merton C. Flemings and Robert Mehrabian in the MIT Department of Materials Science and Engineering. Research in this field has been financed by the Department of Defense because of its interest in the ultimate application of the process to the production of jet engine components.

Rheocast Corporation was organized a year ago by the MIT research.

The MIT Development Foundation, Inc., was established in 1972 to expedite the so-called technology transfer process, generate new technically-based enterprises, create new employment opportunities and bring benefits to the community.

Rheocast Corporation is one of four firms with which the Development Foundation has worked. It also has evaluated between 150 and 200 different projects-at MIT and from outside the Institutefor possible commercial development.

Richard S. Morse, president of the Development Foundation, emphasized the experimental nature of its activities, which he said he hopes "will provide a new mechanism for expediting the public use of the great research activities conducted by MIT, perhaps other institutions, alumni and indepen-

and controlled by the MIT Corporation. Initial financing of the Foundation was undertaken by MIT and a group of prominent financial and industrial sponsors who assist in the evaluation of potential new commercial products and processes and may serve as one of a number of sources of venture capital for the financing of new business enterprises established by the Foundation.

Current sponsors include, for example: Dow Chemical Company, John Hancock, Eastman Kodak, Exxon, First National Bank of Boston, Monsanto, Dresser Industries, Texas Instruments, Johnson & Johnson, Sun Oil, NIBCO, etc.

The directors of Rheocast Corporation are:

Wendell T. Hess, President; Irl N. Duling, Sun Ventures, Inc.; Merton C. Flemings, ABEX Professor of Metallurgy, MIT, and

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Seminars and Lectures

Thursday, June 12

Endopeptidases and Bacterial Sporulation* - Dr. Jacqueline Millet, Institute Pasteur, Paris. Nutrition & Food Science Seminar. 4pm, Rm 16-134.

June 11

June 22

Tuesday, June 17

Small-Froude Number Non-Uniformity* - Gedeon Dagan, Institute of Hydraulic Research, University of Iowa; Technion, Israel. Ocean Engineering Lunch Seminar. 12n, Rm 5-233.

Phenotypic Mixing of Enveloped RNA Viruses* - Robin Weiss, Imperial Cancer Research Func Laboratories, London. Center for Cancer Research seminar. 4:30pm, Rm 6-120.

Wednesday, June 18

Single Phase Helium Cooling of Superconductors* - Dr. Georg Versey, Swiss Institute for Nuclear Research. Magnet Lab Seminar. 2:30pm, 2nd floor conference rm, Magnet Lab (NW14). Tea & coffee at 2:15pm.

The Effect of Vitamin A Acid on Normal & Tumorous Epithelium* - Dr. Lawrence Prutkin, Dept of Cell Biology, NYU Medical Center. Nutrition & Food Science seminar. 3:00pm Rm 16-310.

General Aviation Omega Navigation in the National Airspace - Edward Wischmeyer, doctoral candidate. Doctoral System* seminar. 3:00pm, Rm 33-206.

Community Meetings

The Wives Discussion Group** - Last formal meeting this term, discuss this year's activities and plan next term's meetings. Wed, June 11, 2:15-4pm, Stu Ctr West Lge. Babysitting in Stu Ctr Rm 473.

Women's Forum** - Special meetings for planning the agenda for the Talbot Hse Retreat. Please come, even if you're not going to Talbot Hse, to give ideas and suggestions for Forum activities next year. Mon, June 16 and Wed, June 18, both at 12n, Rm 10-280.

Talbot House Retreat** - June 20-22, Fee must be paid no later than Friday, June 13, to Gay Warner, E19-451, x3-5831.

Social Events

Ad-Hoc Over 30's Singles Chowder and Marching Society 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.

24 Hour Coffeehouse* - Enjoy relaxing conversation, piano playing, games, inexpensive food, candy & drinks. Open 24 hours per day, 7 days per week, Stu Ctr 2nd fl lge.

Gay Dance* - Sponsored by Student Homophile League in honor of Gay Pride Week, beer, soft drinks and munchies. 9pm-lam, Sat, 6/21, in the Sala. Admission \$1.50. Info: SHL. x3-5440, or x0745 Dorm.

Movies

The Fiances (Olmi) - Film Society. Fri, June 13, 7 & 9:30pm, Rm 6-120, Admission \$1.

The Great Bank Robbery** - LSC. Fri, June 13, 7:30pm, air conditioned Rm 26-100. Admission \$.50, MIT or Wellesley ID required.

Arabesque** - LSC. Sat, June 14, 7:30pm, air conditioned Rm 26-100. Admission \$.50, MIT or Wellesley ID required.

Akhri Khat* - Sangam. Indian movie with English subtitles. Sun, June 15, 2:30pm, Rm 26-100. Admission \$.50 with ID.

Adrift (Kadar) - Film Society. Fri, June 20, 7:30 & 9:30pm, Rm 6-120. Admission \$1.

Murder Most Foul** - LSC. Fri, June 20, 7:30pm, air conditioned Rm 26-100. Admission \$.50, MIT or Wellesley ID required.

Lord of the Flies** - LSC. Sat, June 21, 7:30pm, air conditioned Rm 26-100. Admission \$.50, MIT or Wellesley ID required.

Baiju Bawra - Sangam. Indian movie with English subtitles. Sun, June 22, 2:30pm, Rm 26-100. Admission \$.50 with ID.

Music

Editions Erebouni* - Popular Armenian folk music. Wed, June 11 & Thurs, June 12, 8pm, Kresge. Tickets \$5-\$8, availble at box office 7pm.

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.

Harry Brauser Workshop* - Sponsored by Folkdance club. Workshop taught by Harry Brauser, former folkdance teacher at MIT. Sat, June 14, 10am-1pm & 2-5pm; party 7:30-11pm; both in Sala; Admission: \$1/session with MIT ID, \$1.50 without, \$.25 for party. Info available at regular club activities.

Scottish Country Dancing - Will resume in the fall. Thanks to all who attended.

Exhibitions

Faculty Club Art Exhibit* - Works by John Fitch will be shown during the month of June.

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

Paintings by Lloyl Held* - Through June 16 at Rotch Library.

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.

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.

Athletics

Community Soccer League** - League now being formed for Wed and Sun games at Briggs Field. \$60 reg fee per team includes equip and referees. Ea team will play 10 games. Call, 661-1926, evgs.

Community Summer Softball League** - Last chance! Individuals without a team who want to play this summer should show up, 5pm, June 11 at Briggs Field No. 8. Bring your own equipment!

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.

Send notices for June 18 through June 29 to the Calendar Editor, Room 5-111, Ext. 3-3279, before noon Friday, June 13.

Arthur Solomon Appointed New Director of JCUS

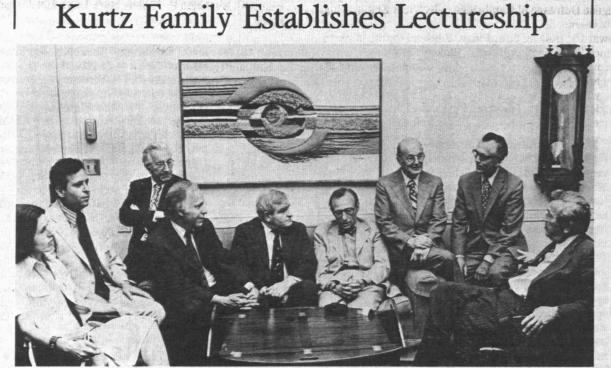
(Continued from page 17 White House Task Force on Government Organization.

Dr. Solomon has worked extensively on problems of housing and community development, property tax reform, and manpower and economic development. His books include Housing the Urban Poor: A Critical Evaluation of Federal Housing Policy; Property Taxes, Housing and the Cities; and A Place to Live: Housing Policy in the States. In these and in numerous articles, he has dealt with the rebuilding of our cities, the financing of housing development, poverty and inequality, and strategies for urban growth.

In addition, Professor Solomon has served as advisor to numerous government and private agencies. He has been a consultant to the US Congress, the US Department of Housing and Urban Development, the Federal Home Loan Bank Board, the Federal Home Loan Mortgage Insurance Corporation. the Massachusetts Department of Community Affairs, the Fairfax, Virginia Office of Comprehensive Planning, the National League of Cities/US Conference of Mayors, Arthur D. Little, Inc., and Abt Associates. He is a member of the American Real Estate and Urban Economics Association and a frequent contributor to professional public policy, economics and planning journals. Professor Solomon has been associate director of the Joint Center since 1971. Now he succeeds Bernard J. Frieden, director of the Center for the past four years, and a number of other eminent Harvard and MIT scholars.

Prior to Professor Bernard Frieden, MIT Provost Walter Rosenblith served as acting director of the Joint Center after Robert C. Wood left the directorship to become president of the University of Massachusetts. Earlier directors of the Joint Center include Martin Meyerson, now president of the University of Pennsylvania, James Q. Wilson, chairman of the Government Department of Harvard, and Daniel P. Moynihan, Harvard professor of education and urban politics who was recently appointed United States Ambassador to the United Nations.

Originally established in 1959 in order to stimulate scholarly attention to a wide range of urban problems, in more recent years the Joint Center has given special emphasis to issues of national housing policy. The emphasis will be reinforced by an additional commitment to expand the scholarly activities of the Center into related research areas, such as environmental regulations and land development, delivery of municipal services and urban growth and economic development. Planning for the future intellectual mission and governance of the Joint Center is a committee, under the direction of Andrew Heiskell, chairman of the board of Time, Inc., and chairman of the Joint Center Visiting Committee. Members of the faculties and administrations of both universities are working with Mr. Heiskell to chart the broader mandate of the



JACOB KURTZ COMMEMORATED—The family of the late pioneer metallurgist Jacob Kurtz has established a fund in his memory to provide a lectureship at MIT and at the Technion in Israel. Family memcheck for the first installment for the fund. From the left are Mrs. Anthony Kurtz, Stephen J. Kurtz, Dr. Walter S. Owen, Ronald A. Kurtz, Chancellor Paul E. Grav, Dr. Anthony D. Kurtz, Dr. Morris Cohen, Dean

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

Page 4, Tech Talk, June 10, 1975

The Joint Center will continue to concern itself with the application of research to critical issues of public policy. Over the last several years the Center has placed increasing emphasis on this responsibility. As part of the Department

Center.

Alfred A.H. Keil and President Jerome B. Wiesner. bers met recently with MIT officials to present the

The family of Jacob Kurtzsuccessful pioneer metallurgist who worked mostly with tungsten alloys-has established a fund in his honor to provide a lectureship at the MIT Department of Materials Science and Engineering and at the Department of Materials Science at the Technion in Israel.

Mr. Kurtz' three sons presented

of Housing and Urban Development's reappraisal of its policies and programs, for example, the Center staff provided estimates on the nation's housing needs and construction goals. Also, a series of papers were provided on the feasibility of a national housing allowance. On behalf of the National Center for Policy Review and three other public interest groups,

a check for the first installment of Chancellor Paul E. Gray. the fund during a recent visit to the Institute.

Dr. Anthony D. Kurtz, Class of 1951, president of Kulite Semiconductor Products, Inc.; Ronald A. Kurtz, Class of 1954, president Kulite Tungsten Co., and Stephen J. Kurtz, treasurer of Kulite Semiconductor Products, Inc., presented the check to MIT President Jerome B. Wiesner and

several faculty associates developed and tested research methods which can be employed to analyze the allocation of revenuesharing funds in individual states and cities. Other research has contributed to the enactment of the tax deduction on home purchases as part of the Emergency Economic Recovery program and impending consideration of poli-

Also present were Dr. Walter S. Owen, head of the MIT Department of Materials Science and Engineering; Dr. Morris Cohen, Ford Professor of Materials Science and Engineering at MIT, with whom the late Mr. Kurtz studied during summer sessions in 1953 and 1955, and Dean Alfred A.H. Keil of the School of Engineering.

cies to moderate cyclical instability in housing starts and mortgage credit. Through Congressional testimony and conferences with private financial institutions, industrial firms, organized labor and government officials the Center has and will continue to contribute to the exchange of information and ideas on critical national issues.

1975 Retirees Gave Nearly 2,000 Years of Service

Nearly 120 employees who will retire during 1975 were honored at the annual Institute-wide retirement dinner Tuesday, June 4, in Walker Memorial.

Walter L. Milne, assistant to the chairman of the Corporation and special assistant to the president for urban relations, was master of ceremonies for the occasion which was attended by the retirees, their families and associates and members of the Quarter Century Club.

MIT President Jerome B. Wiesner spoke informally to the honored guests. He said that his international travels have shown him the respect in which MIT is held throughout the world and attributed much of it to all of the people of MIT.

Alumni, Dr. Wiesner said, often recall the hard work and devotion to excellence of the Institute, and that they learned something about integrity here, through examples set for them by the people of MIT.

Chancellor Paul E. Gray read the roll of those receiving certificates. He said the retiring group had amassed a record of nearly 2,000 years of service, averaging more than 19 years per person, and noted that half a dozen senior members of the group had done their part to "raise the average."

Members of this year's retirement group are:

MIT Campus

John W. Barr of Danville, N.H., Physical Plant, 20 years. Ralph J. Bowley of West Roxbury, Mechanical Engineering, 46 years.

Sanborn Brown, of Lexington, Professor of Physics, 36 years.

Rose Burke of Dorchester, Faculty Club, 23 years.

Wilfred H. Burke of Roxbury, Campus Housing, 29 years. Max Byer of Sharon, Electrical Engineering, eight years.

Daniel J. Callaghan of Lynn, Physical Plant, 20 years. Herbert G. Carr of Stoughton, Campus Housing, 22 years. Thomas Catterson of Everett, Physical Plant, seven

years. Samuel D. Clark, M.D., of Boston, Medical Department, 19 years.

Walter F. Crowe of Lexington, Physical Plant, 14 years. Ruth Dawson of Cambridge, Comptroller's Accounting Office, 34 years.

Susan DeCarlo of Somerville, Biology, 14 years.

Marzio DeCristoforo of Boston, Laboratory for Nuclear Science, 17 years.

George Delvisco of Medford, Physical Plant, eight years. Mary Ellen Doherty of Medford, Physical Plant, 12 years. Dorothy M. Donahue of Winthrop, MIT Press, 12 years. Eugene Dufresne of Cambridge, Electrical Engineering, 31 years.

Edward J. Dunn of Cambridge, Physical Plant, 13 years. James W. Dunnell of Revere, Biology, 22 years.

Dorothy E. Earle of Cambridge, Campus Housing, 28 years.

Mary East of Boston, Economics, 11 years.

Patrick Eustace of Melrose, Physical Plant, ten years. Vincent Federici of Revere, Physical Plant, five years.



CIGARS FOR THE MEN—with apologies to the women —concluded the retirement dinner. Left to right are Mr. and Mrs. Francis A. Sweeney and Mr. and Mrs. Archie Lemieux.

Donald M. Fellows of Sudbury, Materials Science and



TOASTING ANTICIPATED LEISURE are, left to right: Adolph Pieciul, Marzio DeCristoforo, Daniel Callaghan,

Hector MacDougal of Brighton, Physical Plant, 17 years. Allan A. MacInnis of Somerville, Physical Plant, 18 years.

Andrew J. Maguire of Medford, Physical Plant, 18 years. Benjamin Martin of Seneca, S.C., Assistant Professor of Athletics, 27 years.

Dorothy Meigs of Stow, Resource Development Office, 29 years.



CHAMPAGNE POURER Catherine Ahearn, left, shares wine with Elizabeth P. Taylor, Mary Lima and Josephine Lloyd.

- Elting E. Morison of Cambridge, Elizabeth and James R. Killian Professor of the Class of 1926, three years.
- G. Edward Nealand of Sandwich, Director of Purchasing, 29 years.
- Frank E. Nelson of Lynn, Physical Plant, seven years. Natalie N. Nicholson, of Cambridge, Director of Libraries, 21 years.
- William J. O'Brien of Cambridge, Campus Housing, 37 years.
- Horace U. Ohm of Marblehead, Research Laboratory of Electronics, 24 years.
- H. Emerson Pressey of Newtonville, Urban Systems, 12 years.
- Adolph Pieciul of Wollaston, Physical Plant, eight years. William Sampson of Dorchester, Physical Plant, 19 years.
- Nicholas Scali of Somerville, Physical Plant, 12 years. Samuel Sharib of Revere, Physical Plant, seven years.
- Natalia Shefler of Boston, Laboratory for Nuclear Science, 13 years.
- John R. Sherman of Brookville, Electronic Systems Laboratory, 23 years.
- Irwin W. Sizer of Lexington, Dean of the Graduate School, 40 years.
- Prescott Smith of North Chatham, Professor of Mechanical Engineering, 30 years.
- Edward R. Sullivan of Somerville, Physical Plant, seven

George Delvisco, Edward Sullivan and Max Byer. --Photos by Calvin Campbell

Harold F. Helmuth of Arlington, Group 11, 11 years.
Archie R. Lemieux of Lawrence, Group 23, 22 years.
Leonard R. Malling of Arlington, Group 54, nine years.
Edward J. McGoldrick of Cambridge, Group 11, 22 years.
James F. McGuire of Acton, Group 15, 27 years.
John J. Mehigan of Concord, Group 16, 23 years.
Jacob Newman of Reading, Group 15, 12 years.
Robert E. Rader of Asheville, N.C., Division 1, 23 years.
Loyd R. Rathbun of Avalon, Calif., Group 17, 12 years.
Ernest W. Sampson of Malden, Group 72, 13 years.
Francis A. Sweeney of Woburn, Group 33, 24 years.
Alphonse Wilson of Roxbury, Group 85, 24 years.
Alexander Woznac of Graniteville, Group 11, eight years.

CHARLES STARK DRAPER LABORATORY Robert Bolling of Cambridge, Test and Analysis Section,

- 20 years. Warren F. Breslin of West Acton, Security Office, five
- years. James E. Bromilow of Brockton, Security Office, 23 years.
- Frances Brunswick of Boston, Publications Section, 27 years.
- George H. Caine of Jamaica Plain, Physical Plant, 23 years.

Manuel Carriero of Somerville, Physical Plant, 13 years. Mugrudrich Elloian of Waltham, Physical Plant, three years.

- Edward D. Fay of Waltham, Instrument Assembly, 20 years.
- Joshua B. Feldman of Waban, Department Staff, 29 years.
- William J. Johnston of Belmont, Central Machine Section, 23 years.
- George T. Lawson of Brockton, Central Machine Section, 23 years.
- Ralph S. MacGuffage of Belmont, Security Office, 20 years.
- Kenneth E. McClure of Acton, Inertial Gyro Division, 28 years.
- Anthony Mirarchi of North Scituate, Mechanical Design Division, 13 years.
- Michael Mulloney of Cambridge, Physical Plant, seven years.
- John B. Nugent of Winthrop, Navy Mechanical Design Division, 26 years.
- B. Joseph Patten of Norwood, Navy Mechanical Design Division, 21 years.
- Chester Pynn of Melrose, Physical Plant, 29 years.
- Reginald C. Roderick of Somerville, Instrument Assembly, 17 years.
- Paul H. Sherman of Lexington, Security Office, six years. Henry A. Siekman of Lexington, Bedford Flight Facility, 25 years.
- Robert Stirling, Jr., of Saugus, Security Office, 12 years. John E. Sullivan of Randolph, Security Office, 25 years.
- Eugene Tuden of Medford, Security Office, 22 years.

Engineering, 40 years.

Edward F. Fidalgo of Cambridge, Comptroller's Accounting Office, eight years.

Harold Freeman of Andover, Professor of Economics, 42 years.

Margaret M. Gazan of Belmont, Mechanical Engineering, 21 years.

Julia Glass of Cambridge, Physical Plant, 13 years. Sydney H. Grant of North Reading, Physical Plant, ten years.

Robert J. Hansen of Winchester, Professor of Civil Engineering, 28 years.

Albert G. Hill of Boston, Vice President for Research, 38 years.

Marion E. Humphries of Saugus, Campus Information Center, 11 years.

Margaret Kroll of Arlington, Biology, 33 years.

Daniel Lee of Roxbury, Physical Plant, five years.

Shih-Ying Lee of Lincoln, Professor of Mechanical Engineering, 27 years.

Mary L. Lima of Somerville, Comptroller's Accounting Office, 19 years.

Josephine Lloyd of Boston, Comptroller's Payroll Office, 20 years.

Charles Lothrop of Lynnfield, Aeronautics and Astronautics, 24 years. years.

Elizabeth P. Taylor of West Bridgewater, Francis Bitter National Magnet Laboratory, 12 years.

Leonard W. Whaley of Cambridge, Campus Housing, 30 years.

Mildred Whelan of Cambridge, Physical Plant, eight years.

Alberta Wyluda of Brookline, Chemistry, 14 years. Richard F. Zimpel of Lake Pleasant, N.Y., Nutrition and Food Science, 17 years.

LINCOLN LABORATORY

Floyd B. Aldrich of Graniteville, Group 15, 13 years. Joseph J. Basile of South Tewksbury, Group 12, 16 years. Leslie C. Blomberg of Waltham, Group 12, 13 years. Everett E. Bonnell of Lexington, Group 18, eight years. Alice K. Campbell of Fort Lauderdale, Fla., Group 17, 13

years.

Frank C: Castro of Hallendale, Fla., Group 12, 19 years. Virginia Chickering of Waltham, Group 18, ten years. Lewis R. Claar of Arlington, Lincoln Fiscal Office, ten years.

Charles A. Considine of Billerica, Group 12, nine years. Patrick Cosgrove of Cambridge, Group 11, 23 years. Joseph DiSalvitore of Lexington, Group 16, 14 years. William R. Grant, Jr., of Watertown, Group 11, 15 years. Harold S. Hayden of North Abington, Group 12, 15 years. Roger Woodbury of Weston, Office of the President, 33 years.



SHARING REMINISCENCES are Henry Siekman, left, and Paul Sherman.

Rose Receives Nuclear Award

Dr. David J. Rose, professor of nuclear engineering in the Department of Nuclear Engineering, has been awarded the 1975 Arthur Holly Compton Award of one thousand dollars from the American Nuclear Society.

Dr. Rose received the award "for his timely and clarifying publications on energy policy and the handling of nuclear wastes, for his lucid lectures on nuclear energy, and for his teaching abilities which have resulted in creative and pioneering work on the part of his graduate students in fusion reactor technology."

The award was presented June 10 in New Orleans, at the 21st Annual Meeting of the American Nuclear Society.



Announcements

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!).

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

Technology Children's Centre Nursery School*-A few vacancies remain for 3-5 yr olds in Summer Session, June 16-July 25. Both Eastgate and Westgate offer 2, 3 or 5 morning programs. Also some vacancies in Fall Session. Fran Olson, director, x3-5907.

apprx 2ft

exc cond, \$10. Phyllis,

Wstnghse 5000 BTU air cond, 3 yrs

old, gd cond, cost \$155, ask \$80. Call,

Moving, Amana copprtn refrig/freez comb, lk nw, ½ prc, \$300; copprtn Whrlpl wshr w/wheels, \$95; couch,

cstm md slpcvr, \$45; mirror, \$5.

Strdy 7' highback divan; 15' braided

Dining tbl, 6 chrs & cupbrd, best over

\$200; sofa w/ xtra cov, \$50; desk w/chr & lamp, \$50; 3 beds w/matt,

\$15 ea; dressr w/mirror, \$25; dbl matt,

\$30, arm chrs, tbls, 2 b&w TVs, etc.

Tires, 2 G78-14 on 5-hole GM rims, used less than 1 K, \$35/pr. Stan,

Safe, steel and cncrete comb lock on

wheels, 18" L, 15" W, 24" H, 400 lbs.

Openwork cotton summer blnkt, twin

sz, green, \$5; wood-soled lthr clogs, sz

Antique (?) blue vlvt love seat, rcntly

AC, \$50; chest, \$20; trntabl, \$20;

infltable boat, \$25; lwn mowr, \$20;

telephn, \$7; pole lmp, \$5; hassock, \$5; book case, \$10; bed lmp, \$2; trunk,

Mossman Tennessee flt-top guitr, 8 mo

old, custm mothr of pearl snwflk inlay,

gold Grovr tuning mach, exc, precisely

made, cost \$600, now \$450. Call,

Off street pkg for June, July, Aug, nr Orsn Welles, \$15 per month. Call

Hardtp pop up tent/trailr, slps 4,

approx 450 lbs totl wht, exc cond,

towable by compact car, \$450 or best.

rug. H Canning, x206 Linc.

494-9027, aftrn.

x4.5ft,

x3-6705.

783-9895.

x3-6286.

Call, 864-8972.

x7551 Linc.

Mike, x3-3407.

x3-5042.

\$5; iron, \$5. x3-6868.

877-2315 aftr 6pm.

Jeffrey, 868-7094.

x8-3840 Draper.

Mhgny framed mirror,

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.

New UROP Listings

For more detailed information on UROP opportunities listed, MIT undergraduates should call or visit the Undergraduate Research Opportunities Program Office, Room 20B-141, Ext. 3-5049 or 3-4849 unless otherwise specified in the listing. Undergraduates are also urged to check with the UROP bulletin board in the main corridor of the Institute. Projects beginning in the summer for pay.

MITRE Corporation Bedford 1) Maximal Length M-ary Shift Registers. Requires knowledge of Galois fields and binary shift registers with linear feedback.

2) Optimization of digital tapped delay line filters. Problems of signal processing (tap coefficients, signal truncation, filter errors) will be examined. Analysis requires theoretical analysis as well as numerical experimentation.

3) Measuring software development costs. Measurements of costs for development of the PDP-11/45 security kernel designs and establishment of a framework for estimating costs for Multics security kernel development. Management or software engineering expertise required.

Raytheon Service Co.

Resource Recovery from Wastes. A project on recovery of nonferrous metals will involve testing and modifying existing equipment which uses electromagnetic forces to separate non-ferrous metals from mixed solid waste or auto scrap. The project will have practical significance and the results will be considered in the design of full-scale recovery plants.

Burlington

Rotary Drum Air Classifier. An opportunity for a student to become involved in investigation of the use of a rotary drum air classifer for separating light combustible materials from shredded urban refuse. The separation obtained is a function of feed rate, particle size, drum angle, drum rotational speed, lifter configuration, and point of feed entry. The principles involved are not solely aerodynamic; gravitational forces and ballistics also play a role in the separation. A test program is required to determine the effect of the many variables on separation efficiency. Contact Prof. Michael Bever, 13-5066, x3-3323.

MIT Club Notes

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

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, :30pm, Rm 24-407. Info: M. Gaffey or B. Havelton, 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 SUMMERCON & WINTERCON. Info: Paul Bean, 266-6108 or Robert Sacks, 494-8889. Origins I Avalon Hill Games Convention info: Paul Bean.

Student Art Association-Summer art classes in drawing, pottery & photography begin-ning Mon, June 16. Register Stu Ctr Rm 429, x3-7019.

Student Homophile League*-MIT Gay Lounge (Walker, Rm 50-306) open for lunch and most evngs; call ahead, dl 0745. Meetings 1st & 3rd Sundays each month at 4pm, Rm 50-306. For info, talk, help in coming out, call Tom at the Hotline, x3-5440 (Hotline is being moved and is temp out of commission!)

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

Religious Activities

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

Roman Catholic Mass*-Sun, 10am, Chapel.



Ads are limited to one per person per issue and may not be repeated successive issues. All ads must be accompanied by full name and Institute extension. Only Institute extensions may be listed. Members of the community who have no extensions may submit ads by coming in person to the Tech Talk office, Room 5-111, and presenting Institute identification. Ads may be telephoned to Ext. 3-3270 or mailed to room 5-105. Please submit all ads before noon, Friday, June 13.

For Sale, Etc.

Thomas TL-2 organ, transistor, 2 manuals, 13 pedals, blt in Leslie spkr, works perf, \$350. Call, 864-7907.

Shoes, nw, \$5 ea: yellow sndls, 8AA; bone flts, 71/2A; navy flts, 71/2A. Call, 862-1935 eves.

Pr 14" rims w/snow tires for Valnt and Dart, \$35 for pair. Wayne, x3-3106.

LR tbl lmp, frmd picture, rm divider units, deep fryr, doggie bed, all lk nw. Larry, x3-4749.

Acoustic 260 amp for organ, guitr, bass, 2-14" Altec Lansing spkrs, folded horn, guar for term of Boston area res (about 2 yrs), 31/2 yrs old, little use, gd cond, orig list \$1550, sell \$650. Call, 247-4007-eves.

Antique empire sofa c.1825, nwly refin & re-uphlstrd, exc cond, \$425. Alan, x3-6279.

Old but gd stereo: Dyna PAS-3, preamp, Scott 50-50W amp, choice of or Kenwood tuner, Univrsty Dyna spkrs, \$250, Rick, x8-1469 Draper.

Antque Persian Gilims (2) woven rgs, 7'5" x4'8" & 9'3" x 5'3", exc cond; high chr, \$5; 2 car seats, \$3 ea. Marian, 964-5998.

GE 12" port B&W TV w/VHF chnnl, lvng country, \$35. Andy, x3-3868.

stereo w/o spkrs, \$5; Txts, physcs, Rhythm Master, \$75. Robert Ashmth, etc, rcrds, 20% of orig; Bell telephns, \$12-15. Marc or Paul, worth, x3-4765.

Realistic SC15 cassette deck Lafayette 25 watt amp w/spkrs, \$100. Call, 494-8418.

Grande foosball tbl, prof size w/oprtng coin slot, orig \$550, ask \$250; Sears Coldspot AC, 11,000 BTU, 115 volt, 12 amp, orig \$250, ask \$180. Audrey, x3-4437.

F 26" Columbia 3-sp bike, exc cond. Abe, x7416 Linc.

Royal Doulton china, Old Deed's Sprays pttrn, srvng piecs: plttrs, cov veg dshs, etc., for anyone needing to complt sets, no lngr avail, x3-5666.

F Raleigh Sprite 5-spd bike, 271/4", exccond, lrg dbl bskts, case-hrdnd chains and pdlcks, \$75 or best. Call, 547-4465.

Panasonic cassette stereo tape rcrdr, auto stop, was \$100, ask \$70. Diana, x3-2757.

Sofa, \$20, chair \$20; 9x12 shag rug, \$10; end tbl, \$10; lmp, \$5. Yvonne, x3-7617.

M 26" Phillips 3-sp bike, exc cond, w/lock and chn, \$40. Fred, x3-3623.

Wdn desk, 7'x21/2' with 3 ovrhd shlvs, \$10 or best. Call, 494-8404.

'65 Rambler Amb, 2 dr, conv, for immed sale, body gd, nds some work, \$150 neg. Gary, x3-6862.

'66 Mercury Cmt, gd cond, no trouble at all, \$350 or best. Call, 547-1972, morn or eve.

'68 Buick Skylrk, gd cond, eng tune up rcntly, 75 K, auto, p st and br, 2 snws, stereo radio, \$550 or best. Call, 494-8122.

'70 Ford Cntry Sq wgn, 8 pssgr, 60 K, p st & br, auto, ac, roof rack, exc mech cond, nw tires, \$1075. x5332 Linc.

'70 Ford Mstng, 2 dr, fstbck, green, auto, V8, 302 C.I.D., 73K, gd cond, \$1200. Richard, 876-0950 evgs.

'70 Mvrck, 2 dr, 6 cyl, std, gd tires & brks, new parts, must sell, nd garage, bike, exc cond, \$400 firm. Maureen, x8-3592 Draper.

74 Kawasaki Z1, vry cln, nw tires, ch & sprckts, Boge shks, Carello quartz halogen headlt, full windjmmr fairing, best over \$2200. x3-6903 lv mssg.

Commutr scootr, econ (100+mpg), rliabl, rcntly reblt mtr, Hnda 90. Call, Patty, x3-1502, frm 9-1.

Housing

Acton, 1 BR apt, ww, dw, AC, pool, tennis ct, game rm, suana, util incl. x7534 Linc.

Arl, 4 BR colonial w/lg addition, 2 car garage, ww, choice res loc, 10 min H Sq, fam only, avail 7/1 for 2 yrs, \$475. Call, 646-6645.

Arl, gd startr home, nwly redecoratd, LR, K, 2 BR, \$31,000. Call, 646-1357.

Arl, lg 3 BR apt, DR, LR, K, pantry, 2 porches, on Mass Ave, \$285. Rod, x3-4710.

Arlngtn, lg sunny 4 rm apt, 2 BR, eat-in K, 1st fl, yd, avail 7/1-mid Sept, \$250. Call, 354-6597.

Back Bay, BR apt, Beac St by Gloucester, parquet fl 2 frpl, blt-in shlvs, hi ceil, gd Indlrd. Call, 267-2780.

Bri, 2 BR apt in hse, LR, DR, K, pkg, chldrn allowed, \$250. Helen, x8-2471 Draper.

Bri, 2 br apt, LR, DR, K, Indry, in nw bldg, nr MBTA, stores & plygrnds, furn, crpt, pkg, summer sub w/opt, \$260. Call, 783-4095.

Bklne, sum sub July & Aug, 2 BR, v reas. Celia, x3-3127.

Bklne, 1st fl of 2 fam hse, unfurn, 3 rms, K & B, avail July 1 for sum or for yr, quiet area near T, \$155 plus yard care. Maureen, x3-4831.

Bklne, 3 f sk 4th for lg sunny BR in 4 BR apt w/spac K, 1½ B, LR, pkg, July/Aug sub, \$75 neg. x3-7207.

Camb, nr Fresh Pond, 1 or 2 resp people for July-Aug sub, sunny cln, furn 6-rm apt, 2nd fl, on quiet residntl strt, prchs, AC, \$145 each. Sally, x3-6417.

Camb, chrmng 7-rm hse, redsgnd by arch, many intrstng features, fenced-in yrd, deck, mod K, 1½ B, Oxford St area, 8 min frm MIT. Ask \$65,000. Jessie, x3-3141.

Camb-Wtrtwn, mod 2 BR apt nr H Sq,

Marlboro, 4 BR deck hse, DR, elec appl mod K, 2 full B, spac frpl LR, sliding dr to deck, lg fam rm w/frpl & sliding dr to patio, Indry, oil ht, xtras, \$68,000. Carole, x3-2096.

Natick, 1 br apt, compltly furn, sum sub, possbl opt, pool, tennis, pkg, disp, all conv, \$250 plus elec. x8-3541 Draper.

Nwtnville, 3 BR duplex avail 7/1, nr tpke, T, Cabot Sch & shops, \$355 + util. Philip, x3-6421.

Som, nr Portr Sq, sub w/opt, 2 BR, 2 AC, dw, disp, Indry in bldg, pkg, ww, avail July 1, \$260. Pereira, 776-0584.

Som, cln, mod, 1 BR apt w/all luxury features, heat, hw, pkg, \$225. Call, 495-2834 days.

Som, lux BR apt, ac, ww, dw & disp, elec range & refrig, storage area in bsmnt, off-st pkg, perf cond, \$225 htd. Mark Fleming, x3-3241.

Som, nr Porter Sq, sum sub avail 7/2-8/14, 2 BR, ac, ww, dw & disp, Indry in bldg, off-st pkg, \$250. Martinez, x3-5613.

Som nr Inman Sq bus, 2 BR, K, LR, B, balc, carpet, dw, Indry & pkg, several closets, avail 6/1, \$265 incl ht &hot wtr, nego. Ramos, x3-3259.

Som, MIT apt, sum sub w/opt, 1 BR, pkg, \$230 plus elec. Oded Berman, x3-7154.

Som, sub, 1 BR apt, nr bus, cln, quiet, cool, 2nd fl, \$100 plus gas and elec, just redone. Joanna, x3-6220.

Wtrtwn, 2 BR, 2nd fl, frpl, den, garage, adults only. Call, 926-0224, evgs.

Wtrtown, Bel line, 2 BR brk twnhse, 1½ B, qt street, attic, fnshd bsmnt, mod K w/dw & disp, ww, pkg, pool, sauna, clubhse, gas heat, cent AC, \$35,900. Owner, 924-7181, evgs.

Wellesley, 2nd fl 3 fam hse, 6 rms, eat-in K, walk-in pantry, ww, bay wndws, gas ht, storm wndws, gd nbrhd, lg yard, nr bus, Rt 9, 128, Pike, free Indry, avail 7/1, \$300 + util. Call, 237-2309, bef 10pm.

Wellesley, 2 BR, LR, nr college campus, avail 6/15, \$225 incl util. Call, 235-4378 aft 6pm.

Winchester, victorian hse, 5 BR, B, furn, avail 9/1, \$450 + util. x3-4965.

Woburn, 2 BR furn apt, swim pool, tennis, avail 7/1-8/15, \$260 + util, nego. Maggie, x3-7195.

8, hrdly worn, \$5; 14" steel shlf brckts, 50cents ea. Helen, x3-7690. Vehicles Ski boots, nw, Le Trappeur, sz 10, w/tote, \$40. Irvin, x3-6879. Above grnd pool frame, 18' diam, nds linr, 4 ft deep, \$50 or best. x3-7725.

re-uphlstrd, \$90 or best. Joan,

'66 Chevy, 6 cyl, 4 dr sedan, best. Call, 391-6854.

'70 BMW 2002, blue, all tinted, 4 spd, manuevrblty, \$2540. Call, 861-9506.

Chlidren's library tbl, blond wood, 6' x3' surf, \$30 or best. Margie, x8-1811 Draper.

Holubar mntn parka, XL, unused, \$30. Art, x3-1384.

RCA port radio direction finder, AC-DC batt, 3 band, null mtr, marine, brdcst, beacon, exc cond, \$40. Joan, x7002 Linc.

Mobile Trvllr, '71, AC, self containd, slps 6. Call, 321-1688, aft 3pm.

71 Amana 17 cub ft frstlss refrig/ freez, avcdo, revrsbl door, 1 yr left on wrnty, mint cond, \$150. Ken, x5724 Linc.

Teac 6010 SL semi pro tape deck, mint cond w/ 4 ferrite heads, auto rvrse, bias swtch, \$500 or best. Don, x3-6654.

Autorama FTX, Sears, 40" x 99", 4 trks, 4 cars, 4 spd controllrs, nw w/wrrnty, \$30. Luis, x3-3211.

AC 8000 BTU, \$110 or best; ancnt electrc fan, \$5; Framepack (pdded shldrs and wst blt) \$10 or best; Port

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Wok, 12" w/dome lid & ring, used once, \$5.50. Call, 484-0802 bet 1-9pm.

Sears 8000 BTU air cond, 115 vlts, \$135, x9613 Dorm.

Land in NH, 3/4 acre w/brook on property, x8-4101 Draper.

German mde 3 sp bike, lk nw, w/2 rr bskts, \$45 firm. See it at rm 1-371, or call Javier, x3-5043.

Thomas organ; mahog DR set; mple cedar chest; sngl bed w/ spr and matt. Alice, x376 Linc.

'75 Kyack, P-H fibrglss, English boat, recreatnl, Whitewater Class, high vol, gd for tourng, super construc, \$200 w/spray skirt. Cara, x3-4076.

Formica & mtl K set w/4 chrs, \$35 or best; tan vnly armchr, nds recvrng, \$5; vnyl & chrm highchr, \$10. Linda, x3-1782.

Frigidaire wndw AC, 2-sp, 8000 BTU, barely used, exc cond, orig \$250, now \$140; Biozonick Aquarium filtr systm, \$10. x8-2577 Draper.

Guild Manhattan x-175 acoustic-elec guitr, w/bass amp, \$300; Univox \$935 neg. x3-6194.

'70 Torino, fair cond, runs well, \$600 neg. Bob, 354-6269, aftr 6pm.

70 VW bug, exc mech cond, dlr serviced, full record, immac int, gd outside, rad & htr; Canon Canonet QU 1.9 camera; set new stainless steel cookware. Call, 354-2357.

'72 Datsun 240Z, wht snows, 54 K, well cared for, \$3200. x3-5094.

'72 Pont LeMans, 2 dr hrd top, vynl roof, p st, auto, am-fm, sml 8, 40 K, exc. cond, throughout, \$2200 or best. Bob. x 3-1344.

73 Ford Torino, sm V8, auto, econ, lw mileage, best. Billy, x366 Linc.

73 Olds Toronado, brgndy, wht vinyl top, lk nw, all options, 17 K, 14 mpg, \$3,700 or best. Jim, x8-4054 Draper.

'69 BSA 441cc, nw rr tire & bttry, nds tune up, best. Call, x9784 Dorm.

'71 Yamaha 350, mech great, incl chn, xtrs, rently tuned, \$550. Jia Shu, 494-0060, lv msg.

'72 Susuki TS 125, street legal, trail

\$285 incl ht & pkg, x3-1549.

Camb, 1BR apt nr H Sq, dw & disp, sub w/opt, pkg avail, \$260. Yves, x3-7006

Camb, nr MIT, 2 BR sum sub w/opt, fully furn, LR, etc. Call, 547-0196.

Camb, BR nr Cent Sq, sub w/opt avail 7/1-8/31, \$170 incl everything. Call, 547-4120.

Camb, nr Harv Sq, lg front rm, kitntte, semi-bath. Call, 547-4926.

Eastgate, sum sub avail July 1-Aug 31, 1 BR, furn cor apt. Danielle Chouet, x3-4712.

Jam Pln, nr T and Pond, 4 rm apt in privt home ownd by gay cpl, shared entrnc, avail July 1 to quiet resp pers (\$225), or 2 (\$275), all util incl, refs reqd. Call, 522-9809, evs or wknds.

Lex, 3 BR, lg LR, eat-in K, fam rm, carport, avail now, pref cpl, \$450. Henry, x3-1617.

Lex, frpl LR, DR, sunny K, den, 3 BR, 2 full B, 2 car garage, bsmnt, enclosd patio, lg yd, w/outside shed, fruit trees, \$52,000, Call 862-7511.

Walking distance to MIT, 7 rm hse, 2 B, gd cond w/gd size backyrd. Call, 241-9387.

Cape Cod, Craigville beach, 5 BR cottage, \$230/wk. Natalie, x3-7594.

Cape Cod, E Falmouth, 2 BR hse, walk to ocean beach, qt area, exc for sm fam, \$225/wk. Don, x8-2332 Draper.

Cape Cod, Hrwch, avail for sum rntl, nw hse, furn, 2 BR, 1½ B. sundck, dshwshr, nr lake, minutes to ocean, Call, 471-8827, evgs.

Hull, Pemberton end, 6 rm sum cott, sunprch deck, quiet, ideal for fam, no sngls pls \$135/wk, call for avail wks. Sie, x8-3485 Draper.

Nantucket, 4 BR hse avail 7/15-8/9, all mod conv, \$340/wk; also avail late Sept, \$225/wk. x3-6722.

Lake Winnipesaukee, 3 BR chalet \$185 wk. x8-4415 Draper.

Madison, NH, yr-rnd home w/panoramic view Mt Whittier & Chochrua, cathedral ceil LR/DR, K, 4 BR, full B w/space for another, fully insulated, \$38,900, June, x7103 Linc.

Nashua, NH, on Rte 3, sub June-Aug, 2 BR apt, dw, disp, cntrl AC, pkg, tennis crts, balc faces forest, nr lakes, \$200 & elec, neg. Anne, 244-9283 Newton, eves.

Stoddard, NH, Highland Lake, lakefront cottages, all facil, frpl, porch, rowboat, 90 mi (2 hrs) Bos. x8-1566 Draper.

Maine, sum home on Kezar Lake, fully furn, lg priv beach, dock, cnoe, sm mtr boat, slps 8-10 & crib, gd hkng, golf nrby, pets ok. x3-5612.

Highland Lake, Brdgtn, ME, lakefront cott, 2 BR, deck, beach, boat, fshng, avail bef July 5 & aft Sept 1 for \$100 wk. x8-1457 Draper.

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.

Waterboro, Me, lakefront, less than 2 hrs Bos, slps 8, full B, lg LR-DR area, deck facng water, TV, lg rwboat incl safe for childrn, fshng, avail Aug, \$150. Marilyn, x296 Haystack.

So Vt, Weston, mod log home in secluded, wded area, 2 Ivls, 3 BR, compl equip, tennis, fishing nrby, \$350 incl util. x477 Linc.

Vt. Grn Mtn vac rental, contemp 4 BR frpl apt, seas now to 11/15 for \$900, or by wk or mo; smaller apt also avail. B. Pugh, x7364 Linc.

Ludlow, Vt, sum-wntr rental hse, beaut view, 11 acres, 6 BR, 3 B, sauna, sum \$500/mo, ski seas \$3,500. Call, 484-3017.

London, Eng. 2 BR furn apt avail for short let mid-June-Oct or part. Ian, x3-7004.

Animals

Charming yng F cat, nds home. Call, 969-7457 aft 6pm.

AKC Lasha Apso M pups, champ line, \$175-225. Call 444-3495.

2 ador and free. Marilyn, Kttns, 646-5603, bet 3-9pm.

Lhasa Apso pups, gold w/blk tips, 1st shts, wormed, 10 wks old. Call, 354-3315.

Wanted

F 27, serious biol, seeks F to share drvng/exp to obsrv wildlife in Minn & S. Dak enroute to Salt Lake. May spot by plane, frry & hrsbck. Aug 1 for 3 wks. x488 Linc.

Temp jobs (cleang, pntg, hvy grdng, etc) dys or wknds, for exp, dillignt, courteous stnt. Call Brad, 625-7025, Tues-Thurs am or wknds.

Inexp stereo or mono amp, 25 or more watts, fidelity & age not imprtnt. Polly, x3-7828.

Profsnl cpt want to rent apt or sm hse beg Sept. 1 in Wayland-Natick area or vic. Andy, x3-1851.

Bikes, 10 sp, 19"-23" frms, C. Ryan, x3-1577.

Old but usable black type Singer sew mach; also sm girls bike, sngl spd. Regina, x7029 Linc.

Want to rent cabin in cstl area of Maine fr wk of July 20, cpl & 6 yr old. Kathy, x7029 Linc.

Front bicycle rim, 27", free or cheap. Mary, x8-2895 Draper.

Ice cream makr, manl or elctrc. Call Liz, 267-3130.

Babysttr fr 4 mo old, exp w/infnts, 3

walk to MIT (Tech Sq), \$60, ht incl, come see. Call, 547-1972.

MIT grad, M sks rmmte in 2 BR apt, own rm, ind lifestyle, no smokers. Mel, x3-2422.

F rmmte wanted to share apt in Arl, own BR, back yrd, wshr/dryr, ½blk from T, summr or yr rnd, \$100 & util. Peggy, 646-0421 eves or wknds.

Camb, rmmte needed for sum sub in 5 BR apt, Cent Sq. LR, Ig K, dw and disp, own BR. Rhonda, x3-5743.

Rmmte needed for 5 BR apt, own BR, furn, nwly paintd, crpt, 22 Magazine St (Cent Sq), dw, disp, wshr/dryr, own refrig in K, \$82. Call, 547-4684.

F rmmte needed (4th) by July 1 for Som duplx, \$98.75 incl heat, vry lrg BR, nr Union Sq, 1 mi frm Harv Sq. Maria, x3-4571.

Bel, 1 M for own BR in 3 BR apt, K, DR, LR, 11/2 B, bsmt, drive pkg, disp, dw, wshr/dryr, nr T, shops, parks, mstly furn, shr w/ 2 MIT grads, \$120 & util, avail June 26. Capers, 484-2510, evgs.

Seek 2 rmmtes for lg, furn apt, lg K, dw, conv loc nr Cent Sq, T, shops, avail immed, \$105. Call, 492-2085.

M or F rmmte to share mod, cln, Cent Sq apt w/ 2 M, own BR, \$95 & elec. Call, 864-3195.

Drchstr, nice, bg, apt w/prch, pntry, pkg, seeks 1 nice rmmate. Call, 436-1746.

Rmmate, nd 3rd M, 21+, Som apt nr Tufts, wash/dry, own BR, avail now, \$80 + util. Bob, x3-3178.

Carpools

or 5pm. Mary Andresen, x3-6286.

Wd like ride mornings frm Brklne (sect of Pleasnt St and Comm Ave) to MIT. Lisa, x3-7104.

Nd rd frm Mrlbrgh rte 20 (Sudbury side) to MIT daily, hrs 9-5. Elaine, x3-6829.

Miscellaneous

Typing these, MS, term papers etc, on IBM Selectric. Debi, x3-2511.

Quiet, resp working F (2) avail to housesit for 1 yr beg 9/75 in area w/access to T or busline. Vicki, x3-3364.

Need a nursery sch for your 21/2-41/2yr



lly Hansen	3-4275
k Newcomb	3-4269
elyn Perez	3-2928
cretary – Susan Bracht)	
n Hewitt	3-6512
rolyn Scheer	3-6511

Carolyn Scheer (secretary - Ellen Schena)

Sal

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Ev

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K

Acad. Staff, Tech. Asst., in Biology will do research related to isolation and physical characterization of key components of blood coagulation systems and molecular mechanisms by which components interact in fulfilling physiological roles. BA or BS in Chemistry or Biochemistry, laboratory skill required. C75-13 (6/11).

Spons, Res. Staff in Lab for Nuclear Science, will do postdoctoral research with a group studying medium energy nuclear structure with electrons, pho-tons 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 Brook-haven Nat'l Lab facilities (NY). Ph.D. in Physics plus 3 years experience in nuclear instrumentation and interpretation of nuclear reaction data re-quired. 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 manage financial resources Center: (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, Medical Technologist/Technician in Clinical Research Center will perform lab procedures in 12-bed center and for a large volume of out-patients. ASCP registration, experience in clinical chemistry, hematology, and urinalysis and familiarity with lab instruments required. Bachelor's degree in Biology or Medical Technology preferred. D75-109 (6/11).

Spons. Res. Staff in Center for Cancer Research will perform independent research on tumor-associated antigens including selection of test materials and evaluation of assay procedures. MD degree, experience with human tumors and pathology, biochemistry and microbiology required. Recent clinical experience desirable. D75-108 (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 perfor-mance. 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 or technical education and curriculum development required. Industrial training experience desirable. Some overseas travel re-quired. D75-101 (6/4).

quired. Knowledge of the Institute, its personnel and financial procedures highly desirable. A75-36 (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. D75-95 (5/28).

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 soft-ware for music research. BS in computer science, or equivalent, exper-ience with PDP 11 DOS systems required. D75-95 (5/28).

Spons. Res. Staff, temporary. Compu-tational 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 resolutation 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).

Acad. Staff, Tech Asst. in Biology will do research involving nucleic acid isolation, enzymology, bacterial assays, growth and maintenance of bacterio logical stocks, as well as some lab management. Sophisticated knowledge of nucleic acid chemistry and biochemistry techniques, particularly in areas indicated, required. Bachelor's degree in Biology or Biochemistry and previous experience as technical assistant preferred. Recent graduates, please submit list of relevant courses taken. C75-12 (5/21).

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 Bio-physics Lab will assist in sample separation of proteins from animal and human lenses; determine properties of isolated proteins, and evaluate bio-chemical effect of metabolites and catarogenic agents on intact lenses and in vitro lens preparation. BS in Biochemistry or Medical Science, ex-perience in biochemical techniques (chromatography, spectroscopy, sub-trate and product analysis), and physical chemistry of proteins required. will

required. Experience with minicomputers, industrial experience and BS in Mech. Eng. desirable. D75-89 (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. mary 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, in Information Processing Center User Services Group will provide programming information and debugging help to users; produce user documentation, conduct seminars, 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).

Acad. Staff, Tech. Asst., in Biology will be involved in research on Molecular genetics of bacteria: DNA mediated bacterial transformation of mutants, isotope labeling, density gradient centrifugation. Bachelor's degree in Biology or related field plus experience in Microbiology preferred. C75-7 (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 adminis-tration 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. 74-753-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 will coordinate volunteer solicitors in major geographic areas. Out of town travel necessary 50% of the time. Familiarity with MIT required for effective representation as well as poise and ease in dealing with people, demonstrated initiative and ability to work independently, good oral and written communication skill. A75-16, (3/26), A75-25, 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).

old? For details of the TCC prog in Eastgt & Westgt, tlk to Fran Olson, Director, at x3-5907.

Typing w/ editing done, anyting, effcnt MIT wife. Also, for sale reprodctn of 1876 8-day, windup centennial clock. Mike Flynn, x3-6275.

Nw chrome plated bike rack, nvr usd, \$7.50. x8-3981 Draper.

Pt time offc asst 2 days/wk, Bel-Arl typing reqd. Mr. Koumans, area, x3-2916.

Sailbt for charter, 28' Privateer sloop, slps 4, 8' dinghy, 10 hp aux, fully equipd, out of Hyannisprt, \$325/wk bareboat. Gary, x8-1484 Draper.

Ride wanted to Everett frm MIT at 4

wk in Camb nr Westgt. Call, 491-6154.

F 26" 3 sp bike, gd cond. Linda, x3-4669.

Used HP-35 calc or equiv w/220 vlt chrgr. Jerry, x7754 Linc.

Vac clnr; 9x12 rug, queen size matt & box spr, all gd cond. Karen, x3-4905.

For vistng scientst 2-3 br furn apt or hse, 9/1-1/2. x3-7864.

Someone to sign up for Evelyn Wood Reading Dynamics course w/me, 1/2 price if sign up in prs, 7 wk course beg wk 6/23, 1 evg/wk. Tom, 489-3626, evgs.

Roommates

Frmmte wanted for furn BR w/4 other F students in 5 BR Bklne Cldg Crnr apt, K, LR, nr T, sum sub w/opt. \$85 neg. Tony Lake, x3-7441.

Rmmte wanted to share lg 3 BR apt bet Harv & Cent Sq w/2 othrs. LR, K, prch, sunny, airy, safe nghbrhd, sum or yr rnd, \$82 incl heat. Call, 547-7897.

Wntd, 2 rmmtes for 4 BR apt, 5 min

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.

ick Higham	3-4278
at Williams	3-1594
ecretary - Dixie Chin)
irginia Bishop	3-1591
like Parr	3-4266
hilip Knight	3-4267

(secretary - Joy Dukowitz)

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Admin. Staff, Asst. to Director, Office of Sponsored Programs will have responsibility for administration of sponsored projects: proposal review, grant and contract negotiations, postaward 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 environment university required. A75-37 (6/4).

Admin. Staff, position involves administrative assistance in office with diverse academic and administrative responsibilities. Duties will include organizing and managing complex meeting and travel schedule as well as administrative support for other activities of the office. Scheduling and support requires ability to set priorities and make judgments in coordinating several activities. Position will require independence and ability to supervise support personnel. Bachelor's degree, or equivalent combination of education and experience, ability to deal discreetly with sensitive information and to represent the Institute to persons within MIT and outside rebe trained in electronics, laser light scattering, and computer. D75-91 (5/21).

Admin. Staff, Asst. to Director, Admissions Office will interview prospective students, correspond with applicants and secondary school personnel; visit secondary schools; assist in-preparation of publications. Bachelor's degree, or equivalent combination of experience and education, and human relations skill required. Temporary for 1 year, but may be extended. A75-33 (5/21).

Admin. Staff, Graphic Designer, 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).

Spons. Res. Staff, Mech. Engineer, temporary, in Artificial Intelligence to participate in mechanical design work for productivity technology group. Familiarity with state of the art manipulator design, especially applications requiring multiple degrees of freedom, force and touch feedback. and small size, understanding of theory and use of force, touch and accelerator sensors, as well as familiarity with digital interfacing and software control

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 adminis-tration, 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

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Positions Available

(Continued from page 7)

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, part-time, in Center for Advanced Engineering Study will conduct research to evaluate nature of usage of cable TV system. Familiarity with questionnaire design and interviewing techniques required, Masters degree in social science or related field or equivalent experience required. 15-20 hrs/wk. Position is for 7/1/75 through 6/30/76. D75-67 (4/9).

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 parti-cipate 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 generalize leonteif, 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 at the National Magnet Laboratory will work on the Alcator thermonuclear experiment. Conceive, design, and carry out plasma diagnostic experiments using neutron, X-ray, optical, electrical, magnetic and micoranalysis and assessment of data. Ph.D. in plasma physics or related area required. Familiarity with tokamak devices desirable. 74-1512-A (5/1). 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, Bechman 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, Accountant, in the MIT Press Accounting Office will maintain detailed cost accounting records for in-process inventory; calculate costs of completed titles; monitor perpetual inventory and cost of sales for finished books; reconcile subsidiary records to control accounts; perform other pro-jects as required. Accounting certificate, or equivalent experience, required. E75-18 (5/28).

Exempt, Admin. Asst., Office Mngr. in Libraries Microreproduction Lab will strated ability to handle many types of patients and emergency situations required. Emergency Room or ICU experience desirable, 11pm-7pm shift, E75-12 (4/30); Rotate weekends. Flexibility to work other shifts as necessary required.

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 recon-structions. 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 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. 371/2 hr/wk. B75-223 (5/28).

Secretary V in Electrical Engineering and Computer Science headquarters will handle varied secretarial and administrative duties which include preparation of catalog copy, editing and writing of Visiting Comm. reports; maintenance of class and examination schedules; act as liaison with other Institute offices to resolve problems; handle general correspondence independently. Familiarity with MIT procedures, organization skills required. machine dictation and/or Typing, shorthand skills necessary. B75-206 (5/21).

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 Non-smoking language necessary. office. 371/2 hr/wk. B75-234 (6/4).

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, engineering terminology helpful. B75-242 (6/11).

Secretary IV, temporary, in Nutrition and Food Science will type large volume of correspondence and reports; maintain files and records; answer phones; act as receptionist. High school graduate, or equivalent, required. Temp. through 10/31/75. B75-243 (6/11).

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), pos-sibly 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. B75-238 (6/11).

Management Science Group, Sloan School, will type course material, reports, manuscripts, including technical data; answer phones; file, maintain student records. Typing skill and willingness to learn technical typing required. Secretarial training or previous office experience preferred. B75-239 (6/11).

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).

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; and proofread reports; write edit and/or suggest replies to office correspondence. Excellent typing skills plus years secretarial experience required. Shorthand/speedwriting, familiarity with MIT procedures desirable. B75-214 (5/28).

Secretary IV, part-time, in Meteorolo-gy to faculty members and research staff will perform general secretarial duties including typing of manuscripts, class material; arrange travel; prepare and monitor budgets. Must be selfmotivated and able to set priorities. College training and MIT experience desirable. 2-3 days/wk. B75-218 (5/28).

Secretary IV to Nutrition and Food Science faculty member involved in research on malnutrition, learning and behavior: will perform standard secretarial duties including shorthand, typing, filing, machine dictation. Secretarial school training or equivalent experience required. Knowledge of medical/biological terminology helpful. B75-217 (5/28).

Secretary IV-Admin. Asst. V in Sloan School health education and management research project will handle budget, administrative matters; provide information on projects by written correspondence and phone; type and edit reports and manuscripts; act as liaison between project members and outside institutions. Organization skill, excellent typing, command of English language and ability to use dictating equipment required. Knowledge of MIT accounting procedures, shorthand skill helpful. B75-212(5/28).

Secretary IV in Humanities & Social Science Technology Studies Program to oral history faculty member and will perform student assistants: general secretarial duties including arranging travel and meetings, transcribing interviews; monitor accounts; coordinate UROP students. Good typing skill, ability to organize and maintain filing system, flexibility and ability to work independently required. B75-197 (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 in the Office of Personnel Relations, Benefits Office, will perform varied secretarial duties including occasionally heavy typing, shorthand/ speedwriting, filing; explain benefits Institute rograms Secretarial experience, poise in dealing with people, ability to set priorities, and follow through independently required. B75-208 (5/21).

ity (or willingness to learn) required. Shorthand skill preferred. Economics background helpful. Non-smoking office. B75-130 (4/2).

Secretary III-IV will provide secretarial support to Center for Space Research faculty and staff. Duties include large volume of proposal, correspondence and publication typing, answer phones; arrange travel and meetings. Typing skill, including ability to type technical and scientific material and to organize required. B75-249, B75-250 work (6/11).

Secretary III-IV in Medical Department Radioactivity Center will have responsibility to contact radium therapy 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. 371/2 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-IV to Office of Sponsored Programs grant administrator will have responsibility for maintenance of grant and contract records, coordination of approval process, typing of letters, forms and other general secretarial duties. High school graduate with 3 years experience, or equivalent combination of education and experience required. Shorthand and MIT experience helpful. B75-186 (5/14).

Secretary III to Asst. Director, Center for Advanced Engineering Study, will perform varied secretarial duties, particularly relating to Center's foreign student programs; assist students with relocation problems (housing, immigration, etc.); arrange seminars, social events; type proposals; course materials; answer phones; file. Will work closely with other Office secretary and assist Center secretaries as required. B75-228 (6/4).

Secretary III in Aeronautics and Astronautics will act as second secretary to assist the Department Undergraduate Officer; perform general secretarial duties including student registration activities; type correspondence and technical reports; answer telephones and file. Ability to organize and work with details, to interact effectively with staff and students, good typing skill and command of English language required. Previous office experience and shorthand helpful. B75-194 (5/21).

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. midnight-8am shift. B75-195 (5/21). 4pm-12midnight shift B75-251 (6/11).

Keypunch Operator III-Sr. Acctg. Machine Operator IV in Comptrollers 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. Know-ledge of Inforex key-to-disk entry system helpful. B75-215 (5/28).

Sr. Clerk IV-V. Accounting Assistnat

Technical typing skill, keypunch abil- answer inquiries; compile statistics; perform other duties as required. Typing skill, ability to deal accurately with detail, 3 years office experience required. B75-230 (6/4).

> Clerk III, Receptionist in Environmental Medical Service will answer phones, greet visitors, do general and technical typing, deliver materials to other Institute offices; perform other general office duties. Pleasant telephone personality, poise in dealing with people, good typing skill required. B75-226 (5/28).

Clerk II, part-time, in the Office of Exhibitons (CAVS), will assist Director varied duties related to Hayden Gallery operations: do errands; keep storeroom in order; use dry mount machine; make letraset signs; assist in hanging exhibitions; distribute publicity posters; perform inventories; Strong sense of responsibility, desire to learn museum work, knowledge of tools and display materials necessary. 20 hrs/wk. B75-232 (6/4).

Glassware Washer, part-time, in Arteriosclerosis Center will be responsible for washing non-radioactive glassware. Must be able to work with minimum supervision. 2hrs/day; flexible schedule. H75-63 (6/4).

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 transpor-tation 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 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. H75-54 (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 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, collinators, scattering chambers; work with all standard machine tools and instru-ments. 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 01 research work; operate experimental and technical equipment. Experience in use of lathes, milling machines, drill presses, grinding 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 super-vision and to travel, as necessary, to other locations (MIT, Fermi, Nat. Lab., Batavia III) 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: B75-185 Secretary III B75-210 Lib. Asst. IV B75-167 Secretary IV B75-181 Secretary IV B75-198 Edit. Asst. V B75-202 Clerk III Spons. Res. Staff (cancl'd) D75-56 B75-189 Admin. Asst. V B75-213 Secretary III B75-235 Clk. Typ. II (cancl'd) E75-17 Exempt Admin. Staff A75-24 B75-196 Secretary IV Sr. Lib. Asst. IV B75-156 Secretary III B75-207

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).

Nurse, Exempt in Clinical Research Center will perform general and specialized nursing procedures in 12-bed research unit, taking charge as necessary; work with lab and dietary departments; must be able to observe and chart accurately. Mass. licensed RN, graduation from accredited nursing school, plus two years experience required. E75-14 (5/7).

Infirmary Staff Nurse, Exempt, will primarily do bedside nursing and will assist with first aid treatment in emergency clinic. Mass. licensed RN with minimum of 2 years experience in Medical/Surgical unit plus demon-

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 facul-ty, 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. 32¹/₂ hr/wk 9am-4:30pm). B75-245 (6/11).

Secretary IV to faculty members in

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 IV in the Energy Lab will work with students and staff of Energy Information Group: perform general secretarial duties which include correspondence and technical typing, maintaining files, travel arrangements and monitoring of sponsored research accounts. Ability to work independently required. Secretarial school training and MIT experience desirable. B75-157 (4/23).

Secretary IV to faculty member and research staff in Urban Studies and Planning will perform varied secretarial duties including technical typing, editing; maintain computer lists by keypunching. May do occasional library research and contract administration.

Sponsored Accounting Section, in Comptrollers Accounting Office, will tabulate sponsored project research expenditures and cash flow; collect forecast data; maintain daily balances; prepare monthly billings and fiscal reports. General business background plus 2-4 yrs. accounting experience required. Typing skill desirable. B75-99 (3/12).

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).

Sr. Clerk III in Personnel Office, Records Section, will perform varied duties related to generation and maintenance of employee records; interact with department and other Institute employees to resolve problems and The following positions are on HOLD pending final decision: B75-201 Clerk Recept, III B75-199 Tech. Asst. V Exempt E75-16 Spons. Res. Staff D75-30 D75-7 Spons. Res. Staff D75-8 Spons. Res. Staff D75-90 Spons. Res. Staff

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