

Alcator Staff to Have Energy Policy Role

By WILLIAM T. STRUBLE
Staff Writer

Physicists, engineers and administrators who have built and will operate MIT's new experimental plasma fusion machine, ALCATOR C, will play a decisive role not only in the development of fusion but also in setting national energy policy, a high Department of Energy (DOE) official told an audience at a dedication program for the machine Friday, April 7.

Dr. Edwin E. Kintner, acting director of the DOE Office of Fusion Energy, urged members of the ALCATOR C group and the MIT Plasma Fusion Center to use "this powerful new experimental tool to its maximum" because, he said, we need your results for "important reasons" in sustaining what he called an historical effort in science and engineering.

Dr. Kintner was the concluding

speaker in the dedication program for ALCATOR C, which has been constructed in MIT's Francis Bitter National Magnet Laboratory, with the support of \$6.7 million from the DOE, as a joint effort of the ALCATOR group and the MIT Plasma Fusion Center.

Dr. Albert G. Hill, director of the Plasma Fusion Center, was chairman of the dedication program, held in Huntington Hall, which was attended by about 300 members of the MIT community and representatives of national fusion laboratories and contributing industrial groups.

In addition to Dr. Kintner, speakers were MIT president Dr. Jerome B. Wiesner; Dr. John M. Deutch, DOE director of energy research; Dr. Bruno Coppi, MIT professor of physics and one of the originators of the ALCATOR concept; Dr. D. Bruce Montgomery,

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Kerrebrock Named Head Of Aeronautics, Astronautics

Professor Jack L. Kerrebrock, widely known for his work in the development of propulsion systems for aircraft and spacecraft, has been named head of the Department of Aeronautics and Astronautics, effective July 1.

He succeeds Rene H. Miller, head of the department since November, 1968, who has asked to return to teaching and research in the general area of flight transportation. Professor Miller is the H.N. Slater Professor of Flight Transportation.

The appointment was announced by Dr. James D. Bruce, associate dean of the School of Engineering, at a meeting of the department's faculty on March 22. In making the announcement, Dean Bruce noted that Professor Kerrebrock's demonstrated interest and ingenuity in education, his record of research accomplishments and his

personal traits of dynamic leadership make him an ideal person to lead the department at this time.

Professor Kerrebrock, director of the department's Gas Turbine and Plasma Dynamics Laboratory, has been a faculty member since 1960. He has occupied the Richard Cockburn Maclaurin Chair in Aeronautics and Astro-

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M-m-m-m Good

Help for the hungry will be available Thursday, April 13, when the Technology Wives Organization opens its annual spring bake sale at 9am in the Maclaurin Lobby (Building 10).

Cakes, brownies, cookies and other baked goods will be sold.



All-American gymnast Leslie Harris on the balance beam.

Harris Named All-American In Gymnastics

By JILL A. GILPATRIC

Director of Sports Information

MIT has passed another milestone with the naming of Leslie Harris, a freshman from Malvern, Pa., as an All-American woman gymnast—the first woman from MIT to win All-American status.

Ms. Harris capped an exceptionally fine first year of intercollegiate competition with fifth place in the uneven bars at the Women's Small College Nationals and winning All-American honors.

All-around competitor Leslie had a great season this year, both in dual meet and championship competitions. She was undefeated in the all-around event in regular season competition and was instrumental in helping the MIT team, in only its third year as a varsity sport, to achieve a much-improved win/loss record of 5-6 this winter.

Ms. Harris then competed with the Tech team at the Massachusetts State College Division Championships at Bridgewater State on March 5. She made the finals in all events easily and won the all-around competition with a point

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Kistiakowsky Warns Against Neutron Bomb

The controversial neutron bomb is not a humane weapon, is likely to trigger instead of prevent a general nuclear war and is not essential anyway, asserts Professor George Kistiakowsky, a former White House science adviser and one of the nation's foremost authorities on arms control.

He urges that the neutron bomb, or Enhanced Radiation Warhead, as promoters call it, be put in "mothballs," along with older battlefield nuclear weapons.

Professor Kistiakowsky has entered into the international debate over whether the neutron bomb should be produced in an article prepared for the May issue of Technology Review, MIT's journal of science and technology. Dr. Kistiakowsky, professor emeritus of physical chemistry at Harvard University, was one of the men chiefly responsible for the development of the implosion atom bomb in 1945 and served as Special Assistant to the President for Science and Technology under President Dwight D. Eisenhower from 1959 to 1961.

The neutron bomb was designed as a tactical nuclear weapon that uses enhanced radiation to kill and incapacitate enemy soldiers close to where it explodes, while minimizing death and destruction from fire and blast away from the

battlefield.

According to Professor Kistiakowsky, the weapon has been developed primarily for anti-tank use in Europe as a response to a 3-1 numerical superiority in tanks of the Warsaw Pact forces and a concern that these would be used for a blitzkrieg attack on the West.

His main points in the Technology Review article are these:

—It is "preposterous" to call the neutron bomb humane, because its delayed effects may well kill as many people as a fission bomb, only slowly and with great suffering.

—Although proponents claim that deployment of the bombs would make the use of nuclear weapons in battle seem more credible, and thus act as a deterrent, the likelihood is increased that nuclear weapons will be used in combat. This could quickly lead to escalation and a general nuclear war.

—The neutron bomb is not indispensable to the West as a defense against a tank attack because of the availability and demonstrated effectiveness of new high-tech-

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4 Elected To NAE

Four members of the MIT faculty—one of them the director of Lincoln Laboratory—have been elected to membership in the National Academy of Engineering.

They are among 100 new members elected to the Academy this year.

The four new members from MIT bring to 48 the total number of MIT faculty who are members of the prestigious national engineering organization. Total Academy membership now stands at 857.

Election to the academy is considered among the highest professional distinctions that can be conferred on an engineer. Membership honors those who have made important contributions to engineering theory and practice or who have demonstrated unusual accomplishments in the pioneering of new and developing fields of technology.

Those elected from MIT and the citations given for each of them are:

Dr. Robert L. Coble, Department of Materials Science and Engineering: "For contributions to the theory of sintering of materials and to ceramic processing."

Dr. Jack L. Kerrebrock, Richard Cockburn Maclaurin Professor in Aeronautics and Astronautics: "For contributions in the development of propulsion and energy conversion systems design and research, education, and national service."

Walter E. Morrow, Jr., director of Lincoln Laboratory and a professor in the Department of Electrical Engineering and Computer Science: "For contributions to ionospheric, tropospheric and orbital scatter communication, and to military communication satellite technology."

Dr. James Wei, Warren K. Lewis Professor of Chemical Engineering and head of the department: "For the advancement of chemical

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Doc to Head CSF Campaign

Institute Professor Emeritus Harold E. "Doc" Edgerton will serve as honorary chairman of the Community Service Fund's annual drive in celebration of the Fund's tenth anniversary.

Doc, who is known to nearly everyone at MIT, was one of the first trustees of CSF when it was established by the faculty as a means of supporting services to the community by individuals and groups connected with MIT.

The spring campaign is scheduled to begin next Wednesday (April 19) and the kickoff will be marked by balloons and festivities presented by a number of MIT's performing groups.



CAPITOL APPEARANCE—Shown on the steps of the Capitol are members of the MIT Chorallaries, MIT's newest singing group, who toured Washington, D.C., during vacation. Left to right, they are: (front) Dana Klein, Lori Ullman, Kathryn Ralston, Karyn Altman, Sue Hanson and Leigh Slaughter; (back) David Bass, Dan Ottenheimer, Roger Frymire, Peter Cunningham, Dan Nolet, Rich Perlstein.

Open House to Feature Breadth, Variety of MIT

More than 100 exhibits, demonstrations and activities are already lined up for MIT's biennial Open House to be held Saturday, April 29, from noon-5pm.

Open House chairman Hy Tran, a junior in biology, said that more exhibits are still needed and he urged departments that have not yet responded to get in touch with the Open House committee at x3-2600.

The student-organized Open House is an occasion to show the public and prospective students what's happening at MIT. It is being sponsored this year by the Alpha Chi chapter of Alpha Phi Omega service fraternity with funding aid from the office of the Dean for Student Affairs.

Newcomers among exhibits this

year include a soap bubble festival presented by the Department of Mathematics which has also developed a logic game, "Knights and Knaves," that will make its public debut at Open House.

In Materials Science and Engineering visitors will learn how samurai swords are made and what makes them different from other swords and what the composition of meteorites is. There will also be a display of x-ray crystallography.

In response to concerns of the times, the Department of Physics is planning a major exhibit on energy. The Department of Nuclear Engineering also will focus on the problem with exhibits

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Mail Changes to Take Effect

The US Postal Service will begin applying a surcharge on over-size and non-standard size letter mail, effective April 15.

The surcharge will apply to all first class mail weighing one ounce or less and to single-piece third class mail weighing two ounces or less. The amount of the surcharge has yet to be announced.

From April 15 through November 30, the minimum size of acceptable mail will be 3x4 1/4 inches; effective December 1, the minimum size will be 3 1/2 x 5 inches.

Maximum size for mailing, effective April 15, will be 6 1/8 x 11 1/2 inches, with an aspect ratio (length divided by height) ranging from 1:1.3 to 1:2.5.

Standardization will cut down on hand processing of mail and reduce chances of machine jams which can damage mail and delay delivery, according to the Postal Service.

Major mailers at MIT have been notified of the changes by Don Colluppy, supervisor of the mail service at Graphic Arts. He has copies of the Postal Service flyer describing the new regulations in detail and can answer further questions at x3-4765.

Cohen Promoted In Development

Deborah J. Cohen, senior staff writer, has been promoted to manager of Proposals and Publications, Resource Planning, according to an announcement by Nelson C. Lees, director. Ms. Cohen succeeds Joseph G. Carr, who has accepted the position of director of development communications at Tulane University.

Ms. Cohen will continue as senior staff writer, while assuming full administrative responsibility for the office of Proposals and Publications. The group is responsible for preparing written material in support of MIT's overall development operation and one of its major tasks is preparation of proposals in support of MIT's \$225 million Leadership Campaign.

Ms. Cohen joined the Resource Development staff in 1974 as assistant staff writer. She holds an AB degree from Cornell University (1969) and an MA degree from Tufts University (1971). In 1970-71 she was a research assistant for Mayor Kevin White's Committee on the Urban University. From 1971-72 she was a high school teacher in Western Galilee, Israel. From 1972-73 she was a research assistant for the Education Development Center in Newton.

AMITA Awards Nominations Due

Nominations are open for the Association of MIT Alumnae (AMITA) Senior Academic Award, and should be submitted to Professor ChoKyun Rha, Rm. 56-137 by April 15.

The award will be given to a woman student in the class of 1978 on the basis of academic excellence. Factors that will be considered are cum, depth and breadth of academic accomplishments as shown in course work, special projects, and/or thesis research.

AMITA is especially interested in receiving nominations from department research advisors and from members of the class of 1978.

The award will be announced before May 11, 1978.

Three Receive Guggenheims

Three MIT faculty members are among the 292 scholars, scientists and artists chosen to receive Guggenheim Fellowships in 1978. They are:

Cyril Stanley Smith, Institute Professor Emeritus, for a structural metaphor for matter and history;

Professor Martin Rein of the Department of Urban Studies and Planning for a comparative study of family income; and

Professor Langley C. Keyes, Jr., head of the Department of Urban Studies and Planning, for a study of urban planning and policy.

The Guggenheim Fellows were selected from 3,073 applicants, and will receive fellowship awards totalling \$4,569,500.

INSTITUTE NOTICES

Announcements

Senior Class Meeting***—to discuss where, when and what food we should have at the class picnic. Private DR 2, Student Center, 8-10pm, Thurs, Apr 13.

R/O '78 Activities—Scheduling will begin on April 17. Applications are available in the R/O office, 7-105. For more information call Dave Plotnick, d17213 or leave message at R/O office, x3-6771.

Economics Department**—Open house for freshmen interested in finding out about a possible major in economics. People coming from Professor Solow's Killian Lecture welcome. Freeman Rm, E52-391, Thurs, Apr 20, 4-6pm. Refreshments.

Department of Civil Engineering**—Open house for freshmen. Those interested in computer simulation of river basins, transportation systems, aquatic ecosystems, wave-structure interaction, dam safety, earthquake risk assessment, multi-objective planning, pollution migration in the environment, aquatic chemistry or construction management may find Civil Engineering their field. Join us in the Bush Room, 10-105, Wednesday, Apr 19, 3:30-5:30pm. Refreshments.

FITME DAY**—(Freshmen Introduction to Mechanical Engineering) Thurs, Apr 20, 2:30pm, Rm 3-133; 16 mm color sound movie about the "Tug-of-war contest," part of Introduction to Design Course. Tour of department, 3pm, Rm 3-133. Informal discussion with faculty, graduate and undergraduate students, 4pm, Rm 1-114. Topics include job and research opportunities, availability; material covered in courses, etc. Refreshments.

1979-80 Fulbright awards for university teaching and advanced research—applications are due June 1. Information and application forms available from the Council for International Exchange of Scholars, Eleven Dupont Circle, Washington, DC 20036.

Law School applicants for 1979—discussion of application process, Rm 4-149, Thurs, Apr 13, 4pm. Sponsored by Preprofessional Advising and Education Office, Rm 10-186, x3-4158.

MIT Urban Action**—Annual Big Brother Drive, Apr 12 & 13, 11am-3pm, Lobby 10. Representatives from the Boston Big Brother Association, MIT students who are Big Brothers and members of the Urban Action staff will be available to meet and talk to MIT students interested in becoming Big Brothers beginning in late spring, summer or fall of 1978.

Basic Sailing Shore School**—every Monday and Thursday, 5:15pm throughout spring season at the MIT Sailing Pavilion opposite Walker Memorial on Memorial Dr. Classes open to all members of the MIT community interested in learning to sail.

Spring Series Racing**—beginning Monday, Apr 10, 5:30pm, continuing through spring. Racing skipper rating required for participation.

CCT World Championship Regatta**—to be held at MIT, Mon, Apr 17. Sign up at MIT Sailing Pavilion by Apr 14. CCT rating required for skippers, who may have one crew member.

Conversation Exchange*—The MIT Wives' Group has compiled a list of international women interested in exchanging foreign language conversation for English conversation. Contact: Karen Devine, x3-2916.

Faculty members who are interested in serving as freshman advisors in '78-'79 should contact the Office of Freshman Advising, Rm 7-103, x3-6771.

I. Austin Kelly III Competition**—Deadline for submissions, Fri, Apr. 28, 5pm. Two prizes, with an award of \$250 each, will go to the best scholarly/critical papers in Anthropology, Archaeology, History, Literary Studies and Musicology. Minimum length, 4,000 words. Further information from the Course XXI office, 14N-305, x4446.

Physics Department**—Open House for freshmen and sophomores interested in learning more about opportunities in physics for a major and/or career on Wed, Apr 12, 3-5pm in the Undergraduate Physics Common Room, 4-339. Department faculty and students will be on hand to chat with students and to answer questions about course requirements and options for physics majors. Refreshments.

Freshmen—be sure to send Course Selection card to the Registrar's Office by April 24.

Toys are needed for the Wives Group babysitting service. At present there are fewer toys available than before. If you have toys that your child or children no longer play with or if you are leaving MIT and would like to donate some toys to the collection, call Karen Devine, 253-2916, or bring them to the babysitting room 494, Student Center, at any meeting of the Wives Group on Wednesday afternoon from 3-5pm.

The Student Center Committee will start scheduling rooms in the Student Center for the summer on April 15, and for the fall term on May 1. Submit applications in W20-345.

ACM Student Chapter Meeting**—Open house, discussion of constitution, and lectures for next term, Friday, Apr 14, 4pm, Rm 8-314.

1978 Summer College Work Study Program on and off campus**—All students interested in participating should obtain Request for Participating Form from the Student Employment Office, Rm 5-119, as soon as possible. Forms must be returned to the office no later than April 25.

Club Notes

Association for Women Students**—Weekly meetings, Saturdays, 4pm, Rm 3-310. MIT community welcome.

MIT Bridge Club*—ACBL duplicate open pairs game Thursdays, 7pm, Rm W20-473. Info: 494-8593. Admission.25.

MIT/DL Bridge Club**—ACBL duplicate bridge Tuesdays, 6pm, Rm W20-473.

MIT Chess Club*—Meetings, Saturdays, 1-6pm, Rm W20-407. Speed chess, analysis and tournaments. Info: Brad, x5-8156.

MIT Folk Dance Club**—International: Sundays, 7:30-11pm, Sala de Puerto Rico. Balkan: Tuesdays, 7:30-11pm, Student Center, Rm 491. Informal: Fridays, noon-2pm, Kresge. Israeli: Wednesdays 7:30-11pm, Lobby 13.

MIT Go Club**—Regular meetings, Wednesdays, W20-473, Thursdays, East Lounge, 2nd Floor, Student Ctr, 8pm. Players of all ranks, play games, sometimes informal talks on strategy & tactics. Instruction available for beginners.

Hobby Shop**—Mon-Fri, 10am-6pm, Rm W30-031. Fees: \$10/term for students, \$15/term for community. Info: x3-4343.

Kundalini Yoga*—A rediscovered technology of consciousness; come join the MIT Kundalini Yoga Group with Gurucharan Singh Khalsa to exercise, meditate, and get high. Thurs, 5:30pm, Mezzanine Lounge, Student Center. Info: Dan Buchholz, 776-9045.

MIT Motorcycle Club**—Regular meetings first Tuesday each month beginning March 7, 7:30pm, Muddy Charles Pub (50-110). All old members and any interested newcomers welcome. Info: x3-6924.

T'ai Chi at MIT*—Meetings Thursdays, 4:15-6:15pm, Rm W20-407. Prof. E. Liu, director. All welcome.

Placement

The following companies will be interviewing during the time period covered by the current Institute Calendar. Those interested may

CABLE TV SCHEDULE

X3-3625

April 12 - 18, 1978

Wednesday, April 12	Channel 8:	11am-12:30pm	RHETORIC & JOURNALISM (21.940) with Ed Diamond. Guest: William Henry, The Boston Globe. Recorded 3/17/78.
		12noon-1pm	BASEMENT VIDEO PRESENTS FEEDING THE CABLE Film and videotape from everyday and not-so-everyday life.
		1-2pm	GRADING DISCUSSION with Professor Zenon Zannetos, Chairman of the Ad Hoc Grading Committee; Committee members Prof. William Siebert, Drew Friery; and reporters from The Tech and Thursday. Produced 4/4/78 by MITV.
		2-3:30pm	VIDEO CLUB PRESENTS "Anthropological Funnies" A grab bag of scenes shot in Madurai, India, by Bill Crawford in 1977.
		3:30-5pm	LIVE FROM HARVARD UNIVERSITY: "Regulation of Cell-Mediated Responsiveness to Synovial Tumors" by Dr. Carol L. Reinisch, Division of Tumor Immunology, Sydney Farber Cancer Research Center.
		5pm	LIVE FROM HARVARD UNIVERSITY: "Regulation of Cell-Mediated Responsiveness to Synovial Tumors" by Dr. Carol L. Reinisch, Division of Tumor Immunology, Sydney Farber Cancer Research Center.
Thursday, April 13	Channel 8:	10am-12noon	VIDEO CLUB PRESENTS "Anthropological Funnies" (See 4/12, 3:30pm, for details.)
		12-1:30pm	GRADING DISCUSSION (See 4/12, 2pm, for details.)

sign up in the Career Planning and Placement Office, Mon-Fri, 9am-3pm, Rm 12-170, x3-4733.

Wednesday, April 12—Barry Control Inc, Div of Barry Wright Corp; Ford Motor Co; Varian/MA.

Thursday, April 13—Brown and Root; Curtiss-Wright Corp; Westinghouse Electric Co/PhD.

Friday, April 14—Instrumentation Lab.

Tuesday, April 18—IBM; Lagoven-Venezuela.

Wednesday, April 19—General Electric Co; Soncraft, Inc.

Thursday, April 20—Westinghouse Electric Corp.

Wednesday, May 3—Texas Instruments Semiconductor Group.

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.

Summer UROP - Call for Proposals

Proposals for summer UROP support are now being accepted. Eligibility for overhead waiver, materials and services expenses, and wage support is limited to undergraduates continuing ongoing projects. Proposals should be submitted to the UROP coordinator in your faculty research supervisor's department. Proposals of merit will be considered on a first come, first served basis until the money runs out. Tangible evidence of faculty enthusiasm for the proposed research is convincing. If you apply for UROP funds for all or part of your summer wages, payment will be limited to a maximum of \$1,500 at \$3.00/hour. If only overhead waiver is requested, there is no maximum total or maximum hourly rate. Funding decisions will be announced starting the week of April 24. Please don't call and bug us that week; answers will get out as fast as we have them. Please read the "How to Participate" section of the UROP Directory, pages 1-11.

Therapy and Nutrition

Data from charts of children with tumors who have been admitted to Children's Hospital will be analyzed to determine the impact of nutritional status and nutrient intake on their response to chemotherapeutic agents and radiation therapy. The data from these children will be assessed and correlations made between nutritional input and ultimate response to therapy. This is an opportunity for undergraduates who are interested in clinical research. Contact Dr. Robert Suskind, E18-473, x3-6303.

Psychology Department

This lab is currently developing a micro-computer (Apple II) controlled visual display for psychophysical testing of humans, and has an opportunity for a student who would write such programs in hexadecimal machine language and BASIC. The student would be programming in this computer to display various spatial and temporal patterns on a video screen and perhaps an oscilloscope. Certain parameters of these patterns would be modified by the observer in the psychophysical experiments. The student should have the ability to program in hexadecimal machine language and have some knowledge of hardware. Contact Dr. Harris Lieberman, E10-010, x3-5777. Pay available.

Tactile Art for the Blind

A psychiatrist/artist at McLean Hospital, Belmont, is interested in working with students to develop a technique for tactile appreciation of drawings and paintings, with an aim of exposing blind people to visual art. The theoretical part of the project will involve basic concepts of perception and symbol formation. There will be considerable contact with blind subjects. Students could expect to commit about 12 hours/week for two semesters.

2-3pm	RHETORIC & JOURNALISM (21.940) with Ed Diamond. Guests: Ed Miller, Cathleen Kushman and Larry Anderson, of the Harvard Post. Recorded 3/24/78.
3-4:30pm	VIDEO CLUB PRESENTS "Log-jam"
5-6:30pm	GRADING DISCUSSION (See 4/12, 2pm, for details.)
7-8pm	BASEMENT VIDEO PRESENTS FEEDING THE CABLE (See 4/12, 1pm, for details.)
Friday, April 14	Channel 8:
11am-12:30pm	GRADING DISCUSSION (See 4/12, 2pm, for details.)
1-2:30pm	VIDEO CLUB PRESENTS "Log-jam"
3-5pm	VIDEO CLUB PRESENTS "Anthropological Funnies" (See 4/12, 3:30pm, for details.)
5-6:30pm	GRADING DISCUSSION (See 4/12, 2pm, for details.)

Monday, April 17

Channel 8:	11am-12noon	VIDEO CLUB PRESENTS "Tamil Nadu Drama" A documentary of an actor's troop based in Madurai, India. The troop performs semi-traditional dramas as part of temple festivals. Taped by Bill Crawford while studying at Madurai University in 1977.
	12noon-2pm	VIDEO CLUB PRESENTS "Anthropological Funnies" (See 4/12, 3:30pm, for details.)
	2-3:30pm	GRADING DISCUSSION (See 4/12, 2pm, for details.)
	3:30-4:30pm	RHETORIC & JOURNALISM (21.940) with Ed Diamond. (See 4/13, 2pm, for details.)
	4:30pm	LIVE FROM HARVARD UNIVERSITY: "Subunit Flexibility in Macromolecular Assembly: TBSV at 2.9 Angstroms Resolution by Dr. Stephen Harrison, Harvard University.

Tuesday, April 18

Channel 8:	11am-12noon	RHETORIC & JOURNALISM (21.940) with Ed Diamond. (See 4/13, 2pm, for details.)
	12noon-1:30pm	GRADING DISCUSSION (See 4/12, 2pm, for details.)
	2-3pm	Richard Smith at Hayden Gallery. Produced by the Video Club.
	3:30-4:30pm	BASEMENT VIDEO PRESENTS LIVE FROM THE FILM SECTION: "Feeding the Cable" Film and videotape from everyday and not-so-everyday life.
	4:30pm	

Hormones, Neurochemistry, and Sexual Behavior

Gonadal steroids are essential for the display of sexual behavior in both male and female rats. The aim of the proposed research is to relate the behavioral effects of gonadal steroids to changes in the metabolism of serotonin or dopamine in particular parts of the brain. Techniques which the students will use include the assay of brain amino acids and monoamines in rats as well as the observation of behavior following administration of various drugs and hormones. Some knowledge of mammalian physiology and/or biochemistry is desirable. Students will be expected to devote at least 15 hours/week to this project. Contact Professor Michael Baum, x3-7558, 37-315.

Religious Activities

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

Passover Preparation Workshop*—"Kashrut for Passover, What Is and How to Kasher for Passover." Wed, Apr 12, 7pm, 312 Memorial Dr. Rabbi Daniel Shevitz, Jewish chaplain at MIT, will speak.

MIT Baha'i Association—Prayers, every Friday, 7:30am, MIT Chapel. Info: Mahmoud, 492-2889.

Christian Service*—Sundays, 10:45am, Chapel. Singing, preaching, sometimes testimonies, prayer following. All invited.

MIT Hillel Services*—Daily Minyan: 8am, Rm 1-136. The Downstairs Minyan (Conservative Egalitarian): Saturdays, 10am, 312 Memorial Dr. Reform: Fridays, 6:30pm, Chapel. Orthodox: Fridays, Sundown, Kasher Kitchen (50-005); Saturdays, 9am, Bush Rm (10-105).

Interdenominational—Worship and holy communion, Wednesdays, 5:05pm, Chapel, sponsored by Lutheran-Episcopal Ministry. Get acquainted supper following. Info: Randy Clark, x3-6921.

MIT Islamic Society*—Friday Prayers held in Kresge, Rehearsal Rm B, 1pm.

Prayer Time**—Bible class, Fridays, 1-2pm, Rm 20E-207, guest speakers, music, refreshments. Miriam R. Eccles, founder-director, Alpha and Omega Missionary Society.

MIT Vedanta Society*—Meditation and discourses on the Gita by Swami Sarvagatana, of the Ramakrishna Vedanta Society of Boston. Fridays, 5:15pm, Chapel.

Echoes

April 9 - 15

50 Years Ago

Celebrating the tenth year of its existence, V00 D00 will place its "Tenth Anniversary Prom Number" on the stands. Among the art offerings will be several full-page drawings by Henry B. (Chick) Kane, Harold Denison and William B. Elmer.

40 Years Ago

At present "people think that physics makes good training for going into other fields" stated Professor John C. Slater, Head of the Department of Physics; but in the future there will be a great demand for people specifically trained in this field. As an example, he cited the practical use of physics in the study and application of color; including dye stuff and printing industries and the study of spectroscopy.

25 Years Ago

The Tech Sailing Team, led by Captain Ted Garcia '55, won the 26th annual McMillan Cup regatta at Annapolis. The McMillan Cup is the oldest intercollegiate trophy. Ten college teams, five New England and five Middle Atlantic, raced the Naval Academy's 44-foot yawls in competition for this award.

Prepared by Marcia Conroy, MIT Historical Collections, x4444.

TECH TALK

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Mail subscriptions are \$10 per year. Checks should be made payable to MIT and mailed to Business Manager, Room 7-102, MIT, Cambridge, MA 02139.

Stephen Denker Appointed Director of Alumni Fund

Dr. Stephen P. Denker, regional director of the MIT Alumni Center in New York City for the past two years, has returned to Cambridge as director of the Alumni Fund.

Dr. Denker succeeds Frederick G. Lehmann who resigned last May to become director of development at Boston University. Dr. Denker's appointment was announced jointly by James A. Champy, executive vice president of the MIT Alumni Association, and Thomas H. Farquhar, chairman of the Alumni Fund board.

The Alumni Fund was established in 1940 to conduct yearly solicitations from alumni for the continuing support of the Institute. One of the most successful such organizations nationwide, the Alumni Fund annually raises more than \$4 million and has a goal this year of \$5.3 million, a 10 per cent increase over last year's total.

Included in the Alumni Fund are several distinct parts—direct mail solicitation for specific appeals, such as the Building 10 Fund, professorships and the Independent Residence Development Fund; the five-year class reunion gift program through which the 50, 40 and 25 year reunion classes present major gifts to the Institute, and the annual regional solicitation program which reaches alumni who have not previously contributed through personal contact.

"With the continuing financial stresses placed upon the Institute's resources," Mr. Champy said, "the success and, in fact, improvement of Alumni Fund drives

assume critical importance in maintaining MIT's academic vigor. Because of Dr. Denker's professional background achievements in leading the New York alumni program, we feel he is ideally suited to spearhead the Alumni Fund effort."

The New York Alumni Center—a two-way conduit for giving and receiving advice on academic and business related matters—recently completed its 82nd year with a strong record of alumni participation. During his tenure as regional director, Dr. Denker increased volunteer involvement in the Center, organized major new seminars and symposia and significantly increased alumni involvement.

Dr. Denker received SB and SM degrees from MIT in 1960 and the PhD degree in 1963, all in electrical engineering. From 1963-67 he was assistant professor of electrical engineering at Columbia University. For a year he was a device physicist with GT&E Laboratories and he then became a senior engineer with Schlumberger-Doll Research Center where he remained until joining the New York Alumni Center. From 1972-1978 he has also been adjunct professor of electrical engineering at the University of New Haven.



Dr. Denker



CHARLES DAVID TANDY of Fort Worth, Tex., chairman of the board and chief executive officer of the Tandy Co., and the sales and merchandising expert behind the consumer electronic successes of the Tandy Co.'s Radio Shack division, was the invited lecturer last week before students enrolled in the Innovation Center joint subject in entrepreneurship. Sales and merchandising, he said, remain the fields in which the US surpasses other nations and the fields in which young people can find excitement, adventure and the ability to determine their own rate of personal progress. Tandy Co. bought Radio Shack 15 years ago when it was losing \$200,000 a month and has built it into a worldwide chain of consumer electronics stores that had sales last year of \$950 million and a growth rate over the past five years of 37.5 per cent.

Summer Seminar Planned On Information Systems

The MIT Center for Information Systems Research (CISR) will hold its third annual summer seminar, entitled "Current Issues in Information Systems: A Managerial Perspective," the week of June 19-23, on the campus.

The purpose of the seminar is to discuss significant issues in the management of the information systems function. In the course of presenting research results, CISR faculty and staff will discuss the current state of the art and future directions of key information systems areas.

Ongoing projects at CISR include distributed processing, top management information needs, decision support systems, end-user need assessment, future systems software, and data management. The emphasis is on the management aspects of these critical information systems areas; therefore, special consideration is given to effective decision making, evaluation and implementation strategies, and communication

techniques.

The program is designed primarily for managers and decision makers in private and public sector organizations with responsibility for the information systems function. In addition, users of computer based information systems should find the discussions of the determination of information needs to support managers useful and relevant to their decision making function.

The Center for Information Systems Research was established at the Sloan School of Management in 1974 to perform research aimed at improving the effectiveness of information processing tools and techniques available to managers. Dr. John F. Rockart, senior lecturer of management at the Sloan School, is the director of CISR. Research is supported through unrestricted grants from sponsors in both public and private sector industries. In addition, CISR is working with a variety of organizations under joint research contracts.



WINS MONSANTO AWARD—Heinz Stubblefield, second from left, a junior in the MIT Department of Ocean Engineering, has been selected as the first recipient of the Monsanto Achievement Award, which will be presented annually to the minority undergraduate student in engineering who has the best academic record after two and a half years of study. The award was made in the office of Professor Wesley L. Harris, left, director of the MIT Office of Minority Education and an associate professor in the departments of ocean engineering and aeronautics and astronautics. Presenting the \$500 award is James R. Fair, Monsanto's director of research. At right is Milton A. Wade, personnel supervisor at Monsanto Industrial Chemicals Co., Boston.

Kistaikowsky Warns Against Neutron Bomb

(Continued from page 1)

nology "precision guided" anti-tank weapons.

In claiming that the neutron bomb is an inhumane weapon, Professor Kistaikowsky says that enhanced radiation warheads, in their delayed effects, are reminiscent of the poison gases of World War I.

"There is little doubt that collateral damage to civilian structures will be reduced if the present higher yield fission tactical warheads are replaced by the ERWs (enhanced radiation warheads)," he writes. "Whether the same is true about civilian casualties is doubtful."

In order to contain a major blitzkrieg breakthrough involving a great many armored vehicles, he says, the Western forces would have to respond with large numbers of neutron warheads, or "veritable neutron bomb barages."

"Perhaps the number of prompt deaths of bystander civilians would be lower," he continues, "but when delayed deaths, from radiation sickness, from leukemia, cancer, etc., are counted in, it ceases to be obvious that the use of ERWs will be substantially less disastrous to the civilian population in Western Europe, especially in West Germany, than that of the fission warhead."

On the subject of deterrence, Professor Kistaikowsky writes that the deployment of ERWs, in the eyes of their protagonists, would "enhance the credibility of the initial use of nuclear weapons," which in turn might enhance deterrence.

"In reality," he counters, "it is quite likely to lower the nuclear threshold if NATO forces are attacked, without increasing corre-

sponding statements by American "armchair and ambulatory strategists" that the use of tactical nuclear weapons such as the neutron bomb would create a "fire-break," preventing a European war from escalating into a general nuclear war.

While such "decoupling of the tactical and strategic nuclear warfare" would "protect the American homeland," he writes, the thesis "finds little support in Western Europe, especially in West Germany, the prime battleground in the event of an attack by Warsaw Pact forces."

In his argument that deployment of the neutron bomb is not necessary to counter the Warsaw Pact's military threat, Professor Kistaikowsky says that while the numerical tank superiority of the Warsaw Pact forces is unquestionable, "the severity of the threat this poses is in dispute."

"Most important in this regard," he states, "is the record of the 1973 Arab-Israeli war, which showed that even the modern tanks are very vulnerable to the high-technology 'precision-guided' munitions which were then for the first time extensively employed on the battlefield."

The demonstration of the effectiveness of these weapons against massed tanks in the Middle East, he adds, has led to their deployment in Europe.

The "precision guided" munitions are extremely inexpensive compared to battlefield nuclear weapons, Professor Kistaikowsky comments, but have to be deployed in much larger numbers than the neutron bombs to be decisive.

"Therefore their choice as the main anti-tank weapon will call for greater combat manpower and that will have to be more intensively trained," he says.

Bloomfield Plans NEH Seminar

The National Endowment for the Humanities has announced that Professor Lincoln P. Bloomfield of the MIT Department of Political Science will conduct one of its 1978 Summer Humanities Seminars for Journalists.

The seminar, on the topic, "Idealism versus Pragmatism in American Foreign Policy," will be held from June 19 to July 14 at MIT's McCormick Hall.

The National Endowment program brings journalists and members of other professions together for a month of full-time study in seminars directed by literary scholars, philosophers, historians and other scholars at selected colleges and universities throughout the country. Its purpose is to help improve the quality of leadership in the nation by giving men and women with practical responsibilities the opportunity to explore the humanistic dimensions of their professional interests and important questions of the day.

Fifteen individuals will be selected to attend the MIT seminar, tuition-free, each receiving travel funds and \$1,200 for expenses.

August Heckscher To Speak Thursday

August Heckscher, author, journalist and former New York City parks commissioner, will speak at MIT Thursday, April 13, from 4 to 6 pm. in Rm. 3-415.

His lecture, "Fiorello LaGuardia and the City of Today," will be sponsored by the Department of Humanities and the Department of Urban Studies and Planning.

Mr. Heckscher, New York's parks commissioner from 1967-74, is the author of *These are the Days*, *A Pattern of Politics*, *The Politics of Woodrow Wilson*, *Diversity of Worlds* and *The Public Happiness*. He is a former director of The Twentieth Century Fund.



Professor Kistaikowsky speaking at a press conference held in the Student Center.

spondingly the deterrence of attack, which is largely based on the threat of escalation of nuclear warfare.

"There is every reason to believe," he writes, "that the escalating potential for the neutron bomb is the same as for any other nuclear weapon."

All this, he asserts, runs completely counter "to the assertion of some American military writers that the use of ERWs . . . would avoid nuclear escalation."

It has also been pointed out, he says, "that the Soviet military doctrine calls for immediate massive response with nuclear weapons to any first nuclear use by the NATO forces and that Soviet tactical warheads are estimated to be large and 'dirty.' This, of course, nullifies the argument about the reduction of collateral damage by use of the ERWs."

Other arguments advanced against the neutron bombs, he writes, are that their deployment in large numbers near the forward NATO defense lines may result in a loss of control by Washington over the initiation of nuclear warfare, and might also induce a preemptive nuclear strike by the Soviet Union.

Professor Kistaikowsky also

"These are serious disadvantages, but the use of these weapons in repelling a tank attack would need no authorization from some very remote headquarters, which would have to work its way up and down many military and civilian echelons and hence would mean a substantial and possibly an irreparable delay."

"If main reliance is placed on battlefield nuclear weapons," he says, "the concern about the dire consequence of even a short delay will certainly speed up the authorization of their use, and hence will lower the threshold to nuclear warfare."

"What will follow will be massive civilian casualties and other collateral damage in the environs of the battlefields and even these will be but a prelude to the nuclear devastation of Europe and then the general nuclear war."

"These being the alternatives it is impossible to escape the conclusion that NATO military efforts should emphasize various sophisticated 'precision guided' munitions while the ERWs, as well as older battlefield nuclear weapons, be put in mothballs."

THE INSTITUTE CALENDAR X3-3270

April 12 through April 23

Events of Special Interest

Tech Wives Spring Bake Sale** — Thurs, Apr 13, 9am to sell out, Lobby 10.

Energy Technology: Meeting Tomorrow's Needs?* — Lionel S. Johns, Program Manager, Energy Program, Office of Technology Assessment, US Congress and several others. Sponsored by AIAA/FASST. Special Conference of Energy. Fri, Apr 14, all day registration, 8am, Kresge Auditorium. Admission: \$10, pre-registration, \$12 at door, forms available in Rm 33-22 or Rm 33-119, lunch & dinner served. Info: Call x3-2278 or x3-4926.

What We Know and Don't Know About Inflation* — Prof Robert M. Solow, economics. James R. Killian, Junior Faculty Achievement Award Lecture Series, Thurs, Apr 20, 4pm, Rm 54-100.

Seminars and Lectures

Wednesday, April 12

Reorganizing National Urban Policy* — Lester Salamon, Deputy Associate Director, Office of Management and Budget. Public Policy Program Seminar, Noon-2pm, Rm E53-482. Bring your lunch, coffee and tea provided.

What Determines the Equilibrium Tropical Sea-Surface Temperature* — Dr. Edward S. Sarachik, center for earth & planetary physics, Harvard University. Oceanography Sack Lunch Seminar, Noon, Rm 54-425. Bring own lunch, coffee served.

Engineering vs Management-Conflict at the Interface* — Joseph Yamron, Vice President and General Manager, Precision Products Division, Northrop Corporation. Special Seminar Series titled Engineering, Policy and Society, 2pm, Rm 37-252. Coffee will be served after, Rm 33-222.

Contamination of High Voltage DC Transmission Line Insulators by Airborne Particles* — M. Horenstein, G. Electric Powers Systems Engineering Laboratory, EPSEL Seminar, 3pm, Rm 4-149.

Interfacial Effects in Fast Reactors* — M. Saidi, Nuclear Engineering Seminar, 3-4pm, Rm NW12-222.

Topics from Tadem Mirror Physics* — Dr. David Baldwin, Plasma Dynamics Seminar, 4pm, Rm 36-261. Refreshments 3:45pm.

Project Cost Management During Conceptual Engineering* — J. Michael Scholz, P.E., manager of estimating, Petroleum and Chemical Engineering Division, Brown & Root, Inc., Houston, Texas. Civil Engineering Seminar, 4pm, Rm 1-150.

Thursday, April 13

Recent Results in Co₂ Laser Fusion* — Charles Fenstermacher, Los Alamos Scientific Laboratory. Modern Optics and Spectroscopy Seminar, 11-Noon, Rm 66-110. Coffee served 10:30am.

The Open University Approach to Remedial Mathematics* — Prof Michael Pengelley, dean of math, Open University, United Kingdom. John Richmond, British Broadcasting Corporation, senior producer in math, Open University, United Kingdom. Study and Research in Education and the Center for Advanced Engineering Study Joint Seminar, Noon-2:30pm, Rm 20C-117. Lunch will be available for \$1.50 per person.

Simple Model for Magnetic Re-Connection* — Dr. R. Kulsrud, Princeton Plasma Physics Laboratory. Plasma Theory Seminar, 3pm, Rm 36-261.

Construction of the Alaska Pipeline* — David B. Perini, president, Perini Construction Company. Sponsored by Chapter of the Associated General Contractors film & seminar, 4pm, Rm 1-236. Beer & munchies served.

Fiorello LaGuardia and the City of Today* — August Heckscher, former administration, Recreation and Cultural Affairs, Commissioner of Parks, New York City. Urban Studies and Planning Seminar, 4-6pm, Rm 3-415.

Information Theory and Search Theory; A New Look at Their Relationship* — Dr. John G. Pierce, director, Exploratory Research Division, Center for Naval Analysis, Arlington, Virginia. Operations Research Center and Center for Advanced Research Study Joint Seminar, 4pm, Rm 24-121.

New Technologies of Communication and the First Amendment* — Speakers: Stuart Sucherman, WNET; Abraham Chyes, Harvard Law School; Steven Rivkin, Washington Attorney; John Eger, Washington Attorney, Former Director, Office of Telecommunications Policy, 4-6pm, Rm 37-252.

The Surface of TiO₂* — Dr. Howard S. Jarrett, DuPont de Nemours & Company. Physics Colloquium, 4:15pm, Rm 26-100. Tea served at 3:45pm, Rm 26-110.

Designing for Human Behavior* — Speaker Lou Sauer, AIA, Architecture Department and Part of the Design/Behavior Pro Seminar, 7-9pm, Rm New X.

Electron in Clusters: Dynamical Probes of Picosecond Relaxation in Fluids* — Dr. G.A. Kenney-Wallace, chemistry, University of Toronto. Harvard-MIT Physical Chemistry Colloquium, 8pm, Rm 66-110.

Friday, April 14

Slag/Metal Interaction and Notch Toughness in Submerged ARC Welding* — Dr. T.H. North, University of Strathclyde, Glasgow, Scotland, 10am, Rm 4-145.

Responding to Mr. Sauer's Lecture*** — Ray Studer, Penn State University will direct the discussion. AIA, Architecture Department and Part of the Design/Behavior Pro Seminar, 11-1pm, Rm 10-280.

Are Professions Necessary?* — Eliot Freidson, professor of sociology, New York University. Public Policy Program Seminar, Noon-2pm, Rm E53-482. Bring your lunch, coffee and tea provided.

Public Responsibility of the Airport Operator* — Frederick Ford, Director of Aviation, Massachusetts Port Authority. Center for Transportation Studies Luncheon/Seminar, buffet lunch Noon, \$1, lecture 12:45pm, Mezzanine Lounge, Student Center. Free.

Problems of US Policy in Africa* — Richard Moose, Assistant Secretary of State for Africa. African Luncheon Seminar, 1-2:30pm, Rm E52-461.

Chemical Engineering Seminars* — Herbert M. Wood, Recent Temperature Programmed Desorption Experiments, 2pm. John Congalidis, Modeling of Fluidized Bed Coal Combustion, 2:50pm. Daniel Dershowitz, Factors Affecting Degradation of Polymers in Dilute Solving Undergoing Extensional Flow, 3:25pm. William W. Doerr, the Reaction of Sulfur Dioxide and Oxygen with Fully Calcined Dolomites, 4pm, Rm 66-110.

Polymer Coffee Hour* — Prof Chen Chung of RPI will discuss polymer processing techniques, 2-4pm, Rm 8-314.

Effects of Unit Size on Design and Performance of Machinery* — C. Fayette Taylor, professor emeritus, mechanical engineering. Mechanical Engineering Seminar, 3pm, Rm 3-133. Coffee 4pm, Rm 1-114.

Recent Progress in Laser Fusion Research* — Prof Leonard Goldman, Rochester University. Plasma Dynamics Seminar, 3:30pm, Rm 36-261. Refreshments 3:15pm, Rm 36-261.

Structures and Atomic Transport in Glassy Metal* — Dr. Franz Spaepen, Harvard University, physics. Center for Material Science and Engineering Colloquium, 4pm, Rm 9-130. Refreshments at 3:30pm.

Accessory Optic Nuclei and Oculomotor Control; Are Specific Ganglion Cells Task-Related?* — Prof Harvey Karten, psychiatry, State University of New York, Stony Brook. Psychology Colloquium, 4:30pm, Rm E10-013. Coffee at 4:15pm.

Saturday, April 15

My Trip to Northwest China in 1977* — Nobel Physicist C.N. Yang to speak on this recent visit to China. Sponsored by Graduate Student Council, and Films Lectures on China Committee, 2pm, Rm 1-250.

Monday, April 17

Activation of Aflatoxins and Some Model Compounds* — Dr. R. Colin Garner, University of York. Toxicology Seminar, 1:30pm, Rm 16-134.

A Foreign Student in China* — Sponsored by Chinese Students Club. A talk with slides presented by Paul Clarke, a New Zealand student in Peking from 1974 to 1976, now at Harvard University, 7:30-8:30pm. Art in China, a talk with slides presented by Carmal Hinton who grew up in China and is now Instructor in Chinese at Wellesley College, 8:30-9:30pm, Rm 4-370.

Tuesday, April 18

Biochemical Changes in the Growth of Mandible and Long Bone of Newborn Rats Following Protein Calorie Malnutrition* — Dr. Tetsuo Nakamoto, DMD, Thesis Seminar, 1pm, Rm E18-408.

Plastic Strip Yielding Model for a Crack in a Stiffened Sheet* — Dr. Thomas P. Rich, Army Materials and Mechanical Research. Applied Mechanics Seminar, 3-4pm, Rm 3-133, coffee 4-5pm, Rm 1-114.

The Elliptical Galaxies: How They Got Into the Shape They're In* — Dr. Richard H. Miller, University of Chicago. Astrophysics Colloquium, 4:15pm, Rm 37-252, coffee at 3:45pm.

Wednesday, April 19

Brazilian Nuclear Program and Its International Implications* — Roberto Hukai, head, Reactor Physics, Institute of Atomic Energy, Brazil. Center for International Studies Seminar, Noon-2pm, Rm E53-482.

Energy Spectra Predicted by Semi-Geotrophic Theories of Frontogenesis* — Dr. David Andrews, meteorology. Oceanography Sack Lunch Seminar, Noon, Rm 54-915. Bring own lunch, coffee served.

High Power Pulses for IR Lasers* — Dr. Fielding Brown, Williams College & MIT. EECS Optics Seminar, 2-3pm, Rm 36-428.

Neodymium Pentaphosphate Lasers* — Dr. Steve Chinn, staff member Lincoln Laboratory. EECS Optics Seminar, 2-3pm, Rm 36-428.

Engineers in Society* — Lenine M. Gonsalves, president-elect, Massachusetts Society of Professional Engineers, 3pm, Rm 37-212.

Further Discussion of Device for Power Generation by Rectification of Thermal Noise* — Prof Richard B. Adler, electrical engineering. Thermodynamics Seminar, 4pm, Rm 1-114. Coffee served 3:45pm.

Developments in Commercial Satellite Communications Part III; Networking and Regulatory Issues* — Dr. John Harrington, Vice President of Research & Engineering, Communications Satellite Corporation, Washington, DC. Systems, Communication and Control Seminar, 4pm, Rm 39-500.

Foundation Engineering for Off Shore Gravity Platforms* — Dr. Kaare Hoeg, director, Norwegian Geotechnical Institute, Oslo, Norway. Fourth Mathis Memorial Lecture, 4pm, Rm 54-100.

Cause and Chance: Queries at the Foundation of Physics* — Prof Philip Morrison. Undergraduate Physics Colloquium, 4:15pm, Rm 4-339. Social hour follows.

Political Prisoners in Iran* — Madame Madeleine Lague-Veron, member of the Bon Association of Paris. Sponsored by ISA, 7pm, Rm 10-250.

Thursday, April 20

Molecular Spectroscopy Inside a Laser Cavity* — Takeshi Oka, National Research Council, Ottawa. Modern Optics and Spectroscopy Seminar, 11-Noon, Rm 66-110. Coffee at 10:30am.

Maritime Collision Avoidance as a Differential Game* — Som Sharma, Institute Fur Schiffbau, Hamburg. Ocean Engineering Seminar, 3pm, Rm 5-134.

The Application of Some Probability Mixture Models in Analyzing Social Science Data* — Prof Donald G. Morrison, graduate School of Business, Columbia University. Operations Research Center Seminar, 4pm, Rm 24-121.

Comparative Physiology of Sugar Transport in Microorganisms* — Dr. Antonio H. Romano, microbiology section, University of Connecticut, Storrs, Connecticut. Arranged by the Industrial Microbiology and Biochemical Engineering Group, 4pm, Rm 16-310.

Interactions of Elementary Particles with Nuclei at High Energies* — Prof Thomas Ferbel, University of Rochester. Physics Colloquium, 4:15pm, Rm 26-100. Tea served 3:45pm, Rm 26-110.

Friday, April 21

Regulation of Bone Resorption in vitro by a Cartilage Derived Anti-Collagenase Factor* — Dr. John E. Horton, chairman, periodontology, Harvard School of Dental Medicine. Arranged by the Oral Science Group, 8:30am, Rm E18-601.

The International Politics of the Nigerian Civil War* — John Stremlau, Program Officer, Rockefeller Foundation. African Luncheon Seminar, 1-2:30pm, Rm E52-548.

Background Correlates of Spatial Ability* — Prof Ruth Guttman, psychology, Hebrew University, Jerusalem. Psychology Colloquium, 3pm, Rm E10-013.

Chemical Engineering Seminars* — Behrooz Satvat, Restricted Transport of Macromolecules Across Capillaries in the Kidney, 2pm. Martin M. Suenson, Approximate Dynamics of Distributed Parameter Systems, 2:50pm. Behzad Jazayeri, to be announced, 3:25pm, Rm 66-110.

Hydrogen Pellet Work at ORNL* — Dr. Stan Milora, Oak Ridge National Laboratory. Plasma Dynamics Seminar, 3:30pm, refreshments 3:15pm, Rm 36-261.

Saturday, April 22

The Natural Resources and Economic Prospects of China* — Sponsored by the Chinese Students Club. A lecture by Ping-ti Ho, James Westfall, Thompson, professor of history, University of Chicago, 4pm-5:30pm, Rm 10-250.

Community Meetings

What Every Woman Needs/Wants to Know** — Dr. Melvin H. Rodman, director of the MIT Medical Department with Jacqueline Ward as moderator. Sponsored by MIT Women's League. Discussion of options available under MIT health plans. Wed, Apr 12, 11:30am, Little Theatre.

Wives' Group** — Wed, Apr 12: Bring Your Crafts! Practice English and meet other women, 9am-Noon, meet at 100 Memorial Dr, #815B, babysitting provided. Carmen Medina, Member of the Wives' Group will show a film and speak on: "The Canary Island: The Fortunate Island," 3-5pm, Rm 407, Student Center, babysitting provided.

Tech Wives International Cooking** — A tea-tasting party. Wed, Apr 12, 8pm, Rm 10-340. Info: Taslim Sabur 494-0296 or Pattie Dobson 646-4080.

The Commuting, Working, Breastfeeding Mother** — Peggy Coulter, RN, Supervisor of nurses in the Out-Patient Clinic, Medical Department. Prenatal and Parent Education Group Meetings. Tues, Apr 12, Noon, 3rd Fl, Conference Room, Infirmary. Info: 253-1316.

Wives' Group** — Wed, Apr 19: Clare Kramsch, Lecturer in the Humanities Department will give a talk on "The Folk Tale Today: Alive and Well?", 3-5pm, Rm 407, Student Center, babysitting provided.

Tech Wives Weekly Exercise Class** — Technology Wives Organization. An hour of exercise led by professional Marilyn de Kleer. Every Monday through May 1, 8pm, Exercise Room, 2nd floor, Dupont Gym. Info: Call Linda Morecroft 494-8434.

Eating in Response to Stress** — Don't let pressure control your eating. You control it. Nutrition and Food Science discussion, every Thursday, Noon, Rm 37-272.

Lobby 7 Events

Shakespeare Ensemble* — Will perform a number of scenes from their new production. Wed & Thurs, Apr 12, 13, Noon-1pm.

The Locrian String Duet* — A performance of classical, romantic and contemporary music for string duets. Fri, Apr 14, Noon-1pm.

Social Events

Spring Fever Dance* — Sponsored by the Gays at MIT. Disco dance and goodtime party. Sat, Apr 15, 9pm-1am, Sala De Puerto Rico, Student Center. Admission \$2, free w/MIT or Wellesley ID. Beer and soda served.

Strat's Rat* — Sponsored by SCC. Dancing and drinking; live DJ; beer and wine: 35¢/glass, 3/\$1; wine available by bottle. Fri, Apr 21, 8:30pm-1am, Lobby, 2nd floor, Student Center. Free admission, munchies, soda available, college ID required.

Movies

German Film* — Sat, Apr 15: The Subject, (Der Untertan), 1951. Sponsored by Gethe of Boston and the Humanities Department. Black & white with English subtitles, by Volfs Gang Staudte, 8pm, Rm 54-100. Free.

Flesh Gordon* — X-rated satire. LSC movie, Fri, Apr 14, 7 & 9:30pm, Rm 26-100. Admission 75¢ w/MIT or Wellesley ID.

Woman in the Dunes* — Hiroshi Teshigahara (Japan, 1964). Sponsored by Film Society. Fri, Apr 14, 8pm, Rm 6-120, Donation \$1.25.

Papillon* — LSC movie. Sat, Apr 15, 7 & 10pm, Rm 26-100. Admission 75¢ w/MIT or Wellesley ID.

Bridge of the River Kwai* — LSC movie. Sun, Apr 16, 6:30 & 10pm, Rm 26-100. Admission 75¢ w/MIT or Wellesley ID.

French Film Classic** — Saus le toils de Paris (Rene Clair), Thurs, Apr 20, 4:30 & 7pm, Rm 9-150. Sponsored by Humanities Department Foreign Languages and Literature Section and French Library, Boston.

Carrie* — LSC movie. Fri, Apr 21, 7 & 9:30pm, Rm 26-100. Admission 75¢ w/MIT or Wellesley ID.

The Coral Reef* — A drama about life in a fishing village in Taiwan. Fri, Apr 21, 7:30pm, Rm 4-370. Sponsored by Chinese Students Club.

Alphaville* — Jean-Luc Godard (France). Sponsored by Film Society. Fri, Apr 21, 8pm, Rm 6-120, donation \$1.25.

The Towering Inferno* — LSC movie. Sat, Apr 22, 6:30 & 10pm, Rm 26-100. Admission 75¢ w/MIT or Wellesley ID.

Midnight Movie: Road to Morocco** — Sponsored by SCC. Sat, Apr 22, Midnight, Sala De Puerto Rico, Student Center. Bring your blankets and sit on the floor. Free.

Chinese Students Club* — Sun, Apr 23: The National Games, Third National Games held in Peking, 1975, 1pm. The Other Side of the Sky, Shirley McClain's trip to the People's Republic of China, 1973, 3pm. The Chinese Connection, Bruce Lee Kung-fu drama, 1908, 4:15pm, Kresge Auditorium.

Charly** — LSC Movie. Sun, Apr 23, 6:30 & 10pm, Rm 26-100. Admission 75¢ w/MIT or Wellesley ID.

Orchestra Tour* — Wed, Apr 12, conductor David Epstein. The orchestra on tour to Avery Fisher Hall, Lincoln Center, New York. Program is Stravinsky, Scherzo a la Russe; Kurt Weill, suite from Der Silbersee; and Berlioz, Harold in Italy, Marcus Thompson soloist. Info: 253-2906.

The Role of the Music Critic in Society* — Richard Dyer, music critic of the Boston Globe. Wed, Apr 12, 5pm, Rm 14E-304. Free.

Baroque* — Carol Epple and Nancy Roth, baroque flute; Laura Jeppesen, gamba; Gisela Krause, harpsichord. Works of C.P.E. and J.S. Bach. Apr 13, Chapel, Noon. Free.

Club for India Affaris* — Presents Parveen Sultana, popular Indian artists, will sing in accompaniment with her husband Ustand Dilshac Khan, accomplished vocalist and classical composer. Apr 16, 3pm, Kresge Auditorium.

College Orchestra* — Donald Wheelock conducts Debussy, Petite Suite; Bartok, Rumanian Folk Dances; Mary Howe, Stars, Sand, Whimsey; Beethoven, Piano Concerto No 5; Kenneth Fearn, piano soloist. Sponsored by the Symphony Orchestra. Tues, Apr 18, 8:30pm, Kresge Auditorium. Free.

Sade** — Sponsored by the Department of Humanities. Wed, Apr 19, Rm 66-110.

Live Oak, Medieval and renaissance music. Sponsored by the Department of Humanities. Thurs, Apr 20, Chapel, Noon, Free.

Recital* — John Buttrick, piano, his program is Schubert: a Fantasia; Ravel; Mirrors; Beethoven; Sonata, Opus 101; Chopin: Etude in c-minor, Prelude in c-sharp minor, 2 Mazurkas, and Sonata in c. Fri, Apr 21, 8pm, Kresge Auditorium. Free.

Choir Extravaganza* — Several guest choirs from the New England area will join the Gospel Choir in its sixth annual benefit concert. Apr 23, 7:30pm, Kresge Auditorium. Donation, \$2 at the door, \$1 admission Lobby 10, \$1 students.

Caricatures* — Music Library, Rm 14E-109. Numerous cartoons on various aspects of music, especially pictures of famous composers and their works.

Exhibits

Against the Grain of Contemporary Fashion* — Creative Photography Lecture Series given by Jerome Liebling. Wed, Apr 12, 4:30pm, Creative Photography Laboratory, 120 Mass Ave, Camb, MA. Coffee served, Free admission.

In Search of Photography* — By Charles Harbutt, The Post War Period: William Klein, Robert Frank. Thurs, Apr 20, 7:30pm, Creative Photography Gallery, 120 Mass Ave, Camb.

Exhibition of Color Photographs* — Open through Thurs, Apr 27, Mon-Fri, 9am-10pm, Sat, 10am-6pm and Sun, Noon-8pm, Creative Photography Laboratory. Info: Ava Cohn 253-4424.

MIT Historical Collections* — Permanent exhibition Mon-Fri, 9am-5pm, Bldg N52, 2nd floor. Katharine Dexter McCormick, '04; Vannevar Bush, '16; and 1876 Exhibit, Bldg 4 corridor. The New Technology Exhibit 2nd floor balcony of Lobby 7. Energy Exhibit Bldg E40, 1st floor. Radiation Laboratory Exhibit main corridor, Bldg 8. Center for Space Research, Astrophysics Exhibit main corridor, Bldg 4. Bldg 6 Dedication Exhibit.

Richard Smith, Recent work '72-'77* — Organized and sponsored by the MIT Committee on the Visual Arts with grants from the British Council and Prudential. Informal gallery talk by the artist, 7-8pm, a BBC filmed interview daily, 12:45 & 2pm. Open through Apr 19, Hayden Gallery, 160 Memorial Drive, Camb, MA. Gallery hours: Sun-Fri, 10am-4pm.

Edgerton's Stroboscopic Projects* — Photographs and demonstrations by Harold Edgerton selected from forty years of investigations of natural phenomena. Sponsored by the Compton Gallery Committee with the assistance of the Committee of Visual Arts. Through Wed, April 12, Mon-Fri, 9am-5pm. Margaret Hutchinson Compton Gallery, Maclaurin Building 10.

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.

Strobe Alley* — High speed photographs by Harold E. Edgerton, Institute Professor and Professor of Electrical Measurement, Emeritus. Bldg 4, 4th fl.

Athletics

Home Schedule* — Wed, Apr 12: JV & V Lacrosse, Bowdoin, 3pm; W Softball, Fitchburg, 3:30pm; M V Tennis, Bowdoin, 3pm; M JV Tennis,

Governor Dummer, 3pm. **Thur, Apr 13: M V Tennis**, U Mass 3pm; **W Tennis**, U of Conn, 11am. **V Baseball**, BU, 3pm; **Sat, Apr 15: V Baseball**, Lowell, 2 games, 1pm. **LTWT Crew**, Yale, 11:15am V; 10:15am 2nd V; 9:15am Fr. **W Crew**, Brown & Mt Holyoke, 11:45am. **Sat & Sun, Apr 15 & 16: W Sailing**, Emily Wick Trophy, 11:30am. **Mon, Apr 17: JV Lacrosse**, Governor Dummer, 3pm. **W Tennis**, Salem State, 3:30pm. **Tues, Apr 18: M JV & V Tennis**, Dartmouth, 3pm. **Wed, Apr 19: V Baseball**, 3pm, **Fri, Apr 21: M V Tennis**, Vermont, 3pm. **W Tennis**, URI, 3pm. **Sat, Apr 22: LTWT Crew**, Biglin Cup, Dartmouth & Harvard, 11:45am Var. **W Crew**, Eisenberg Cup, Princeton & Yale, Noon. **JV & V Lacrosse**, Trinity, 2pm. **Sun, Apr 23: M F Sailing**, Freshman Invitational, 9:30am.

Graduate Soccer Home Schedule* — Sat, Apr 8, 2pm, Soccer Field A, North Terminal.

Theater and Shows

Romeo and Juliet* — The Shakespeare Ensemble, Tues through Sun, Apr 18 through 23, 8pm, Sala De Puerto Rico, Student Center. Admission \$3 & \$3.50, with \$1 off for students. Info: 253-2903.

Dance

Advanced Swing Workshop* — Sponsored by MIT-Wellesley Ballroom Dance Club. Another swing lesson featuring steps we haven't taught before. No partner necessary. Come on over and have a swinging time. Sun, Apr 23, 2pm, Burton Dining Hall. Admission 50c. Info: Scott Brundage x5-8347.

MIT Dance Workshop* — Classes taught by Beth Soll. **Modern Technique**, Wed, 6pm-7:30pm, Rm W31-125. **Mon**, 5:15pm-6:45pm, Rm W31-225. **Improvisation/Composition**, Mon, 7pm-8:30pm, Rm W31-225. **Independent Student Work**, Wed, 7:30pm-8:30pm, Rm W31-125. Info: 266-1202 or x3-5286.

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

*Open to the public
**Open to the MIT community only
***Open to members only
Send notices for Apr 19 through Apr 30 to Calendar Editor, Room 7-102, x3-3270, before noon, Friday, Apr 14.



REHEARSING for the Shakespeare Ensemble's coming production are, left to right, Tom Stephanik as Romeo, Daniel Kim as Friar Lawrence and Dorian Jankowski as Juliet.

—Photo by John Leppingwell, courtesy Technique

Shakespeare Ensemble To Give Romeo and Juliet

The MIT Shakespeare Ensemble will perform *Romeo and Juliet* in the Sala de Puerto Rico of the MIT Student Center (84 Massachusetts Avenue, Cambridge) Tuesday through Sunday, April 18-23, at 8pm.

Tickets will be on sale at the door and weekdays in Building 10, and they may be reserved by calling 253-2903. Prices are \$3 and \$3.50, with a \$1 discount for students and an additional discount of \$.50 per ticket for groups of 10 or more.

The production is being directed by Ensemble Director Murray Biggs. "We have focused on the youth, innocence and passion of the lovers, but we've also given the comic side of the play its full weight," Mr. Biggs said. "It is staged simply, in the style of the 16th century, with set, costumes, props and lighting all designed to contribute to this effect. As in all the Ensemble's productions, special care has been given to Shakespeare's language, to make it intelligible and interesting to a modern audience."

Mr. Biggs was assisted by Jo Ann Kruger, '77. Costume design is by Lita Wright, with assistance from Jan Ostrowski. Sets and lighting were designed by Leon Shiman, a postdoctoral fellow in the mathematics department; dances were reconstructed from Renaissance originals by Ingrid Brainard, and sword fights were designed and directed by MIT fencing master Eric Sollee.

Dorian Jankowski, '80, will play Juliet, and Tom Stefanick, '78, will play Romeo.

The MIT Early Music Society will present a special program of music of the Italian Renaissance, beginning each evening at 7:40pm, arranged and conducted by Tim Aarset, a lecturer in the MIT humanities department.

The Ensemble, which has just returned from a successful tour to Yale University and the University of Hartford, will perform scenes from its repertoire Wednesday, April 12, and Thursday, April 13, in the lobby of Building 7. Anyone interested in joining next year's company, now being formed, should call x3-2903.

Color Photos Exhibition Open

An exhibition of photographs exploring a wide variety of color techniques is being held at the MIT Creative Photography Laboratory through Thursday, April 27.

The show will feature work by 10 photographers using conventional negative-to-positive color processes, dye transfer, color tint and black and white with polychrome paint and enameling.

The photographers represented are Dan Babior, Mitchell Epstein, Elizabeth Heyert, Christopher James, William Larson, Greg McGregor, William Parker, Trina von Rosenvinge, Michael Siede and Joel Sternfeld.

The exhibition is open to the public free of charge from 9am to 10pm Monday through Friday, 10am to 6pm Saturday, and 12pm to 8pm Sunday.

Sun Day to be Focus of Art Contest

A Sun Day photography and art contest, with cash prizes for four different categories of work, is open to all members of the MIT community, in conjunction with Sun Day, the May 3 celebration of the use of solar and other renewable energy resources.

Twenty-five dollar prizes will be awarded for the best black and white photograph, best color photograph, best drawing, painting or print and best sculpture. The entry judged best overall will win \$50. Deadline for submitting entries to Rm. W20-002 is Monday, April 24, at 10am.

Entries will be judged on the basis of the artistic expression of ideas relating to Sun Day. Judges

will be Gyorgy Kepes, MIT Institute Professor Emeritus of Visual Design (whose work will be exhibited in the Margaret Compton Gallery beginning April 28), Marjory Supovitz, Projects Director, MIT Committee on the Visual Arts, and Starr Ockenga, assistant professor of photography in the Department of Architecture.

More information on the contest is available at MIT Ecology Action, W20-002, x3-7922. Flyers describing the contest are also available from the Committee on the Visual Arts, the Council for the Arts, the Compton Gallery and the Center for Advanced Visual Studies, and will be posted throughout the Institute.

Compositions by Edward Cohen To Be Performed in New York City

Two compositions by Edward Cohen, a lecturer in the humanities department, will be performed in New York in April.

Elegy for soprano and six instruments will be performed by the New Repertory Ensemble at Carnegie Recital Hall on April 14, under the sponsorship of the International Society for Contemporary Music. The piece is a setting of two poems on mythological subjects by H.D. (Hilda Doolittle). It was commissioned for Tanglewood by the Berkshire Music Center and the Fromm Music Foundation at Harvard, and given its first performance at Tanglewood in August, 1977.

Madrigal, a chamber work for five instruments, will be performed in the Prospective Encounters series of the New York Philharmonic Orchestra on April 29. It will be conducted by Gunther Schuller and performed by members of the New York Philharmonic. This series of contemporary music concerts was initiated and conducted by Pierre Boulez during his tenure as music director of the New York Philharmonic. Madrigal was written for flute, bass clarinet, trumpet,

viola, and double bass in 1967.

Mr. Cohen has studied composition with Irving Fine at Brandeis University and Seymour Shifrin and Luigi Dallapiccola at the University of California at Berkeley. Before coming to MIT, he taught at Brandeis and Harvard University.

Smith Orchestra To Play Here

On Tuesday, April 18, conductor Donald Wheelock will lead the Smith College Orchestra in a concert at Kresge Auditorium. The event, hosted by the MIT Symphony Orchestra, will begin at 8:30pm. Admission is free.

The orchestra will perform a wide variety of works: the *Petite Suite* of Claude Debussy; *Roumanian Dances* of Bela Bartok; *Sand and Stars* of Mary Howe; and the Piano Concerto No. 5 (Emperor) of Ludwig van Beethoven.

Pianist Kenneth Fearn will join the orchestra as soloist in the Beethoven. Both Mr. Fearn and Mr. Wheelock are members of the music faculty at Smith.

Brochure Describes Patient Advocates

The MIT Medical Department has issued a new brochure outlining the services of the patient advocacy program instituted more than two years ago.

The brochure describes a patient advocate as an ombudsman who will listen to grievances and try to resolve them, answer questions and meet needs of patients and their families on any aspect of medical care they are receiving.

MIT employs two patient advocates, Constance Bean and her assistant, Irene Merwin, both of whom hold MS degrees in public

health and have wide experience in health care systems and patient advocacy.

As explained in the brochure, the patient advocates have two major roles—to explore with patients what choices are available to them and to respond and work to resolve patient complaints. As part of the process they attend the monthly meetings of the Medical Department Advisory Board, a committee composed of users of the Medical Department representing various parts of the Institute.

In addition, the advocates help to

arrange health education programs, such as the weight control series and the quit smoking programs, for members of the community. They are also available to assist in preparing patients and their families for impending hospitalization.

For further information or copies of the Patient Advocacy brochure, call the Health Information and Education Office, x3-1316.

Writing Prizes Are Announced

The MIT Department of Humanities has announced this year's writing prizes for MIT undergraduates.

The Ellen King Prize for Freshman Writing—to be given to an MIT freshman for writing in any category—includes a first place award of \$100 and a second place award of \$50. The Robert A. Boit Writing Prize—for writing in all categories by undergraduates—offers \$425 divided among several winners. The Boit Manuscript Prize awards \$200 to undergraduates for works of substantial length, either completed or in progress.

No single entry may be submitted in more than one competition, and no individual may submit more than two entries to each competition. Prizes may be divided, and no awards will be made in the absence of outstanding entries. The competitions close Monday, April 24, 1978, at 5pm. Winners will be announced on or about May 15, and a luncheon for winners and judges with a reading of some winning entries is scheduled for the end of the spring term.

Copies of rules for the competitions are available in Room 14E-310. Questions concerning requirements for prose and fiction entries should be addressed to David Breakstone, for poetry entries to Robin Becker and for drama entries to Thomas Postlewait.

CLASSIFIED ADS X3-3270

Ads are limited to one per person per issue and may not be repeated in successive issues. All ads must be accompanied by full name and Institute extension. Persons who have no extensions or who wish to list only home telephones may submit ads by coming in person to the Tech Talk office, Rm 7-102, and presenting Institute identification. Ads may be telephoned to X3-3270 or mailed to Rm 7-102. **Deadline is noon Friday before publication.**

For Sale, Etc.

6 pc Mediterranean BR set; qu sz bed, triple dresser; vry gd cond, \$350 or best. Call 944-6149 aft 6pm.

Radial tires, 165-13, continental, mtd & dyn balanced on Datsun/Toyota rms, exc cond, \$75/pr. Deena x3-4378.

'72 Scout airplane 840 hours TT. Call Paul x3-7487.

Spring special, 20" Schwinn G bike, exc cond, lifetime frame, \$25. Kerry x3-4280.

AD Tricycle, 5 spd, custom fitted, perf for errands, nvr used, \$155. Call x3-7755.

5 spd bike w/lock, tools & parts, \$125; Ballentine 3028A, RMS, digital multimeter, \$200. Call x3-1938.

B&W 21" TV, gd cond, \$50. Call x3-6117.

Lg pieces of 1/4" plate glass, cheap. Call 864-6379 eve.

Pr van seat, Ford van, 3/mos old, \$80/ea or \$150 both. Call x3-6102.

Stereo equip, nw stereos, wholesale prcs, csst tape. Call Rich 787-5288 lv msg, eve.

Efficient spkrs: lg Heathkit guitar spkr, 90w, 2-12" & a horn w/casters & 20' cable, \$125 exc cond; sm braun L-200 sup bkshl/cr spkr, 40w, brand nw, \$95. Gerald x3-4726.

Learn to fly. Tech Aero Club 140 membrshp \$40. Call Ron x3-7423.

Keithley microvolt ammeter mod 150A, 1 microvolt to 1V DC, fl scale, \$100; Dynako stereo 120 custom blt, \$90, both in pristine cond. Call Melvin Alpert x3-4192.

Craftsman pw sander, \$10. Dave x3-5980.

Baby equipmnt: roundup swing, \$7.50; portacrib & mattr, \$30; changng tble, \$8; carriage, \$15; playpen, \$8; feeding tble, \$2. Call Berj Zamanian x8-2816 Draper or 272-8159.

Whirlpool Imperial 80 washing machine used 5 yrs, \$100; Whirlpool Imperial 80 gas dryer, 8 yrs old, \$50; GE Fashionette 6000 BTU rm A/C used 5 summers, \$75. Call Ira Gilbert 862-5500, x7092 or (1) 263-5856.

Golf Clubs: 4 wilson woods, 9 tp-flight irons & puttr, \$75 or best; Fisher quick skis, \$25, w/ Cubco bindings & plates, \$50. Call Warren x3-6004.

Crown 1C-150A preamp, 18 mos old, exc cond, transferbl 3 yr wrnty, \$340, nego. Call Chris x5-7509 Drml.

Small bike, \$35. Call 203-9044 eve.

Set of german Arzberg china. Call x3-6059.

Stratolounger reclnr, dk green, exc cond, \$80. Call 861-0613 aft 3pm.

Mod bdrm set, Q sz sprng & matt, frame & hd-board, dbl dresser w/mirror, ch of drawers, end tble, vanity, \$400. Roger x3-6907.

Audio Vox AM/FM car stereo, perfect cond, \$50. Call Nancy Burke 522-6700.

MITS altair 680b microcomputer, \$350. John x432 Linc.

C78-14 tires, gd tread, mntd & balanced on GM rims, \$15/pr. Call Susan 876-2360.

Les Paul Custom, 20th Anniv edition, cream finish & pickguard, shielded, hot rod pcups, exc cond, w/case, \$550. Saint x5-8201.

Look GT bindings, exc cond, Dolomite panter ski boots, sz 10, best. Call 536-3931 or 267-4948.

Pr 1st row tickets to Robert Palmer, Orpheum Th, Apr 22, 7pm, \$9 ea; 2 calculators, 1 scientific prgm-bl, (49 steps), harly used, \$30; 1 HP, used only 20 hrs, \$125. Call x3-6464.

Qu sz metal bed frame, \$15, br nw. Paul x3-2979.

Desk, slant top, walnut finish, \$45. Call 776-9045 eve.

Beaut velvet sofa, 1 yr old, movng overseas mst sell, ask \$175, 1/2 its prc. Call 494-8807 or x3-5387.

Movng mst sell, black swivl chair & hsock, \$60; stereo (8 track phno & radio) & tble, \$90. Call 661-6964.

Unpainted furn, rug. For details, call Annette x3-2669.

Bed, sng w/frame & bx sprng, \$30; recvr, 1 channel not work, 20W, cheap. Steve x7268.

Stud work bookcase, 5 shvls, 3'x4'x9", brown, \$10. Fisher x3-5571.

EMS hiking boots, M sz 9 1/2, exc cond, \$25; Rachle hiker, M sz 10 1/2, exc cond, \$35. John 232-9725.

Great spkrs, ADS 500, \$175/pr, mst sell quick. Mike 661-8857 lv msg.

Tw sz matt & bx sprng, vry firm, vry gd cond, \$120. Call Lisa x7226 w deliver.

Canon TLB camera, usd 3x, virtually new, ask \$250. Call x3-7053.

Coldestop high efficiency auto 3 rm air cond, 13000 btu/hr, 115 volts, exc cond, \$250 or best; encyclopedia Americana w/yr books, \$20; lg walnut 6-dwr desk w/ typewriter pltrfm, \$60; lg naugahyde reclnr, \$40. Call 926-5721, sat & sun 10-3.

Camera 35mm Pentax SLR; nw tires F78-14; 23" motorola color TV, nds wk, cheap. Call Chuck x8-3705 Draper.

(8) 70 yr old flat wooden windows, 37x70", (12) panes 16x11", \$12 ea or best. Rick x7477 Linc.

Pr 7.00-13, Good Yr bltd tires, mntd on Dodge Dart rms, gd cond, \$25/pr; brn nw green braid rug, 5'5"x8'5", \$30. Cindy x8-3555 Draper.

Console Grundig, mknng German, stereo, FM, 4 spks, lk nw perf cond, record ply, connect for tapes \$250. Call x3-6310.

Bureau, \$25; firpbc screen, \$5. Call x3-4733.

Yalton Yogurt Makr, usd 2x, \$6. Jean x3-2361.

Din tble, \$10; dishes \$3; toastr oven, nds repair \$5; sm shelf, \$2; crocheted coat, lg sz, hand md, \$15; snow coat, sz sm, \$5; nw hand md sweater, \$15; iron, \$2; bamboo curtains, 1 lg, 3 sm, \$20; corell sevr for 4, \$10. Nadia 494-8373.

Classic and beaut, 2 piece french desgrn dress, made by Russell Baker, Eng, & watching coat, solid emerald green, sz 6-8, lk nw, betwn 5' & 5'3". \$30. Call 494-0254.

Qu sz bed w/bx sprng & frame, 18 mos old, \$50 or best. Call 491-6172.

Vehicles

'66 Sunbeam Alpine roadster w/stl hard top & tonneau, gd cond, green. Call John 494-8214.

'66 Toyota Corona, 4 dr sedan, rms wl, nw brks, 10-OK, \$375. Buzz x5-9621 Dorn.

'66 Volvo 122S, rebtl stnd trmssn, exc eng, bdy nds work, \$850. Call 964-2003.

'68 Dodge Dart, V8, exc bdy, exc mech, reliable, 84K, air cond, AM, vinyl roof, \$500. Call x3-2663.

'69 Buick Electra, air cond, PS & PB & windw, AM/FM stereo, exc run cond, \$475 or best. Call x8-4027 Draper.

'69 Ford, Galaxy wg, bdy & chock prblms, safe & basic transport, \$200 or best. Call x3-4651.

'69 Mercury Marque, gd rn cond, \$500 or best. Call 327-1668.

Honda 450cc, 7K, mny extras, exc cond, \$750 firm. Tim x3-1812.

'70 Opel Rallye performance, handling economy 25 to 30 mpg, fly instrumnt, 58K, being driven as is but nds bdy wrk, \$375 or best reas offer. Dennis x8-3346 or 593-5095.

'70 Ply wg, 9 pass, V8, nw tire, exh, battry, ball joint & shocks, ask \$700. Dave x3-4214.

'70 VW Squareback, \$800 or best. Call Charlie x3-7587.

'71 Toyota Crown wg, eng nds wk, \$250 or best. Call x143 Linc.

'71 VW bus, 3.0K, rebtl '75 eng, nw mflr, nw bttry, AM/FM, x/defrostr, convrt to camper, insulated, carpet, dentd, best. Ferry 494-8120 or x5-7203 Dorn.

'71 VW squareback, \$900. Joe x7671 Linc.

'72 Fiat 128 parts car, gd eng, trmssn, rubber, bdy badly rustd, best. Call x3-5707.

'72 Ford Grand Torino, 302ci eng, 4 dr sedan life grn w/grn vinyl top, bench seat, auto, pls disc brks, nw tires & upholstery, \$1,395 or best. Cheryl 272-6470, x293.

'72 Porsche 914 Metallic gold, gd cond, hi mlg, but runs vry wl w/mny nw parts, AM/FM, konis 1 ownr, \$2,495 or best. Call x3-1587 or (1) 365-3258.

'72 Saab 99, 4 spd, 1 ownr, 45K, green, exc cond, \$1,900. Call Gary x3-3021.

'73 Chevy Malibu wg, PS & PB, AM/FM, roof rack, 350ci, V8, hg mlg, but rns exc, \$1,400. Call x3-2772.

'73 Pinto Squire wg, exc cond, roof rack, AM/FM, \$1,550. Call x3-7704 or 358-4960 eve.

'73 Ply Satellite, 4 dr sedan, air cond, PS & PB, exc bdy & mech cond, \$1,350. Call 784-5827 eve aft 6pm.

'73 Porsche 914, silvr, car has been pampered, runs beautly, garg winters, AM/FM stereo, \$2,800. Call x3-1664 days.

'73 VW, movng mst sell, 51K, \$1,500 or best. Call 661-6964.

'74 Datsun 710, 4cyl, blue, 4 dr, \$2,300. Anne x3-5610.

'74 Honda MT250, fly modif for trail ride, grt induro/play bike, \$550. Tom x3-3212.

'74 VW sedan, sun roof, lw mlg, must be seen. Call 625-4006.

'76 Honda 550 motorcycle, 26K, flaws cond, nvr drvn in rain. Call x3-2238.

'76 Pinto MPG runabout, 4 spd manu, white vinyl 1/2 roof over red, mag whls, stl bltd radial, sun roof, AM/FM stereo & more, 22K, \$2,850. Don x5511 Linc.

Housing

Allston, 3BR, 1st fl to sublet June-Aug, fl K, bath, furn, \$250/mo. Call 782-0029 eve.

Back Bay, 3 1/2 BR apt, avail June 1, summer sublet or rent, huge LR w/firepic, baywindw, skylight, partly furn, cls to Arl T, \$500/mo, incl all util. Call Renee or Bruce aft 5, 353-0872.

Brightn, Comm Ave, clean bldg, brght & airy, 1 BR, hdwd flrs, tile bath, no fee, \$215 htd. Call Bob 782-4878.

Brightn/Newton In, 2 BR apt, dishwhr, garb disp, pool, w/w & hrwdw flra, sublet w/option to rent, avail May 1. Call x3-6520 or 787-9707.

Camb, 5 rm condomin in mod bldg, exc loc, 5 min from Harv Sq, 2 BR, 2 fl ct bathrm, comp appl, K, LR, DR, ww in all rms, AC, off-st park, laund, ask \$7,000. Pls call Lisa x3-7106 or 492-5783 eve.

Camb, ex mod 1 BR, 5 yr old apt, 15 min walk MIT, green & red lns, K-DR, LR, AC, ww, all appl, laundry, off-st park, avail May 1, \$235/mo incl heat/hot water. Call 547-0868 aft 6pm.

Drchstr, 3rd fl Victorian hse, quiet St atop Ashmont Hill, lg K, BR, lg foyer, LR, turretwm w/sky-line view, 2 blocks T, \$235/mo incl ht, hotwater, gas, elect. Call 288-8619.

East Gate, 1 BR apt, avail for sublet May 1-Aug 1, \$209/mo. Call Gary x3-3247 or 494-8525 eve.

Eng, vac apt for rent wkly, beaut situated on slopes of Malvern Hls, Worcestershire, tastefly furn, cent heat, accom 4-5 \$80-120/wk incl utils. x7437 Linc.

Glencoe, Nova Scotia, vac retrt, loc on vry pr 12 acre hlside site, ovrks East River valley, 2BR & loft for 4 more, swim nr by river or waterfall pool, prime spot for bird watch, hike & rock hunting, \$125 wk, May-Sept. Alex Parker x7453 Linc.

Lexingt n hm, beaut settng nxt to conservation land, firepic LR, panel, 3BR, 2 ceramic baths, playrm, family rm, shop, exc storage, patio, deck, tool hse, prv 1/2 acre w/orgnic garden, cmnty pool, tennis, high 60's. Call x3-3306 or 862-6072 eve.

ME, nr Rangeley, lux, contemp, 3BR hse, on huge lake, superb view, mtn range & wilderns, super hike, fish & canoe incl w/rent. Jeannie x8-2577 Draper.

Writing? or relaxing, quiet, 4 BR chalet in woods of Southern Vermont w/amities, May 1-Oct 30, \$750 + util. Call x3-3408 or 661-8445 eve.

Westgate, 2 BR apt, avail June 1 to Aug 15, \$245/mo incl util, furn. Call 494-8917 aft 6pm.

Animals

AKC, F white german shepard puppy, 4 mos old, \$100 or best. Velma x3-4914.

5 wk old long-haired kittens, black, black/white, and money. Call 787-1586 aft 9pm.

Free to gd home, 8 mos old F dog, not spayd. x3-4994.

Lost and Found

Found: Ring, nr Burton Hse on Apr 1. Call 494-8122.

Roommates

Rmmate wntd to share w/1 M & 1 F, lg sunny apt in N. Camb, T, to Central & Hvd Sq, \$92 + util, non-smoker. Call 864-8159.

Wanted

Vermont farm hse for 1 or 2 wks in Aug, mst have swim pond. Jim Jones x3-2180.

Classical guitar, mst be in gd cond, Pls call Eric x3-3868.

Watertwn or Belmont apt wntd, 1 or 2BR, under \$300. Call Lois 924-1697.

W tennis racket. Call Sheryl x5-6488 Dorm, Tues & Thurs 9-12am.

Car to rent for summer. Call Harvey x5-8272 Dorn.

Selmer alto sax & stereo csst tape recdr. Call x75-50 Linc.

Summer rental or sublet, sought by former Wellesley Prof, family return to Bos area, apt w/storage spc or sm hse, modest rent, as early as May, mutual agreemnt. Call x3-3062 or 547-8906.

Use of motorhm for 1 mo, Jul or Aug '78 (wd also consider fly eq Van) on rental basis or swap for sev ann wks at sum resort. Bob x3-2748 or 272-4267 eve.

VW Beetle, '66 or older, mst hv gd bdy, minimal rust, mech cond not importnt, w/ pay cash & tow it away. Jim 492-0737 eve.

Garage for 18' boat, Somervl-Medfrd area. Call Paul x8-1554 Draper.

Display case or Curio cabinet corner or wall. Karen x3-4481.

Secretary/receptionist for yrbook senior pictr sitings, Apr 24-28 & Mar 1-2, 9am-noon, 1-5pm, \$4.50/hr. Call Bill or Genie x3-2980.

Martin 6 strng acoustic guitar, must be in exc cond. Pete x3-5401.

Visiting Prof from Paris seeks approx 6 rm hse for family, durng '78-79 academic yr. Prof Negele x3-7077.

Nd Chem or Chem E student to improve cleaning process, fee & expns. Call Martin x8-1159 Draper.

Scuba tank 50 or 72 ci, alum w/J valve, usd, in gd shape. Tony x3-5717.

Artist nds lvng/work space, concrete fl, light, ventilatn & open spc requrd for studio area, (a heat dbl garage w/access to water w/ do as a minim). Call Jane x3-7483.

Sm hse to rent on Nantucket Isl from July 29-Aug 12. Judy x7423 Linc.

Nd respsnl P, P's to board my dog 4/16-4/20, your hse or mine, fee nego. Pls! call Ruth x3-5598 or 646-5761.

Carpools

Riders wnt to Brklyn. Call Hellen x3-2710 or Bert x8-1255 Draper.

Miscellaneous

Experienced editor/prf reader, part social sci & archit. Joan x3-1356.

Experienced mother wants to do babysittng nr Porter Sq. Contact 547-1718.

Wl type, theses, report, manu, fast & accur. Call x3-4528.

Expr typist, any forms of typing. Linda x3-5476.

Surplus Property

Sealed bids to W.A. Derry, Property Officer, Rm E19-717, x3-2777.

Thermal snow melter, mod 40TM, serial 5520-645 w/4 cylinder air cold eng, weight approx 5 tons; 750-16 tires, mfg by Ternal Research & Eng Corp of Conshohocken, PA; fuel tank capacity 275 gallons; #2 fuel oil, eng fuel tank 30 gallons reg grade gasoline.

POSITIONS AVAILABLE

This list includes all non-academic jobs currently available on the MIT campus. Duplicate lists are posted on the Women's Kiosk in Building 7, outside the offices of the Special Assistant for Women and Work (10-215) and Minority Affairs (10-211), and in the Personnel Office, (E19-239).

Personnel Interviewers will refer any qualified applications on all biweekly jobs as soon as possible after their receipt in Personnel.

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

Information on openings at Lincoln Laboratory (Lexington, Ma.) is available in the Personnel Office.

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

Dick Higham 3-4278
Pat Williams 3-1594
Carolyn Scheer 3-1595
(Secretary — Tertia Perkins)

Virginia Bishop 3-1591
Richard Cerrato 3-4266
Ken Hewitt 3-4267
(Secretary — Paulette Chiles)

Sally Hansen 3-4275
Lewis Redding 3-2928
Kathleen Rick 3-4269
(Secretary — Jenni Leibman)

Admin. Staff, Associate Director, for the Council for the Arts to assist in arts promotion in various aspects of fund-raising, including research, cultivation and planning; manage regional events and carry out special projects as necessary. A Bachelor's degree, or equivalent, and strong organizational, fund-raising and writing skills required. Arts administration experience and knowledge of at least one art form desirable. A78-15 (4/12).

Academic Staff, Assistant Science Librarian, for chemistry and chemical engineering to select material for acquisition, retention and withdrawal; consult with faculty on research and instructional developments; advise on materials budget; develop and maintain written collection policy statements; participate in collection evaluation activities. Will also serve at the Reference Desk; manage chemistry reading room, perform other duties as necessary. Master's degree from accredited library school, chemistry background, organizational skills required. At least 2 years experience, preferably in a large system, also required. C78-9 (4/12).

Admin. Staff, Editor/Writer, in Information Processing Services Operations to be responsible for preparation and publication of computer-user documentation: edit, write, collect information and obtain document approval; communicate with printer. May also teach and consult on word processing. A Bachelor's degree, or equivalent, and at least 1 year's technical editing/writing experience required. Experience with computers and data analysis (especially econometrics) and familiarity with computer-based word processing desirable. A78-12 (4/12).

Admin. Staff, Asst. Director, for the MIT Associates Program to plan and perform activities involved in serving a number of companies who participate in the Program: arrange company representatives' visits; meet with faculty and staff; solicit new member companies; sponsor and coordinate on-campus meetings. An engineering or science degree, two years technical experience (preferably in engineering) required. A management and marketing background and/or an MBA preferred. A78-14 (4/5).

Academic Staff, Technical Instructor, in the Chemistry Department to maintain facilities and inventory for undergraduate laboratory; order supplies; prepare solutions; maintain spectrophotometric chromatographic and analytical instrumentation. A basic knowledge of chemical methods is required as well as the ability to organize tasks and to assign responsibility to others. C78-10 (4/5).

Admin. Staff, Staff Accountant, in the Comptrollers Benefit Accounting Office will define and implement changes in computer systems; write programs with user-oriented report generator language; prepare financial reports for auditors and actuaries; assist in preparing employee benefits budget, in estimating pensions and in reconciling control accounts. Will train and supervise support personnel. Position requires accounting degree or formal education/experience combination, a familiarity with computerized payroll/business systems, and communications skill. Familiarity with pension and insurance plans as well as accounting experience desirable. A78-13 (4/5).

Sponsored Research Staff in Mechanical Engineering to study lasers and their application in four research areas: optoacoustic spectroscopy; non-linear optical mixing; laser induced chemistry; development of new types of gas lasers. A theoretical background in atomic and molecular physics, several years of practical experience in at least 2 of the indicated research areas required. Demonstrated ability to master other research areas and to conduct independent research required. R78-79 (4/12).

Sponsored Research Staff, temporary, in the Lab for Nuclear Science to collaborate in research program of group doing experiments in hadron interactions. Ph.D. in high energy physics and 2 years experience in the field required. R78-81, R78-82 (4/12).

Sponsored Research Staff in the Electric Power Systems Engineering Lab to contribute to the mechanical, thermal and cryogenic aspects of the design, construction and testing of experimental superconducting generator; develop assembly methods; supervise, coordinate and trouble shoot during construction; participate in test program. At least 10 years experience in the design, construction and testing of large, complex mechanical and cryogenic equipment and a good working knowledge of cryogenics and commercial superconductors required. R78-80 (4/12).

Sponsored Research Staff, Staff Engineer in the Research Lab of Electronics to maintain RSX-11M software system; develop, maintain and document data processing software; maintain PDP 11/55 CPU; supervise new equipment construction, testing and installation; assist and advise students who are involved with hardware and/or software. Bachelor's degree in computer science and serious interest in learning DEC software and hardware required. Some background on signal processing and/or on DEC software/hardware desirable. R78-78 (4/12).

Sponsored Research Staff, Research Metallurgist or Material Scientist, in the National Magnet Lab to formulate and produce superconducting alloys; process alloys into high current, high critical field wires and ribbons; measure and optimize the superconducting and mechanical properties of superconducting wires. Ph.D. or equivalent in metallurgy or materials science required. Experience in the preparation of superconducting materials; measurement of stress and strain, critical fields and critical currents at liquid helium temperatures also necessary. R78-59 (4/5).

Sponsored Research Staff in the National Magnet Lab to do postdoctoral research on matter at high magnetic fields. Extensive experience with cryogenics, superconducting magnets and modern instrumentation in solid state physics required. Demonstrated innovative capabilities and background in experimental studies of magnetism and superconductivity also required. R78-58 (4/5).

Sponsored Research Staff, to do postdoctoral research, in the Research Laboratory of Electronics, related to the study of basic physical processes in hot Tokamak plasmas, in particular RF heating of such discharges. A Ph.D. in physics is required. R78-77 (4/5).

Sponsored Research Staff in Nutrition and Food Science to do research on metabolism and functions of vitamin A in the formation of glycopospholipids. Will work with vitamin A deficient rats, tissue cultures of rat cornea and biochemical enzymatic assays on culture medium. A Bachelor's degree, or equivalent, in life sciences required. R78-74 (4/5).

Sponsored Research Staff, Computer Programmer needed for data base file management in the

Energy Laboratory for data selection, acquisition, entry to a technical data base, quality maintenance, file updating/improvement, interface program development, application program development and technical reporting. Previous programming experience plus a Master's or Bachelor's degree in Mechanical or Chemical Engineering or in Computer Science with an engineering background required. Familiarity with data base system, fluid dynamics, heat and mass transfer, chemical kinetics and combustion useful. R78-72 (4/5).

Sponsored Research Staff, Computer Programmer in the Energy Laboratory to maintain and upgrade existing system computer program, and assist in development of mathematical models for fluidized bed combustors. Previous programming experience plus a Master's or Bachelor's degree in Mechanical or Chemical Engineering or in Computer Science with an engineering background required. Experience in data analysis, model testing, and technical reporting also necessary. Familiarity with fluid dynamics, heat and mass transfer, chemical kinetics and combustion helpful. R78-73 (4/5).

Sponsored Research Staff in Nutrition and Food Science to perform quantitative mutation assays; participate in development of automated assay procedures and experiments probing mechanisms of mutation in bacteria. A minimum of a Bachelor's degree in microbiology or related field as well as laboratory experience required. R78-75 (4/5).

Sponsored Research Staff, Energy Analyst, in the Energy Lab to conduct and administer research in economics and public policy of renewable resources (currently, in area of photovoltaics). A Master's degree in Economics and/or Management, or equivalent, a background in economic analysis of renewable energy technologies, and demonstrated ability in individual research and research administration required. R78-70 (4/5).

Sponsored Research Staff in the Clinical Research Center to be responsible for operation of specimen laboratory: process samples; maintain precise sample records; oversee maintenance of equipment and supplies; prepare associated reports. Work will be under direction of research staff and other Center personnel. A Bachelor's degree in science, at least 3 years' laboratory administration experience, including supervisory responsibility, required. Knowledge of computer terminal data handling and storage preferred. R78-76 (4/5).

Sponsored Research Staff, Combustion Engineer, in the Energy Lab to participate in research on the formation of soot and polycyclic aromatic hydrocarbons in flames. Familiarity with the use of flame probes and other experimental and combustion techniques used in combustion research required. Ph.D. in chemical engineering, mechanical engineering, fuel technology, or the equivalent, and experience in particulate organic matter in flames research preferred. R78-60 (4/5).

Sponsored Research Staff, Staff Engineer, in the Research Lab of Electronics to supervise staff and student technicians; assist and advise students involved with hardware projects; maintain lab facilities; supervise electronic parts and supplies stock; new equipment construction, testing and installation; maintain lab equipment documentation. Experience in the maintenance of digital equipment and ability to supervise technical operations required. R78-61 (4/5).

Sponsored Research Staff, in the Center for Space Research to do post doctoral research involving the planning and carrying out of observations of x-ray observatory; perform related studies of the visible counterparts of x-ray sources. Ph.D. in astronomy or astrophysics and practical experience in optical astronomy required. R78-62 (4/5).

Sponsored Research Staff, Research Assistant, part-time, in the Psychology Dept. to prepare stimulus materials for language experiments; administer test protocols; data reductions and processing. Knowledge of descriptive and inferential statistics including analysis of variance; programming at introductory level in FORTRAN IV or equivalent required. Familiarity with experimental psychology, especially human testing, audio recording and motion picture photographic material desired, as well as some knowledge of formal linguistics and elementary electronics. Half time appointment. R78-67 (4/5).

Sponsored Research Staff, Temporary Systems Programmer in the Energy Lab to design and code an executive system for a large interactive (FORTRAN) process simulation; debug and test programs; document programs and subsystems; implement programs for data management, file retrieval and processing problem-oriented languages; interface with the operating system of computer (IBM 370/168 with VS and CMS); develop specialized assembly-language programs. B.S. degree in science or engineering and 1-3 years experience in computer programming required. Knowledge of data base management and computer operating systems as well as proficiency in FORTRAN and IBM operating systems necessary. Temporary appointment of 8 months. R78-69 (4/5).

Sponsored Research Staff in the Research Lab of Electronics to do postdoctoral research in Radio Astronomy; will use interferometric methods, including VLBI and conventional interferometry. Ph.D. in physics or electrical engineering, or equivalent, with strong background in electronic systems and modern physics required. Interest in galactic structure, the interstellar medium and nonthermal radio sources, as well as familiarity with interferometry experimental techniques desired. R77-53 (4/5).

Sponsored Research Staff, International Energy Economist, in the Energy Lab to analyze world oil markets; research international energy issues. Graduate level training in economics with concentration in the areas of international economics, background in energy economics and policy and experience with international economics of energy supply, demand and trade required. Experience in international business and/or finance, as well as research experience on international energy issues and/or on problems of international trade, finance and monetary phenomena also required. R78-68 (4/5).

Sponsored Research Staff in Nutrition and Food Science to assist with research relating to health effects of gases and aerosols arising from fossil fuel combustion. Pulmonary function measurements in guinea pigs are used to assess irritant potency. Position requires experience in empathetic handling of small animals preferably including surgical experience, and familiarity with inhalation toxicology. A B.S. or equivalent in life science required. R78-66 (4/5).

Sponsored Research Staff, in the Earth and Planetary Sciences Dept. to operate trace-element analytical lab; prepare samples; handle manually, and through computer, raw activation data; operation of state-of-the-art equipment; train other personnel in neutron activation. Bachelor's degree and experience in neutron activation necessary. Also requires some familiarity with trace-element geochemistry. Research requires some night and weekend work. R78-64 (4/5).

Exempt, Chef, in the Endicott House to prepare dinners for 30 people, six nights a week; prepare hors d'oeuvres for large groups; plan menu; order food; supervise cook; prepare lunches when necessary. Ability to prepare gourmet meals, present them attractively. Also required to wash own pots and pans and keep kitchen clean. Irregular schedule, 48 hrs./wk. E78-20 (4/5).

Exempt, Engineering Asst. in the Earth and Planetary Sciences Dept. to direct the construction and testing of, and to be responsible for, the operation of seismic recording systems for the ocean bottom; supervise undergraduate lab asst.; coordinate field tests of the instruments on oceanographic cruises. Bachelor's degree and/or substantial course work in earth and planetary science and experience with mechanical systems, particularly tape recorders desired. Digital and analog electronics experience is required. E78-19 (4/5).

Freshman Leslie Harris Wins All-American Status

(Continued from page 1)

total of 31.7. Leslie had a great day, sweeping the vaulting, uneven bars and beam and taking second in floor exercise. The following weekend, she traveled to the University of Pittsburgh to compete in the EIAW (Eastern) Championships, finishing 15th out of a field of 88 in the all-around event.

This past weekend, Leslie made the trip to the United States Air Force Academy in Colorado to compete in the Women's Small College National Championships. This was the first year that the championships were divided into Small and Large College Divisions. Fifteen teams and 14 all-around gymnasts from across the nation qualified to participate.

The first day's preliminary competition selected the team champion, Centenary College (La.), the all-around champion, Kathy Johnson, also from Centenary, and the top 10 gymnasts to compete in the final competition on Saturday.

Leslie was 11th in the all-around competition with a score of 33.10. She started the competition on balance beam, the most difficult event, but two falls forced her usually high score down to a 7.55. Her second event was floor exercise where she scored 8.2. Leslie's strongest events of the meet were the last two, vaulting and uneven bars. In vaulting, a well-executed handspring full twist vault was scored at 8.75. On uneven bars, she received an 8.6. She qualified for

the finals in vaulting and uneven bars and was declared an All-American on bars. In that final competition, she finished fifth and received a medal.

Her achievement is enhanced by the fact that Ms. Harris has three more years of varsity intercollegiate competition in which to further distinguish herself. Here's to a bright future for Tech's Leslie Harris.

Evans is Visitor In Course 24

M. Gareth Evans, a Fellow of University College, Oxford, is a visiting professor of philosophy this term in the Department of Linguistics and Philosophy.

Professor Evans received his BA from University College, Oxford, in 1967. He also studied at Christ Church, Oxford, and at Harvard University. He was a visiting professor at the University of Minnesota in 1971.

Obituaries

F. E. Broderick

A funeral Mass will be held today (Wednesday, April 12) at 10am in St. Anthony's Church in Cohasset for Frederick E. Broderick, 81, one of MIT's few 50-year employees, who died Sunday at South Shore Hospital.

Mr. Broderick was a project technician in electrical engineering. He came to MIT in 1913 at the age of 16 and retired 54 years later in 1967. During his years here he worked on many major projects including the electrostatic generator, and the differential analyzer, a forerunner to today's computer.

In association with the late Professor Carlton E. Tucker, who devised the original Institute telephone system, Mr. Broderick was responsible for the installation of the dormitory telephone system.

Mr. Broderick was a founder of the Research, Development and Technical Employees Union and he also helped organize the MIT Employees Federal Credit Union in 1939. At his death he was a member of the board of directors of the MIT Quarter Century Club.

Mr. Broderick is survived by his widow, Alice Shea Broderick, and a son, George E. of Cohasset, and two brothers, Charles M. of Jamaica Plain and James B. Broderick of West Roxbury.

Mrs. E. N. Hartley

A funeral service was held yesterday (April 11) in King's Chapel in Boston for Charlotte Corlew Hartley, wife of Professor emeritus E. Neal Hartley of Concord.

Mrs. Hartley, who was 69, died Saturday at Emerson Hospital in Concord following a short illness. She was the last living member of a family whose ancestors sailed on the Mayflower and fought in the Revolutionary War.

Mrs. Hartley is survived by her husband, who is professor emeritus of humanities and Institute archivist emeritus.

Memorial contributions may be made to charities of choice or to the Wheaton College Class of 1930 50th reunion fund.

V. A. Gorlov

The body of Vyacheslav A. Gorlov, 19, a former MIT mathematics student missing from his parents' Medford, Mass., home since April 2, was discovered Sunday in the Maclaurin Building.

Gorlov had withdrawn from MIT effective the end of the second week of the spring semester. He was the son of Dr. and Mrs. Alexander Gorlov. Dr. Gorlov is a professor of mechanical engineering at Northeastern University. The coroner has ruled the death a suicide.

Secretary IV, part-time, for 2 faculty members in the Earth and Planetary Sciences Dept. to handle secretarial/administrative duties: type correspondence, class materials, manuscripts; file; schedule appointments; answer phones; manage research accounts; act as liaison between headquarters and faculty. Excellent typing skill, including ability to type technical material, organizational skill and ability to set priorities required. At least 2 years secretarial experience also required. 20 hrs./wk. B78-124 (4/5).

Secretary IV in Housing to aid Community members to find housing; record listings; maintain records and files; order supplies; type correspondence and lists; answer and place telephone calls. Accurate typing skill and good organizational skills required. Two years' college or business school training and one-two years' work experience preferred. Non-smoking office. B78-126 (4/5).

Secretary IV, part-time, in Nutrition and Food Science to type manuscripts, proposals; order reprints and supplies; transcribe machine and shorthand dictation; perform all other general secretarial duties. Excellent skills, including shorthand required. Some knowledge of biological and/or chemical terminology desirable. B78-144 (4/5).

Secretary IV, part-time, in the Biology Dept. to type manuscripts, applications, reports, correspondence; file; arrange travel; assist in meeting arrangements; monitor accounts; handle petty cash. Good typing skill and good command of English required. Shorthand and knowledge of MIT helpful. Prefer 3-5 years experience including some bookkeeping experience. 20 hrs./wk. B78-129 (4/5).

Secretary IV in the Food Service to screen calls and visitors; type correspondence, menus, reservations, rates, budgets; arrange meetings; schedule appointments; arrange travel; distribute office mail; compose some correspondence independently; file. Will also cost recipes and menus; obtain prices from purveyors; maintain accounting information. Good typing skill, shorthand/speedwriting required. 40hrs./wk. B78-136 (4/5).

Secretary IV to four faculty members in the Physics Dept. to type technical reports, manuscripts, proposals; maintain budget records; file; arrange travel. Excellent typing skill, including technical typing, required. College graduation and familiarity with physics courses preferred. B78-139 (4/5).

Secretary IV, to several faculty members in the Mechanical Engineering Dept. to type correspondence; schedule appointments; arrange travel. Excellent typing skill, including technical typing, shorthand/machine transcription ability and knowledge of basic bookkeeping required. High school graduation with formal secretarial training or equivalent education and experience required. B78-135 (4/5).

Secretary IV, for two faculty members and one research associate in the Research Lab of Electronics to type reports, technical material, correspondence and course material; plan meetings, seminars, arrange appointments. Good typing skill, machine transcription skill, good organizational skill, ability to work well with a variety of people required. Two to three years secretarial experience or secretarial school graduation and one year's experience also required. B78-134 (4/5).

Secretary IV to two faculty members in Materials Science and Engineering to arrange travel and appointments; schedule classes and seminars; prepare class work; maintain a variety of files; type and edit correspondence, papers, manuscripts, proposals and reports from handwritten drafts and machine dictation; independently respond to inquiries, prepare reports; assist visitors and researchers with schedules, reports and procedures. Good typing skill, willingness to learn and ability to successfully interact with a variety of people required. Experience in technical typing preferred. B78-132 (4/5).

Secretary IV in the MIT Press to type correspondence; duplicate manuscripts, send them for review and order reviewers' fees; write letters for project proposals rejections and process them; maintain files; prepare for monthly Board meetings. Will also assist with publication of contracts; keep monthly accounts; assist in turnover of manuscripts; serve as liaison between acquisition editors and other Press personnel. Excellent typing and machine dictation skills required, as well as precision and attention to detail. Ability to set priorities, organize several activities and strong interest in publishing also required. B78-107.

Secretary III-IV in the Student Financial Aid Office to type correspondence and reports; maintain files; handle mail; compile and compare statistics; process forms and records; assume receptionist's duties in absence of regular receptionist. Excellent typing skills required. B78-166 (4/12).

Secretary III in the National Magnet Lab to type technical manuscripts, reports, correspondence; maintain files and records; schedule meeting rooms; arrange travel. Excellent typing skill required. High school training with at least 1 year secretarial experience or secretarial school/college graduation also required. Technical typing experience or willingness and ability to learn necessary. B78-133 (4/5).

Editorial Asst. V in the MIT Press, will edit technical manuals. Position requires Bachelor's degree and training in science and mathematics. Editorial experience desirable. B78-163 (4/12).

Sr. Accounting Clerk IV in the Sloan School, System Dynamics Group to verify accounting statements; file; perform follow-up work; compute monthly billings; distribute cost statements; issue petty cash; type budgets, financial and general information; index and distribute publications; assist in routine administrative/accounting and miscellaneous matters. Excellent typing and organizational skills and ability to assume responsibility required. Experience at MIT helpful. B78-165 (4/12).

Sr. Clerk IV in the Center for Space Research to maintain records; prepare and submit jobs for computer processing; produce plot of computer processing results from a tomatized plotting system; distribute and file computer processing results. A college degree, accuracy, dependability and willingness to learn required. Familiarity with digital computers a plus. B78-127 (4/5).

Clerk/Typist IV in the Resource Planning Office to operate a Mag Card II system for typing proposals, case statement and other specialized material. Previous Mag Card II experience, good typing and organizational skills, and ability to work under deadline pressures required. Attention to detail and ability to work independently with minimal supervision also necessary. B78-143 (4/5).

Sr. Clerk IV in the Civil Engineering Academic Programs Office will work with administrative assistant to maintain records; assist students with requests for information and statistics; type material for printer; compile and update lists. At least 2 years' clerical experience, or equivalent, good typing skill required. Knowledge of keypunching is helpful. B78-149 (4/5).

Sr. Clerk/Receptionist III-IV in the Office of Personnel Services to share responsibilities related to employment process with other receptionist; provide information on available positions, application procedures, etc. to new applicants and others; refer general inquiries to other Institute offices as necessary; process resumes for review; handle a substantial amount of filing. May perform other clerical duties as necessary. Typing skill, previous working experience in an office setting, ability to exercise sensitivity and judgment required. Working experience in some public-service capacity is strongly preferred. 37.5 hrs./wk. B78-147 (4/5).

Clerk III in the Physical Plant to issue keys; maintain files; coordinate production and distribution of keys; handle mail; perform receptionist duties. Good typing and general office skills required. B78-153 (4/12).

Accounting Clerk III in Graphic Arts to handle general clerical duties. Good typing skills, interest in working with figures and knowledge of the use of calculators required. B78-152 (4/12).

Clerk III in the Physical Plant Dept. to review and process requisitions; type and dispatch purchase orders; batch requisitions/orders for keypunching; handle internal communications; maintain files. Good typing and general office skills required. Experience in a purchasing or related department also required. B78-138 (4/5).

Sr. Clerk III in the Comptroller's Accounting Office to prepare time sheets for computer entry; log file maintenance changes; post payroll audit of time sheets and input; research inquiries in reference to pay discrepancies, payroll procedures and general information; compute pay adjustments, file changes and special checks; handle paycheck mailing; complete reports; file. Ability to work well with others and to communicate effectively required. B78-146 (4/5).

Hourly, Technician A (Electronic) in the Laboratory for Nuclear Science to assist in research projects through operation of experimental and other electronic apparatus. Initial assignment will involve testing large drift chambers (apply high voltage; energize amplifier circuits and make standardized tests). Position requires graduation from a 2 year technical school, or its equivalent, plus 2 years of applicable experience. A general background in electronics testing, including familiarity with modern oscilloscopes and pulse generators is required, as well as familiarity with a wide variety of electronics components. H78-43 (4/12).

Hourly, Pot Washer, in the Food Service to wash cookware; clean and mop floors; handle other general cleaning, and remove trash. Applicants must be able to speak English and to follow instructions. High School graduate preferred. 11AM-8PM irregular schedule including Sat. and Sun. Shifts. H78-44 (4/12).

Hourly, Waiter/Waitress, part-time, in the Faculty Club to take members order; pick up and serve food using banquet trays; clean and reset tables; perform other duties pertaining to dining room service. Must be able to speak and read English. Experience helpful. 11AM-3PM, M-F. May include occasional weekend work. H78-50 (4/12).

Hourly, Waiter/Waitress, part-time, in the Faculty Club to take members' orders; pick up food and serve using banquet trays; clear and reset tables; perform other duties related to dining room service as necessary. Must be able to speak and read English. Experience helpful, but not necessary. Position will be for 8-12 hours per week, 5PM-9PM, M-F. Occasional weekend work may be involved. H78-40, H78-41 (4/5).

Hourly, Machinist B, in the Dept. of Aeronautics and Astronautics Aerophysics Laboratory to set up and operate machine tools working from blue prints, specifications, verbal instruction or sketches. Will use lathe, milling machine and surface grinder. At least 3 years applicable experience is required. 40 hrs./wk. H78-37 (4/5).

The following positions were still available at *Tech Talk* deadline. The date following each position is the date of the most recent *Tech Talk* issue in which the position was described.

ADMINISTRATIVE STAFF:
A77-3, Systems Programmer, Info. Processing Serv. (2/16)
A77-62, Industrial Liaison Officer, Ind. Liaison (4/5)
A77-80, Manager, Info. Proc. Serv. (12/14)
A77-86, Systems Prog., Info. Proc. Serv. (1/11)
A77-87, Systems Prog., Info. Proc. Serv. (1/11)
A78-3, Asst. Dir., Office of Minority Ed. (2/1)
A78-8, Admin. Staff, Dean for Student Affairs (3/8)
A78-10, Asst. Director, Council for the Arts (3/22)

BIWEEKLY:
B77-518, Sec. III-IV, Mech. Eng. (10/5)
B77-611, Sec. IV, Elec. Systems Lab. (11/2)
B77-647, Sec. IV, Treasurer's Office (3/1)
B77-655, Sec. IV, Chemical Eng. (11/16)
B77-679, Sec. V, Nuclear Sci. (12/7)
B77-696, Sec. IV, Personnel Office (12/7)
B77-743, Sec. IV, Earth & Planetary Sci. (1/11)
B77-753, Sec. IV, Tech. Adaptation Prog. (1/11)
B77-755, Sec. IV, Earth & Planetary Sci. (1/11)
B78-2, Clk./Sec. III-IV, Ctr. for Cancer Res. (1/25)
B78-4, Sec. IV, Civil Eng. (1/18)
B78-8, Sec. IV, Admissions (1/18)
B78-13, Acctg. Asst. V, Comptroller's Benefit Off. (1/25)
B78-16, Sr. Clk. III, Div. of Lab. Animal Medicine (1/25)
B78-25, Sec. III-IV, Urban Studies & Planning (1/25)
B78-27, Admin. Asst. V, Civil Eng. (1/25)
B78-28, Sec. IV, Lab. for Nuclear Sci. (2/1)
B78-56, Sr. Clk. III, Sloan School (2/22)
B78-71, Sr. Clk. IV, Lab. for Comp. Sci. (3/1)
B78-74, Sec. IV, Dean for Student Affairs (3/1)
B78-76, Sec. IV, Nutrition & Food Sci. (3/8)
B78-80, Sec. V, Mech. Eng. (3/8)
B78-82, Sec. III-IV, Resource Planning (3/8)
B78-83, Sec. III, Medical Dept. (3/15)
B78-84, Sec. IV, Medical Dept. (3/8)
B78-87, Computer Oper. IV, Admin. Comp. Serv. (3/8)
B78-93, Communications Console Oper. III, Physical Plant (4/5)
B78-97, Sr. Key punch Oper. III, Alumni Assoc. (3/22)
B78-98, Sr. Key punch Oper. III, Alumni Assoc. (3/22)
B78-100, Sec. IV, National Magnet Lab. (3/22)
B78-104, Sec. IV, Neurosciences Res. Prog. (3/2-2)

B78-108, Sr. Clk. IV, Resource Planning (4/5)
B78-111, Tech. Asst. V, Medical Dept. (4/5)
B78-112, Sec. V, Energy Lab. (4/5)
B78-113, Sec. IV, Vice Pres. Res. (4/5)
B78-119, Sr. Clk. III, Sloan School (4/5)
B78-120, Sec. III-IV, Chemical Eng. (4/5)
B78-121, Sec. IV, Tech. Adaptation Prog. (4/5)
B78-122, Account Rep. V, Info. Proc. Serv. (4/5)

ACADEMIC STAFF:
C77-36, Social Worker, Medical (10/5)
C78-1, Tech. Inst., Mech. Eng. (1/18)
C78-4, Tech. Asst., Biology (3/22)
C78-5, Asst. Eng. Librarian, Eng. Lib. (4/5)
C78-6, Asst. Eng. Librarian, Eng. Lib. (4/5)
C78-7, Facilities Officer, Elec. Eng. & Comp. Sci. Dept. (4/5)
C78-8, Res. Associate, Div. for Study & Res. in Ed. (4/5)

EXEMPT:
E77-47, Engineering Asst., Aero/Astro. (10/12)
E77-54, Eng. Asst., Ctr. for Mat. Sci. (12/14)
E77-56, Estimator/Scheduler, Physical Plant (11/9)
E78-1, Unit Coordinator, Medical (1/25)
E78-2, Audiologist, Medical (1/25)
E78-8, Machine Shop Super., Lab. for Nuclear Sci. (3/8)
E78-11, House Manager, Housing Office (4/5)
E78-12, Nurse Practitioner or Physician Asst., Medical (4/5)
E78-13, Tech. Asst., Medical (4/5)

HOURLY:
H77-89, HVAC Designer/Draftperson, Physical Plant (10/5)
H77-170, Waiter/Waitress, Endicott House, Dedham (2/15)
H77-206, Elec. Tech. A, Energy Lab. (3/1)
H78-23, Mach. A, Nutrition & Food Sci. (3/8)

The following positions have been FILLED since the last issue of *TECH TALK*:

R78-3 Spns. Res. Staff
E77-44 Exempt
B77-772 Sec. IV
B78-117 Edit Sec. IV
A77-92 Admin. Staff
B78-92 Console Oper.
B78-114 Sec. IV
E78-7 Exempt
A77-73 Admin. Staff
B78-102 Lib. Asst. IV
H78-25 Hourly
H78-26 Hourly
B78-116 Sr. Circulation Asst.
B78-115 Sec. IV
B78-125 Sec. IV
B78-62 Admin. Asst. V
B78-69 Sec. III
B78-118 Admin. Asst. V
B78-60 Acctg. Asst. V

The following positions are on HOLD pending final decision:

A77-83 Admin. Staff
R78-1 Spns. Res. Staff
B77-671 Admin. Asst.
A77-82 Admin. Staff
E78-9 Exempt
A78-5 Admin. Staff

Exempt, Supervisor in the Office of Laboratory Supplies to coordinate daily activities of stock room personnel; set up work schedules; maintain payroll; screen and interview candidates of stock clerk positions. Previous supervisory experience; knowledge of lab apparatus, chemicals, solvents and electronics and of safety measures relating to the proper handling of hazardous materials required. Experience in stock controls and systems and ability to deal effectively with department administrators, faculty, students and outside vendors also necessary. E78-18 (4/5).

Exempt, Editor, in the MIT Press to edit manuscripts and prepare them for publication. Bachelor's degree and 2-3 years experience as independent manuscript editor of technical and engineering material required. E78-16 (4/5).

Secretary VA to Executive Vice President, Alumni Association; Organization skills are important. Must be able to exercise judgment and work independently; extensive coordination of meetings; preparation of travel itinerary and expense reports; compose correspondence; excellent typing, shorthand skills and good telephone manner required; minimum of 5 years secretarial training. B78-145 (4/12).

Admin. Asst. V in the Sloan School of Management to prepare reports, transmittal material and budget analysis and control; edit manuscripts and correspondence; coordinate workshops and conferences; screen calls; schedule appointments; transcribe reports, letters and papers from machine and/or oral dictation. Excellent typing skill, shorthand or speedwriting, good English grammar ability required. Ability to work with a variety of people and to set priorities also required. B78-130 (4/5).

Secretary V in the Lab for Nuclear Science to handle secretarial responsibilities for the Director of the Bates Linear Accelerator: schedule appointments; type correspondence and reports (some technical); file; arrange meetings. Excellent typing and shorthand skill required, as well as ability to work under pressure, communicate effectively and exercise good judgment. At least 5 years secretarial experience and willingness to travel regularly to Middleton, Mass. also required. Secretarial school or college background preferred. B78-154 (4/12).

Secretary V to the Head of the Chemical Engineering Department to coordinate graduate student seminars; schedule meetings, luncheons and receptions; compose and type routine correspondence; maintain files and research accounts; answer a variety of requests for information and department publications; open and sort mail; type technical material; maintain office supplies; act as receptionist to the Reference Center; assist with special projects as required. Excellent secretarial skills, including shorthand, ability to work with minimum supervision and to use tact and discretion in dealing with confidential matters required. Willingness to work additional or irregular hours when the need arises also necessary. Familiarity with MIT preferred. B78-161 (4/12).

Secretary V, in the Humanities Dept. to assist in administrative duties; maintain records; advise students; arrange meetings; organize office procedures daily. Good public relations, organizational and typing skills required. Ability to work efficiently with several people and some office experience also required. Knowledge of German preferred. B78-148 (4/5).

Sr. Secretary IV-V, part-time, will handle a variety of secretarial and administrative details at the President's house in Watertown. Schedule appointments for Mrs. Weisner and for the President's House at 111 Memorial Drive; arrange travel; transcribe correspondence; maintain extensive files. Work closely with Dr. Weisner's secretary; act as liaison for Dr. Weisner with other MIT offices, community agencies and businesses. Keep payroll and other records; attend meetings when required; write and address invitations for Institute events. Excellent typing skills required. Knowledge of the Institute desirable. Discretion, honesty and tact essential to deal with confidential matters and to work in a private home. Position will normally be 12 hrs./wk., but will be for 22 hrs./wk. in summer months. B78-155 (4/12).

Secretary IV, in the Biology Dept. to answer phones; type letters, recommendations, manuscripts and grant proposals mostly from dictaphone; order office supplies; handle petty cash; process requisitions; monitor research accounts. Excellent typing skill and aptitude for figures required. At least 2 years of experience also required. B78-158 (4/12).

Secretary IV, part-time, in the Mathematics Dept. to type correspondence; course work and technical reports; arrange seminars; file; answer telephones; arrange travel. Good typing skill and 3 years secretarial experience required. Technical/statistical typing experience, good organizational skills preferred. B78-157 (4/12).

Secretary IV to a research staff member in the Energy Lab to type correspondence, reports; make travel arrangements; schedule appointments; screen phone calls; maintain files and accounts. Good secretarial skills including ability to use dictation equipment and organizational and editing skills required. Ability to set priorities and to work independently also necessary. MIT experience desirable. Non-smoking office. B78-162 (4/12).

Secretary IV to the Wage and Salary Administrator and the Assistant Wage and Salary Administrator in the Personnel Department to provide excellent secretarial and statistical support. Will collect and compile data for salary surveys, statistical summaries, develop graphs and charts. Responsible for the maintenance of Institute Unemployment Compensation, including recording and processing claims, representing the Institute at D.E.S. hearings. Must have ability to work with figures, well developed sense of responsibility and initiative and excellent typing and communications skills are necessary. B78-164 (4/12).

Secretary IV to academic staff member and research staff in the Center for Policy Alternatives on a variety of projects including environmental/occupational health, teaching in technology and law, etc. Will handle general secretarial duties; organize proposals; coordinate projects; monitor accounts; arrange travel; prepare course material. Excellent typing skill, shorthand/speedwriting, good organizational skills required, as well as the ability to set priorities and work independently. Interest in research subject matter important. 37.5 hrs./wk. B78-160 (4/12).

Secretary IV in the Center for Advanced Engineering Study to coordinate work of the program director, research associates, authors and editors involved in a rational project to develop a modular system of continuing education: type project correspondence, reports and manuscripts; arrange meetings and conferences; monitor budgets; draft reports and correspondence; respond to requests for information and maintain files. Good typing, organizational and written communication skills required. Ability to work independently and under pressure of deadlines also necessary. MIT experience helpful. B78-150 (4/12).

Secretary IV to several faculty members in the Center for Theoretical Physics to type, some technical material; answer phones; handle mail; schedule meetings and appointments; arrange occasional luncheons. Typing skill required. Technical typing skill and shorthand helpful. B78-151 (4/12).

Secretary IV in Resource Development to an officer for Capital Campaign (a 5 year, \$225 million fund raising program). Responsibilities will include contact with Institute staff, potential donors and others; carrying out research to support Campaign efforts; arranging travel and other duties as required. Excellent typing skill, ability to handle precise work with accuracy and to handle a variety of duties simultaneously required. B78-159 (4/12).

Alcator Staff to Have Energy Policy Role

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who has overall design and engineering responsibility for the ALCATOR project; and Dr. Ronald R. Parker, who is in charge of ALCATOR fusion experiments. Dr. Parker and Dr. Montgomery are associate directors of the Magnet Laboratory.

Speaking on "The Promise of Fusion," Dr. Kintner said the need for results from ALCATOR C experiments is twofold.

"The first," he said, "is the new insights into our ability to control plasmas which ALCATOR C should provide."

But the second and overriding reason "is that significant technical progress is the most important evidence we have in trying to convince those above us who make policy in energy research that the fusion program deserves their support."

He told the ALCATOR and Fusion Center group that "you should not underestimate this latter need, for we are attempting to do something in fusion that has never been done before in history—to generate support for a non-military program at a high budgetary level and for a long period of time with no guarantee of the result."

Dr. Kintner said, "We have no military purpose for our work, such as that which justified the development of radar, or jet aircraft, or fission energy. We have no near-term commercial profits to offer. We can only offer the vision that when we have learned enough about the fourth state of matter to turn it to practical use, the benefits which will then accrue will justify the long, difficult and expensive road we have had to walk to to get there."

Dr. Kintner noted that there are "many doubters" about the feasibility of fusion, but he called it "the last known physical process which can be considered as a means to produce massive quantities of energy. It is the sole large-scale energy resource which can be considered as the basic energy for all men for all time without significant detrimental effects on the biosphere."

The availability of such an energy resource "with no national boundaries on the fuel supply and

with acceptable effects on the environment will significantly change the future of the race, he said, adding "to appreciate that one needs only to ask how different the world would be if the full promise of fusion were available today."

Dr. Kintner praised the "dramatic" accomplishments of MIT's predecessor machine, ALCATOR A, and called it "one of the best reasons for believing that fusion can be developed to a point of economic usefulness."

An important aspect of the success of MIT in the ALCATOR program, he said, "has been the comparison it has provided in the fusion community of a relatively small university program relative to the significantly larger programs in other laboratories involved in magnetic fusion research longer and at much higher budgetary levels. In my judgment, the MIT program has been one of the most cost effective in world fusion research."

Dr. Kintner noted other MIT "technical contributions of recognized world significance" and added, "In my mind, it is not an exaggeration to propose that the contribution the Institute is making and will make in the development of fusion can be equally profound and of equal or greater importance to the future of the race."

Following the dedication program, about 130 members of the audience participated in a tour of the ALCATOR project which included special presentations, displays, and explanations of the research.

Lyndon Cited

Donlyn Lyndon, professor of architecture in the School of Architecture and Planning and chairman of the Committee on the Visual Arts at MIT, has been elected to the College of Fellows of the American Institute of Architects (AIA), a lifetime honor given for outstanding contribution to the profession. Professor Lyndon, with other newly elected Fellows, will be invested at the AIA convention in Dallas, Texas, May 22.

Variety of Cultural Activities To Highlight Boston China Week

China Week, beginning with a Chinese cultural night of kung-fu, Chinese singing, dance, fashions and a cultural film on Friday, April 14, 7:30pm, at Boston University's Hayden Hall, is being sponsored by the Chinese Students Clubs of MIT, Boston University and Northeastern University and the Intercollegiate Chinese Student Social Committee, to promote understanding of Chinese culture

and modern society.

China Week activities at MIT will begin Monday, April 17, 7:30pm, with a talk with slides by Paul Clarke, a New Zealander who studied in Peking from 1974-76, followed by a talk entitled "Art in China" by Carmal Hinton, instructor in Chinese at Wellesley College. Friday, April 21, a movie, *The Coral Reef*, about life in a Taiwanese fishing village will be shown at 7:30pm in Rm. 4-370.

Saturday afternoon, April 22, from 4 to 5:30, Ping-ti Ho, James Westfall Professor of History at the University of Chicago, will deliver a lecture, "The Natural Resources and Economic Prospects of China," in Rm. 10-250. On Sunday afternoon, April 23, three films will be shown at Kresge Auditorium. *The National Games*, a documentary on the Third National Games in Peking in 1975, will be shown at 1pm, followed by *The Other Side of the Sky*, a documentary on the visit to China by the women's group headed by Shirley MacLaine. The final film will be a Bruce Lee kung-fu drama, *The Chinese Connection*.

Northeastern will be host Wednesday, April 19, 7:30-9:30pm with two slide presentations at 346 Ell Center: the first, "Education in China," will be followed by a discussion with Brenda Landsdown, formerly of CUNY and Harvard University; the second, "Hong Kong: Borrowed Place? Borrowed Time?" will be presented by a group of Hong Kong students in the Boston area.

AARP to Focus On Nutrition

Dr. Judith Wurtman, research associate in nutrition and food science, will be the speaker for the April meeting of the MIT-Cambridge chapter of the American Association of Retired Persons on Tuesday, April 5, at 5pm in the Student Center Mezzanine Lounge.

Discussing "Eating to Grow Older," Dr. Wurtman will offer suggestions on improving nutrition for older persons without causing disruption of individual life styles. She will offer tips on how to make food purchasing and preparation easier as well as more nutritious. Dr. Wurtman is the author of a forthcoming book, *Eating Your Way Through Life*, to be published by Raven Press later this year.

Refreshments will be served beginning at 4:30pm.



LIKE PATIENT SENTRIES these cylinders stand waiting to be taken for refilling, a reminder that cylinders gather demurrage charges of up to \$1.80 per month, sometimes more than the remaining gas is worth. For cylinder pickup, call x3-4761.

Kindergarten Spaces Available

There are still a few spaces open in the Extended-Day Kindergarten which is scheduled to open in September, 1978, under the auspices of Technology Children's Center, Inc.

Within the context of full day care, a certified Kindergarten program will be offered to children of families affiliated with MIT. The program will be available year-round, Monday through Friday from 8:00am to 5:30pm and will be located at East-gate on the plaza level. Information and applications are available from Margaret Sand, x3-1592, or stop by Rm 4-144.

Open House

(Continued from page 1)

and demonstrations on the social aspects and safety of nuclear energy.

Also included will be a number of exhibits from the School of Humanities and Social Sciences to show activities that add breadth to the technological foundations for which MIT is famous. Among them will be an exhibit of works of Gyorgy Kepes, Institute Professor Emeritus and founder of the Center for Advanced Visual Studies, in the Margaret Compton Gallery.

Open House this year will coincide with the Massachusetts State Science Fair featuring regional award-winning science projects by high school students. The Science Fair will be held in Rockwell Cage beginning Friday, April 28.

Members of the Open House committee include: Robin Schlinger, a senior in chemical engineering, operations chairman; Eric Sklar, a freshman, scheduling chairman; Tom Davidson, '77, publicity chairman; and Debbie Freeman, a sophomore in chemical engineering, treasurer. On the day of Open House approximately 150 students will be working in refreshment booths, information booths, and running tours. Students interested in helping should call the committee for information.

Diamond to Write Esquire Column

Edwin Diamond, senior lecturer in the MIT Department of Political Science, will write a monthly column in *Esquire* magazine called "Future Watch," about people, ideas, processes and trends that will affect the way we live, work, play and think over the next 5-50 years.

Mr. Diamond, former senior editor of *Newsweek*, will continue in his present activities at MIT, and as media commentator for the *Post-Newsweek* TV stations in Washington, D.C.

Kerrebrock Named Head Of Aeronautics, Astronautics

(Continued from page 1)

nautics since 1975. Professor Kerrebrock is the first MIT faculty member to hold that professorship, established in memory of MIT's sixth and youngest president (1909-1920).

Professor Kerrebrock is the fifth head of the department whose history began shortly after the Wright brothers' famous first flight in 1903. MIT was the first university to offer, starting in 1914, a master's degree in aeronautics. An undergraduate curriculum was begun in 1926 and the department was formally organized in 1939. Research and teaching are conducted in the divisions of aeronautical and astronautical systems; mechanics and physics of fluids; propulsion and energy conversion; structures, materials and aeroelasticity; and instrumentation, guidance and control.

A native of Los Angeles, Professor Kerrebrock received his BS from Oregon State University in 1950, his MS in 1951 from Yale University and his PhD in 1956 from the California Institute of Technology.

He was an aeronautical research scientist with the National Advisory Committee for Aeronautics in Cleveland from 1951-53; a research fellow at Cal Tech from 1955-56; a research engineer at Oak Ridge National Laboratory, Tennessee, from 1956-58; and a senior research fellow at Cal Tech from 1958-1960, the year he joined the MIT faculty as an assistant professor. He was promoted to associate professor in 1962 and to pro-



Dr. Kerrebrock

Draper Honored

Dr. Charles Stark Draper, MIT Institute Professor, Emeritus, and senior scientist of the Charles Stark Draper Laboratory, was given the National Space Club's prestigious Dr. Robert H. Goddard Memorial Trophy March 10 in Washington, D.C.

The trophy honors achievement in advancing space flight programs that contribute to United States Leadership in astronautics.

Andersen Designs Sculpture Site

Dr. Wayne V. Andersen, professor of the history of art in the Department of Architecture, has designed a half-acre site on the grounds of Clark University in Worcester, Mass., where a sculpture in memory of Robert H. Goddard, the rocket pioneer, will be installed. Dr. Goddard taught at

professor in 1965.

Professor Kerrebrock directed the department's Space Propulsion Laboratory from 1962, when he founded it, until 1976, when it was merged with the Gas Turbine Laboratory, of which he became director in 1968.

He is chairman of the Science and Technology Advisory Group of the Air Force Scientific Advisory Board, a member of the National Research Council's Aeronautics and Space Engineering Board and a member of the American Society of Mechanical Engineers' Turbomachinery Committee, and has served on many ad hoc groups such as the National Aeronautics and Space Administration's Advisory Board on Aircraft Fuel Conservation Technology.

He is a Fellow of the American Institute of Aeronautics and Astronautics, and the Explorers' Club, and a member of the American Association for the Advancement of Science, Sigma Xi, Tau Beta Pi and Phi Kappa Phi.

Professor Kerrebrock and his wife, the former Bernice Veverka, have three children. They live in Lincoln, Mass.

NAE Members

(Continued from page 1)

engineering by mathematical analysis of complex reaction and applications to commercial processes."

Also elected to the Academy are two engineers with close ties to MIT. They are Richard H. Bolt, chairman of the board, emeritus, of Bolt, Beranek and Newman, Inc., of Cambridge, and George N. Hatsopoulos, president and chief executive officer of Thermo Electron Corp., Waltham. Dr. Bolt, former professor in the Department of Electrical Engineering and Computer Science and former director of the Acoustics Laboratory in the Department of Physics, was cited for "contributions to acoustics and leadership in engineering enterprises and in public services."

Dr. Hatsopoulos, currently a senior lecturer in the Department of Mechanical Engineering, was a professor in that department. He was cited for "contributions to classical and quantum thermodynamics, thermionics, energy conversion and industrial thermo-electric energy."

Clark for 28 years.

Though there are memorials to Dr. Goddard in New Mexico and Maryland, none has been established in his home state of Massachusetts until now. The sculpture at Clark is a tribute to Dr. Goddard from the National Aeronautics and Space Administration.