Massachusetts Institute of Technology

TECH TALK

January 11, 1978
Volume 22
Number 19

LATEST WORD on what's new in Independent Activities Period is posted on the IAP panels in the Rogers Lobby, where crowds gather daily to check out the listings.

Soviets, MIT Sign Management Pact

The United States and the Soviet Union have opened up a new area of cooperation—in the field of management education and research and executive development—as the result of a protocol agreement signed recently by MIT and the State Committee of the USSR Council of Ministers for Science and Technology.

The agreement was signed by MIT President Jerome B. Wiesner and by Jermen M. Gvishiani, deputy chairman of the State Committee and also director of a new institute of management in the Soviet Union, the Institute for Systems Analysis. The signings took place in December at MIT and in Moscow.

The agreement, believed to be the first of its kind between the two countries in the management field, states that one of its objectives is to strengthen friendly relations between the United States and the Soviet Union.

While the agreement provides a broad base for cooperation between scientists and specialists in the management field, the specific forms of cooperation will be described in a protocol to be worked out by an implementation committee. The committee is expected to complete its work by May. Professor William F. Pounds, Dean of the Sloan School of Management, will administer the agreement for MIT.

Projects under consideration include an exchange of scientists and specialists; an exchange of management and technical information and documentation; the joint development and implementation of programs and projects in the field of research, teaching and applied management research; joint research and development, as well as the exchange of research results and experience; and the organization of joint courses and conferences.

Associate Dean Peter P. Gil of the Sloan School said the formal agreement stems from visits made to the USSR for the past ten years by students in the Sloan School's Sloan Fellows Program, and accompanying faculty.

The Sloan Fellows, young executives studying for master's degrees in management in a special 12-month program, travel abroad each year as part of the program.

"I take the Sloan Fellows to Russia every year, to Moscow and Leningrad, where they meet with industry and government people," Dean Gil said. "As the result of these contacts, eight Russian executives have been enrolled in the Sloan Fellows Program in recent years, including three this year. In fact, the Sloan School is the only management school in the United States where Russians are enrolled in a degree-granting program."

These contacts and exchanges, he said, have created a close relationship between the Sloan School and the State Committee of the USSR Council of Ministers for Science and Technology.

As an example of the kind of cooperation that can result from the protocol agreement, Dean Gil cited a hypothetical case in which the Soviet Union might be better at producing hydro-electric energy, while the United States might be better at distributing it. "If this were the case," he said, "then perhaps both sides could learn from one another in a full exchange of information and experiences."

Jerome H. Holland to Speak At King Day Observance

The Honorable Jerome H. Holland, former ambassador to Sweden and a member of the MIT Corporation, will be the keynote speaker at the annual Martin Luther King, Jr., observance at MIT on Friday, Jan. 13.

Dr. Holland, a distinguished American educator, administrator and humanitarian, is presently a director of the New York Stock Exchange. A 1939 graduate of Cornell University, where he was an All-American end in football, Dr. Holland received the MS degree in 1941 from Cornell and the PhD degree in sociology in 1950 from the University of Pennsylvania.

From 1953-60 Dr. Holland was president of Delaware State College. In 1960 he was named president of Hampton Institute where he served until becoming ambassador to Sweden in 1970.

Dr. Holland was elected to the MIT Corporation in 1969 and re-elected in 1974. He serves on the Corporation Visiting Committees for the Department of Humanities and Student Affairs and was chairman of the latter from 1972-76. He formerly served on the Visiting Committee for the Center for International Studies.

Dr. Holland is a corporate director of a number of major com-

(Continued on page 8)

Dr. Holland

Holiday Notice

In observance of the birthday of Dr. Martin Luther King, Jr., which falls on Sunday, Jan. 15, the Institute will be closed on Monday, Jan. 16. The usual pay practices applying to recognized Institute holidays will be in effect.

Deutch to Hold IAP Seminar

Dr. John M. Deutch, director of energy research in the newly created US Department of Energy (DOE), will deliver comments on energy research issues in the US at an Independent Activities Period seminar on Friday, Jan. 13.

"Energy Research Policy in the US" (No. 67), sponsored by the Department of Chemistry, will be held in Rm 6-120 from 4-5:30pm. Members of the MIT community are welcome to attend.

Dr. Deutch, on leave from MIT as professor of chemistry and head of the Department of Chemistry, officially assumed his new post in the Office of Energy Research on Thursday, Dec. 29, 1977. Dr. Deutch was nominated by President Carter in September and confirmed by the US Senate on Tuesday, Dec. 6, 1977. He is the first to hold the position.

LIS Announces Spring Courses

The Lowell Institute School, which offers inexpensive evening courses to technician-level students, has announced its course offerings for the spring term.

Subjects will include drafting, television systems, analog and digital electronics including microprocessors, applied math for electronics, metal joining, machine tools, technical illustration, photography, glassblowing, oral communication and technical and business writing.

Dr. Bruce D. Wedlock, director of LIS, said deadline for submitting applications is Wednesday, Jan. 25. Classes meet for 14 weeks, beginning Monday, Feb. 6, at 6:30pm.

A bulletin containing detailed course descriptions and application may be obtained from the Lowell School office, Rm 5-118, or by calling x3-4895.

J.L. Kinsey Appointed Head Of Chemistry Department

Dr. James L. Kinsey, professor and acting head of the MIT Department of Chemistry, has been named head of the department, effective Jan. 1, 1978, Dr. Robert A. Alberty, Dean of the MIT School of Science, has announced.

Professor Kinsey, an authority in studies of molecular beams and atomic and molecular collisions, succeeds Dr. John M. Deutch, who is on leave from the Institute as the first Director of Energy Research in the newly created US Department of Energy.

Dean Alberty said that "in view of Professor Kinsey's stature in the field of chemistry, the Institute is fortunate that he has accepted the responsibility for the department, especially on such short notice."

Professor Kinsey is a leader of studies of chemical kinetics aimed at determining the kinds of intermolecular forces, reactive processes that reflect variations in the forces, and the forms of reactant energy that are most effective in overcoming barriers to reaction.

Professor Kinsey

Most recently, his research efforts have focused on the use of laser-induced fluorescence and crossed molecular beams to study the reactions of three- or four-atom systems—a detection method that can distinguish individual quantum levels of the molecules and provides a three-dimensional angle-velocity distribution of molecules.

Professor Kinsey served as vice-chairman of the 1972 Gordon Conference on the Dynamics of Molecular Collisions and as chairman of the 1974 conference. He was a visiting staff member from 1974 to 1977 of Los Alamos Scientific Laboratory, to which he is now a consultant. His many publications in his field include important contributions to the understanding of quantum chemistry.

Professor Kinsey has received numerous fellowships and honors. He was a Postdoctoral Southern Fellow in 1958-1959, a National Science Foundation Postdoctoral Fellow in 1959-1960, a Miller Research Fellow at the University of California from 1960 to 1962, an Alfred P. Sloan Fellow from 1964 to 1968, and a John Simon Guggenheim Fellow in 1969-1970.

Born in Paris, Texas, Professor Kinsey received the BA degree in 1956 and the PhD degree in 1959, both from Rice University. He was a postdoctoral fellow at the University of Uppsala, Sweden, in

(Continued on page 8)

TAX CHANGES

F.I.C.A. (SOCIAL SECURITY TAX)

Effective with January, 1978 pay checks the F.I.C.A. deduction has been increased from 5.85 per cent to 6.05 per cent. This deduction will continue with each check until the taxable salary reaches $17,700.00 at which point the total deduction will be $1,070.85. These increases apply both to employees and to MIT's matching amount.

SICK PAY EXCLUSION

The $100 per week sick pay exclusion allowed in previous years is no longer excludable from both Federal and Massachusetts incomes.

For taxable years beginning after December 31, 1976, a maximum exclusion of $100 per week, up to $5,200 per person per year ($10,400 on a joint return) is available only to a person under 65 who has retired on disability and who is *permanently and totally disabled.* This is defined as "unable to engage in any substantial physical activity because of a medically determined physical or mental impairment which can be expected to result in death or can be expected to last for a continuous period of 12 months or more."

The revised exclusion begins to phase out on a dollar-for-dollar basis when a person's "adjusted gross income"—including disability income—is more than $15,000 and completely vanishes when his adjusted gross income is more than $20,200.

Further information may be obtained by requesting Publication 522-Exclusion for Sick Pay or Disability Income from your local Internal Revenue Service Center.

Gallery Talks to Explore Cosmos

By KATHARINE CHILDS JONES
Staff Writer

Human perceptions of the cosmos is the subject of a series of public gallery talks and films to be presented by two artists and a radio astronomer on January 12 and 14.

Charles Ross of New York City, an artist in residence at MIT for several weeks this winter; Lowry Burgess, a Fellow at MIT's Center for Advanced Visual Studies (CAVS), and M. Littleton Meeks, head of radio astronomy operations at MIT's Haystack Observatory, will participate in "The Artist's View of the Cosmos," a project sponsored by the Committee on the Visual Arts for the Institute's Independent Activities Period.

The project was planned as a means of expanding on ideas and issues generated by Mr. Ross's Institute residency and ongoing exhibition in Hayden Gallery. His interest in astronomy and natural light phenomena and their manifestation in his art was the impetus for providing a forum for other artists and scientists at the Institute to exchange ideas and explore areas of common interest.

The first two presentations, planned in conjunction with exhibitions of the artists' works, will include gallery talks and film screenings. At 7:30 and 9:30pm on Thursday, Jan. 12, in the CAVS exhibition room, Lowry Burgess will show *The Quiet Axis: The Inclined Galactic Light Pond, Bamiyan, Afghanistan* (1974, 25 minutes) and talk about the exhibit of his drawings at CAVS. Both the film and the drawings relate to a complex, ten-year project the artist is undertaking which concerns the realignment of the earth with the cosmos.

At 7:30pm on Friday, Jan. 13, in Hayden Gallery, Charles Ross will screen his films *Sunlight Dispersion* (1972, 25 minutes) and *Arisaig, July 10, 1972* (8 minutes). He will also give a gallery talk about "Light Placed," the ongoing Hayden Gallery exhibition of his prisms, solar burns, star space maps and proposed environmental and architectural pieces.

Following a 2pm talk and screening of two computer animated films by Dr. Meeks on Saturday, Jan. 14, in Rm. 3-133, there will be an informal panel discussion with Dr. Meeks, Mr. Burgess and Mr. Ross.

Mr. Burgess' film and drawings are about an implied new axis for the earth extending from Bamiyan, Afghanistan, through the center of the earth to Easter Island. The axis points toward the Large Cloud of Magellan, the galaxy closest to the Milky Way. Mr. Burgess first conceived of the project in 1968 and six years later went to Bamiyan, a high, very dry desert valley in the Hindu Kush, and set 12 holographic plates, one for each month of the year, at specific angles along a mile-and-a-half axis in the earth. When the light at sunrise struck the plates, the surface of a lake in the plane of the galaxy was implied. *The Quiet Axis* records the installation of the work in its historic setting.

Next summer Mr. Burgess plans to complete the project when he goes to Easter Island and places on the ocean floor a crystal globe containing a complex set of substances and images. His drawings, to be on view at CAVS from January 10 to 29, are of both aspects of the project, "The Inclined Galactic Light Pond" and "Garden Into Air."

"My project implies a new set of cosmic relationships," Mr. Burgess said. "Metaphorically, I'm hanging the earth back on the stars."

Charles Ross is interested in making the dynamics of light visible and in projecting a cosmological sense of the world. His film, *Arisaig, July 10, 1972*, is a continuous film of a solar eclipse exposed according to the eye.

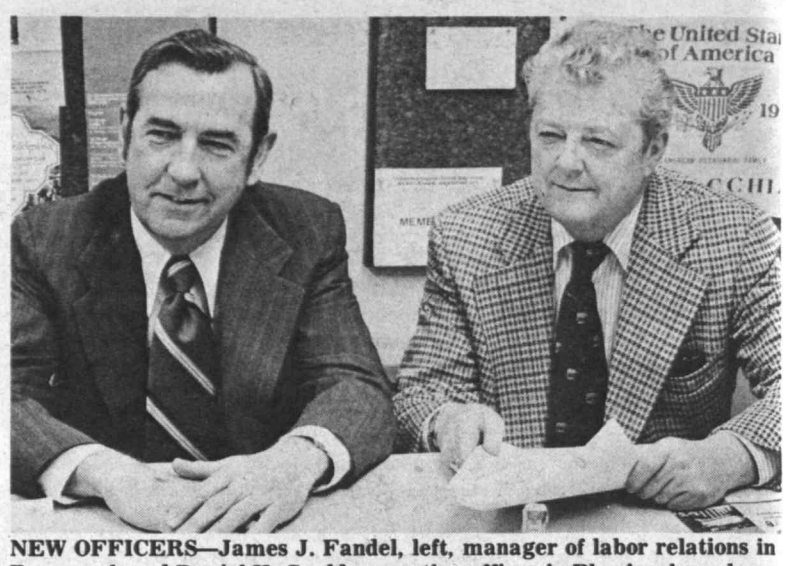
"I tried to adjust the iris of the camera as the iris of the eye responds to light," Mr. Ross said.

His second film, *Sunlight Dispersion*, shows the solar spectrum moving over objects in a room during one day. A stack of prisms at the room's window generated the spectrum. The film was shot at 12 times the actual movement of the light so viewers may see the spectrum moving slowly over objects in the room.

"As the spectrum moves, the different colors completely change the character of the objects," Mr. Ross said. The sound track for the film is the sound track of the sun recorded by radio astronomy at the High Altitude Observatory in Boulder, Colo.

Dr. Meeks works with computer graphics and computer animation to generate models of astronomical systems. He builds computer models from the mathematical data of scientists who have explored specific systems. The resulting films make astronomical information visible.

At the 2pm talk on Saturday, Jan. 14, he will show some computer-generated slides illustrating radio observations of various kinds and two films, *The Motions of Stars* and *Planetary Motion*. These are among the ten films he has made—eight for the Houghton Mifflin Company and two for the Smithsonian National Air and Space Museum in Washington, DC.



NEW OFFICERS—James J. Fandel, left, manager of labor relations in Personnel, and Daniel H. Gould, executive officer in Physics, have been elected vice president and treasurer, respectively, of the Quarter Century Club board of directors. The directors voted recently to divide the former post of vice president and treasurer into two separate offices in view of the increasing activities of the club. The former position was held by the late Joseph F. Lynch, who died last summer.

Cadets Return from Army Trip

Twenty-five MIT Army ROTC cadets will be returning to the campus today, Wed., Jan. 11, after a three-day IAP orientation trip including scheduled stops in New Jersey, Washington, DC, and Maryland.

The Army ROTC IAP Orientation Trip, sponsored by the US Army, began on Monday, Jan. 9, as students left the Institute by bus en route to Ft. Monmouth, NJ. They were accompanied by Major Richard Murphy, information officer for the Army ROTC Program at MIT.

"The Army sponsors this type of field trip every year, usually during Independent Activities Period," Major Murphy said. "It gives our students an opportunity to attend classified briefings, visit the Pentagon, and travel at the same time."

The itinerary for the trip included ample time for sightseeing in addition to planned visits at Electronics Command, Ft. Monmouth; the Directorate of Army Automation at the Pentagon and Harry Diamond Laboratories, Washington, DC, and the Ballistic Research Laboratory, Aberdeen Proving Grounds, Md. The cadets were provided with lodging in Bachelor Officers' Quarters for two nights in Washington.

Forum to Hear Dr. Kistiakowsky

Dr. Vera Kistiakowsky, professor of physics, will be one of the speakers at the Cambridge Forum tonight (Wednesday, Jan. 11), discussing "Science in the Year 2000." Speaking with Professor Kistiakowsky will be Dr. Everett Mendelsohn, professor of the history of science at Harvard.

The Cambridge Forum, open to the public free of charge, meets weekly at 8pm at the First Parish in Cambridge, 3 Church Street.

Seamans Elected

Dr. Robert C. Seamans, Jr., Henry R. Luce Professor of Environment and Public Policy, has been elected to the board of trustees of the Sea Education Association (SEA).

Based in Woods Hole, SEA is an educational institution devoted to teaching liberal arts college undergraduates about the marine environment and heritage.

Echoes

Jan. 8 - Jan. 13

50 Years Ago

Prizes for the musical score and the advertising poster for Tech Show 1928 were awarded respectively to Joseph Murphy '29, and H. Lee Burgess '28.

40 Years Ago

Will B. Jamison '39 was named general manager of the new volume of the Tech Engineering News at the 18th annual banquet of T.E.N. in Hotel Myles Standish. Robert V. Smith '39 was appointed editor-in-chief and Paul B. M. Farwell '39, business manager.

25 Years Ago

The Department of Electrical Engineering will offer a new course, Hearing, Speech and Language, under the direction of Professors Walter A. Rosenblith and Morris Halle. The course will appeal mainly to graduate students but is open to qualified seniors as well.

Work has begun on the rehabilitation of the Engineering Library under the dome of Building 10. The renovation work is part of a long-range plan to reorganize the Institute library system.

Prepared by Marcia Conroy, MIT Historical Collections, x4444.

INSTITUTE NOTICES

Announcements

BSO Open Rehearsals**—Discount tickets for Wed, Jan 25, on sale now at TCA, Stu Ctr Rm W20-450.

February Degree Recipients—Cards enclosed with Feb degree notice must be returned to Rm E19-344 by Jan 20. Indicate whether diplomas are to be mailed, called for in person, & if attendance at commencement June 5, 1978, is planned.

Official Notice—Transcripts of records with first term grades included will be available week of Jan 16, Registrar's Office, Rm E19-335.

Preprofessional Advising—So You Want to Be a Lawyer? (347).** Wed, Jan 11, noon-1:30pm, Rm 1-135, **The Non-Practicing Lawyer.** Bring lunch.

RUNE**—the MIT journal of arts and letters is seeking submissions—poetry, short fiction, essays & graphics—for spring issue. Drop off manuscripts, Rm 14N-305, or send through Institute mail to Rm 50-301. Deadline: Feb 28, 1978. Info: Susan, 566-0030, or Don, 267-6448.

Wives' Group**—A list of international women interested in exchanging conversation in Italian, Japanese, German, Portuguese, Farsi, Chinese, etc., for English conversation is available from the Wives' Group. Contact Karen Devine, x3-2916.

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.

Electronic Systems Laboratory
Investigation of the networking of information retrieval systems. Students will assist in design, programming, testing, or evaluation of an interface on MULTICS computer system. Work may also include analysis of computer and information structures, both hardware and software, which can best provide desired integration of information transfer functions. Some experience with PL/1 programming language, or with MULTICS computer system required.
Contact: Prof: Professor J.F. Reintjes, Rm 35-418, x3-2353, or Mr. Richard S. Marcus, Rm 35-406, x3-2340.

Cellulose Biodegradation
Project involves design and execution of a mutant selection program, in order to help identify extracellular enzymes produced by a bacterium. Work is part of an applied project to increase the production of these enzymes. A student would be welcome to get involved with other aspects of the project as well.
Contact: Rey Gomez, Rm 15-210B, x3-5108.

Cardiovascular Unit: Cell Membrane Permeability Beth Israel
This laboratory is beginning a systematic inquiry into the role of cell membrane "stiffness" as a major determinant of cell volume. Specific projects include: 1) ^{24}Na washout and uptake experiments using slices of guinea pig myocardium and renal cortex treated with ouabain; 2) Comparison of the effect of metabolic blockade and the substitution of K^+ for Na^+ on an ion for ion basis on the rate of swelling of diaphragm and kidney in hypotonic solutions; 3) Effect of stretch and stimulation on myocardial water content and distribution measured with ^3H-inulin, ^3H-mannitol, and ^{51}Cr-EDTA.

Children's Hospital Medical Center Boston
Opportunity exists for a student to do anthropomorphic studies of the human pelvis to determine the x-ray technique of a non-invasive nature to assess the spatial relationships of the hip joint to specific landmarks in the pelvis. This is a very important project, having wide ramifications in the field of orthopedics today. The appropriate student might be a sophomore or junior. Good background in physics and some computer knowledge essential.

Club Notes

MIT Electronics Research Society**—Our computers are up, our scopes are running. IAP is the time to build that electronics project. Lab, Rm 20B-119 is open evenings. Info: x3-2060. Dues, $2. New members welcome.

MIT Figure Skating Club**—MIT Skating Rink, Sun, 11am-1pm. Bring skates. People who skate forwards comfortably and have at least attempted to skate backwards are welcome to meet other skaters and practice their skills.

MIT Go Club*—Regular meetings: Mon & Wed during IAP, 8pm, Rm W20-491. Meeting Wed, Jan 11, Rm W20-473. Go is played, taught. Discussions on strategy, occasional speakers on basic tactics announced in advance. Check *IAP Guide* for additional activities.

MIT Juggling Club*—Juggling practice, all levels. We teach beginners. Sundays, through Jan, 12:30-4pm, Stu Ctr Rm 473, free.

MIT Space Habitat Study Group*—Interdisciplinary discussions of space industrialization, colonization & related issues. Tues & Thurs, 7pm, Marlar Lng (Rm 37-252). Contact: Beverly Bugos, x3-6896.

Religious Activities

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

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

IAP Notices

The numbers in parentheses indicate an IAP activity. For further information consult the IAP Guide or call x3-1668.

Basic Pistol Marksmanship Course** —A.T. Platais, instructor. Thurs, 6:30pm, duPont Pistol Range, $20. To preregister call x8-1419, Draper.

The Office of the Future(385)**—Change of date. As Monday, Jan 16, is a holiday, the lecture series will begin on Tues, Jan 17, with **Office of Automation—Evolution or Revolution.** All other lectures should be moved up accordingly. Info: Marvin, x3-1660.

How to Use the Aeronautics Library as an Information Resource (5)**—Kate Herzog, aero/astro librarian. Tues & Thurs, Jan 10, 12, 10-11:30am, Rm 33-316.

IAP Art Courses**—Student Art Association registration still open for Weekend Pottery Workshop, Photo Sessions & Framing Workshop. Info: x3-7019.

Recital of Works for Viola D'Amore & Harpsichord, Viola & Piano*—Fri, Jan 20, 8pm, Kresge. Violist, Marcus Thompson; pianist, Seth Carlin, and harpsichordist, Maryse Carlin. Sponsored by MIT Music Section. Free.

Rosh Chodesh Marathon in Honor of Women, Nature & Moon (549b)**—sponsored by MIT Hillel. Wed, Jan 18, 7pm, Rm 3-310.

Strat's Rat*—Fridays through IAP, 8:30pm-1am, Lobdell (2nd fl, Stu Ctr). Dancing, live DJ. Beer & wine: .35/glass, 3/$1; wine available by bottle. College ID required. Free.

Tech Organization for Professional Secretaries**—TOPS general discussion meetings Thurs through IAP, noon-1pm, Rm 10-280. Bring lunch.

Vaguely Photographic*—an exhibition of photographic work by five artists: Laura Blacklow, Martha Leinroth, Wendy Richmond, Ruth Schilling, Joel Slayton. Creative Photo Gallery (W31-310), through Thurs, Jan 26. Free.

CABLE TV SCHEDULE X3-3625

January 11 - 17, 1978

Wednesday, Jan. 11
Channel 8:
12-1pm — *USE OF PERFUSED ORGANS FOR METABOLIC STUDIES* by H. Brunengraber. Recorded 12/13/77.

Thursday, Jan. 12
Channel 8:
11:30-1:30pm — *COLLEGE BOWL '77* Produced by MITV.

Friday, Jan. 13
Channel 8:
9am-12noon — *LEGACY OF A DREAM*

Monday, Jan. 16
Channel 8:
12-1:45pm — *SCIENTIFIC SEXISM: FROM FREUD TO SOCIOBIOLOGY* with Freda Salzman. Recorded 11/18/77.

Tuesday, Jan. 17
Channel 8:
12-1pm — *USE OF PERFUSED ORGANS FOR METABOLIC STUDIES* by H. Brunengraber. Recorded 12/13/77.

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Sloan Management Review Winter Issue Due Soon

The Freedom of Information Act as a business tool. . . A look at women MBAs. . . The role of the first-level supervisor. . . A new approach to information systems design. . . The use, or misuse, of inventory models. . . Illegal responses to union organization campaigns. . .

Articles on these and other subjects are included in the soon-to-be-published Winter 1978 issue of the *Sloan Management Review*, the professional management journal of MIT's Alfred P. Sloan School of Management.

In the lead article, "The Freedom of Information Act: Strategic Opportunities and Threats," three scholars from Stanford University note that the FOIA represents a potential management tool to gain competitive advantages, but add that managers must be alert to the "defensive as well as offensive implications" of the act. The authors are David B. Montgomery, professor of marketing and management science at Stanford's Graduate School of Business; Anne H. Peters, a doctoral candidate in organizational behavior at Stanford; and Charles B. Weinberg, associate professor of marketing at Stanford's Graduate School of Business.

Francine E. Gordon and Myra H. Strober, in their article, "Initial Observations on a Pioneer Cohort: 1974 Women MBAs," address a series of questions. Among them: Are women MBAs any more or less likely than their male counterparts to succeed as managers? How do their backgrounds and goals differ, and are these factors likely to create performance and salary differentials between men and women MBAs as their careers progress? Ms. Gordon, general manager of the California Actors Theatre in Los Gatos, holds the PhD from Yale and has been a consultant on the integration of women into management. Ms. Strober is assistant professor of economics at the Stanford University Graduate School of Business.

Researchers from the MIT Sloan School and industry analyze how first-level supervisors see themselves and their subordinates in the article, "The First-Level Supervisor: Still the Man in the Middle." Their study seeks to improve the effectiveness of behavioral science programs of training and organizational change through a better understanding of the beliefs of the first-level supervisor. The authors are James W. Driscoll, assistant professor of industrial relations at the Sloan School; Daniel J. Carroll, Jr., material distribution manager for the Western Electric Company; and Timothy A. Sprecher, general superintendent for the General Motors Assembly Division, Leeds Plant, Kansas City, Mo. Carroll and Sprecher hold SM degrees from the Sloan School

In "The Evolution of an Information System: From Key-Man to Every Person," Henry C. Lucas, Jr., finds that many organizations are experiencing only limited success in implementing computer-based information systems. Lucas, associate professor of computer applications and information systems at the New York University Schools of Business, proposes a new "evolutionary" approach to information system design—one which is more user-oriented (but not necessarily more costly) than the conventional approach.

In "Inventory Models and Management Objectives," Irwin W. Kabak and Allen I. Schiff demonstrate how inventory models can be modified to serve a growing need of managers in the planning process—budget attainment. This is in contrast to the more traditional goal of utilizing the models to maximize expected profit. Kabak is professor of operations research at the New York University Graduate School of Business Administration. Schiff is assistant professor of accounting at Fordham University.

Why would an employer, faced with a union representation campaign, decide to commit unfair labor practices in order to forestall unionization? In "Calculative Strategy Decisions during Union Organization Campaigns," Charles R. Greer and Stanley A. Martin show that under certain conditions it is economically feasible for employers to secure economic gains by violating the National Labor Relations Act. They conclude that the law should be reformed in this regard. Greer is assistant professor of management at Oklahoma State University. Martin is assistant professor of business administration at the University of Wyoming.

In this issue's SMR Forum, two commentators look at the multinational enterprises that have emerged as major economic powers on the world scene.

Stephen J. Kobrin, Ford International Assistant Professor at MIT's Sloan School, bases his comments on *Storm Over the Multinationals: The Real Issues*, a book by Raymond Vernon. Professor Kobrin writes that the conflict between nation-states and the multinationals is only one manifestation of the tension between social, political and economic aspects of society. It is one aspect, he states, of the more universal issue of societal control over its productive institutions.

The comment of Yair Aharoni, professor of management at Tel-Aviv University, is based on *Multinationals from Small Countries*, a book edited by Tamir Agmon and Charles P. Kindleberger. Professor Aharoni writes that international production is not an exclusive domain of the large firm and that a growing number of small firms—many of them from small countries—have swelled the ranks of the multinationals.

Several book reviews and a listing of recent management publications round out the Winter 1978 issue of the *Review*, which is published three times during the academic year and is in its 19th year. The editors for the current issue are Tony Dutra, Lindsay Jo Fried, Mark S. Halperin, John G. Roth, David P. St. Charles and Wayne Zafft. Gay Van Ausdall is the managing editor. Single issues of the *Sloan Management Review* are available for $5 each at the *Review* office, MIT Rm E52-062. Annual subscriptions are $14.

Admissions Office Seeks Volunteers To Read Cases

Admissions director Peter H. Richardson describes application forms to volunteer faculty readers at a meeting in the Emma Rogers Room.

Mounds of mail are piling up in the Admissions Office these days as prospective students file their applications and endorsements.

Although it is too early to forecast with precision, Peter H. Richardson, director of admissions, estimates that final applications will be filed by approximately 4,500 prospective freshmen.

Helping out in the selection process are some 60 members of the faculty who are volunteer readers.

"The input we get from faculty readers plays an important role in determining the nature of each entering class," Mr. Richardson said. "It is one means of assuring that admissions officers clearly understand what kinds of young people the faculty hopes to attract."

Also, Mr. Richardson noted, volunteer readers are welcome for the help they provide in the enormous volume of reading that must be done over the next two months. Each application—or case—must be read by at least two readers, so that having volunteer readers is a significant aid to the admissions staff.

As a rule each case takes 20-30 minutes to read and annotate for the first reader. The second reader usually takes less time and merely makes additional comments. If there is a significant difference of opinion between the first and second readers, the case will be read a third time.

When all of the reading is done in mid-March, the readers will be invited to participate in the final selection process, called round-up, when the decisions are made.

Although this year's reading has already started, additional volunteers are welcome. Orientation sessions are scheduled for new faculty and staff volunteers to acquaint them with the procedures used. Those interested may call x3-4791.

School of Science Names Seven

Dr. Robert A. Alberty, Dean of the MIT School of Science, recently announced the appointment of the following persons to visiting positions at MIT:

Felix E. Browder has been appointed visiting professor of mathematics for four-and-a-half months, effective September 1. He is one of the world's leading authorities on partial differential equations, and is currently Louis Block Professor of Mathematics at the University of Chicago. Dr. Browder received the SB from MIT in 1946, and the PhD from Princeton University in 1948.

Igor Dolgachev, appointed visiting associate professor of mathematics for four-and-a-half months, effective January 16, has been chief researcher at the Institute of Complex Automatization in Moscow, and associate professor at the Moscow Institute of Electronic Engineering. He received the PhD from Moscow State University in 1969.

Moshe Israeli has been appointed visiting associate professor of applied mathematics for nine months, effective September 1. He is currently associate professor in the computer science department at the Technion-Israel Institute of Technology in Haifa, Israel. He was assistant professor of applied mathematics at MIT from 1972-1973, and he received the PhD from MIT in 1971.

Louise A. Raphael, named visiting professor of mathematics for nine months, effective September 1, is associate professor of mathematics at the Atlanta University Center's Clark College, a black college in Atlanta, Georgia. She received the PhD, specializing in functional analysis, from Catholic University, Washington, D.C., in 1967.

Michele F. Vergne has been appointed part-time visiting associate professor of mathematics for nine months, effective September 1. She was a visiting assistant professor at MIT from 1975-1976, and she has done research at the Centre Nationale de la Recherches Scientifique. Dr. Vergne received the Doctorat d'Etat from the University of Paris in 1971.

Barbara A. Underwood was appointed visiting associate professor of nutrition and food science for 10 months, effective September 1. She has been at Pennsylvania State University as associate professor of nutrition and director of the Division of Biological Health in the College of Human Development. Dr. Underwood has done research in many countries around the world, and is a member of numerous organizations dealing with world nutrition problems. She received the PhD from Columbia University in 1962.

Raphael D. Levine has been named visiting professor in chemistry for six months, effective December 1. He is professor at the Hebrew University, and a specialist in the study of molecular collisions. Dr. Levine received the PhD from Nottingham University in 1964, and the DPhil from Oxford University in 1966.

Richard Marvel Is Appointed Benefits Officer

Richard P. Marvel, who has broad experience in the insurance and benefits fields, has been named benefits officer for MIT, effective November 21.

Mr. Marvel will supervise administration of MIT's extensive benefits program and be responsible for the continuing development of benefits policy in collaboration with the Treasurer's office and other concerned offices within MIT. Announcement of his appointment was made by Robert J. Davis, director of personnel relations.

A native of Philadelphia, Mr. Marvel received the BS degree in economics in 1958 from Villanova University. He served as a commissioned officer in the Marine Corps for three years and later was a civilian employee in the Navy nuclear submarine program.

Mr. Marvel

In 1961 Mr. Marvel joined the Insurance Company of North America as a commercial liability specialist and later became an employee benefit consultant for Johnson and Higgins, an international insurance brokerage and employee benefit consulting firm.

Mr. Marvel has been self-employed as a consultant on benefits programs for the past four years.

Mr. Marvel and his wife have three children and live in Scituate where he is active in town government.

Taylor Elected Fellow of SAE

Dr. C. Fayette Taylor, professor of automotive engineering, emeritus, in the Department of Mechanical Engineering, has been honored by the Society of Automotive Engineers through election as an SAE Fellow.

Professor Taylor, who came to MIT in 1926, will be formally cited at the SAE congress and exposition in Detroit next month for his "outstanding career as a researcher, author, and master teacher of internal combustion engine theory and design."

The Sloan Automotive Laboratory at MIT was established by Professor Taylor in the late 1920s and it was there that he pioneered basic research on the internal combustion engine.

The Fellow grade of membership recognizes outstanding engineering accomplishments of SAE members. The grade established in 1976 is awarded to only a limited number of members each year.

Assertiveness Workshop

An Assertive Management Workshop led by DeAnne Rosenberg will be offered by the MIT Women's Forum during IAP beginning on Thursday, Jan. 12, from 11am-12:30pm in the Emma Rogers Room (Rm 10-340).

Ms. Rosenberg, a management consultant and president of her own Boston-based consulting firm, will discuss the principles and practice of assertiveness in three one-and-one-half hour sessions. Participants will learn skills designed to strengthen control in the human relations area.

The workshop is open to the community but enrollment is limited. For registration and further information, contact Brenda Ferriero, Rm 39-411, x3-4102. Subsequent meetings will be held on Wednesdays, Jan. 18 and 25.

Trilling Named Head of CEE

Professor Leon Trilling of the Department of Aeronautics and Astronautics, has been appointed the new head of the Committee on Engineering Education.

He succeeds Professor Kent F. Hansen of the Department of Nuclear Engineering, the first chairman of the committee, who resigned when he was proposed by President Carter for membership on the Nuclear Regulatory Commission. Other vacancies on the committee were created when Professor Ernest G. Cravalho resigned to become deputy head of the new College of Health Sciences, Technology and Management, and Professor Kenneth A. Smith resigned when he was named acting head of the Department of Chemical Engineering.

Named to the committee to fill the vacancies were Professors Norman Jones of the Department of ocean Engineering and Bernhardt J. Wuensch of the Department of Materials Science and Engineering.

Professor Joseph M. Sussman of the Department of Civil Engineering, who succeeded Professor Cravalho as associate dean for education programs of the School of Engineering, has joined the committee as a member ex-officio. Committee members are appointed by the Dean of the School of Engineering.

Other members are Professors Herman A. Haus of the Department of Electrical Engineering and Computer Science, Fred Moavenzadeh of the Department of Civil Engineering and Henry M. Paynter of the Department of Mechanical Engineering.

THE INSTITUTE CALENDAR X3-3270

January 11 through January 22

Events of Special Interest

Present and Future Activities of Harvard-MIT Division of Health Sciences and Technology (420) — Wed, Jan 11,** 2-5pm, Rm 10-250. **The Medical Sciences/MD Curriculum, I.M. London,** Grover Hermann Professor in Health Sciences & Technology; director, Joint Harvard-MIT Division of Health Sciences & Technology. **The Biomedical Engineering Doctoral Programs, Prof L.R. Young,** aero/astro. **The Medical Engineering and Medical Physics/PhD Program, E.G. Cravalho,** Matsushita Professor of Mechanical Engineering in Medicine; associate director, Joint Harvard-MIT Division of Health Sciences and Technology. **Major Research Programs, Prof London.** Following these presentations, Prof London and others will discuss the plans for the new Whitaker College of Health, Sciences, Technology and Management.

The Artist's View of the Cosmos (395) — Committee on the Visual Arts.** Thurs, Jan 12: **The Quiet Axis: The Inclined Galactic Light Pond, Bamiyan, Afghanistan, Lowry Burgess,** CAVS Fellow. Gallery talk, slide and film presentation, 7:30pm, Center for Advanced Visual Studies Gallery (W Jan 13: **Light Placed, Charles Ross,** artist-in-residence. Gallery talk, slide and film presentation, 7:30pm, Hayden Gallery (14W-111). Sat, Jan 14: **Visual Models of Astronomical Systems, Littleton Meeks,** head, radio astronomy operations, Haystack Observatory. Talk, slide and film presentation, 2pm, Rm 3-133. Panel discussion following. Participants include: Littleton Meeks, Lowry Burgess, Charles Ross, and others.

Seminars and Lectures

The numbers in parentheses indicate an IAP activity. For further information consult the *IAP Guide* or call x3-1668.

Wednesday, January 11

Energy Seminar Series (410) — David Wood,** program director, management & economics, Energy Laboratory. **Energy System Modeling Activities of the MIT Energy Laboratory.** 9:30am, Rm 66-144.

Energy and Public Attitudes (245) — Donald Dube,** G. 10am, Rm 24-121.

Gigawatt Relativistic Electron Beams — A Path to Fusion (286) —** Alan Palevsky, John Hansman, Ruth Shefer G. 10am-noon, Rm 26-261.

What Is Human Language? (164) — Prof Ken Hale,** linguistics & philosophy. **Cultural Richness in Language: Two Australian Aboriginal Semantic Traditions,** 10am, Rm 6-120.

Bicycle Repair for Anyone (552a) —** Peter Fiekowsky, U. 11am, Rm 24-612.

Diet Recipe Swap (556) — Imelda Rojak,** Lincoln Laboratory, 1pm, Rm 50-250.

Maximum Likelihood Identification of Linear Dynamic Systems (129a) — N.R. Sandell,** associate professor of systems science and engineering, electrical engineering and computer science. 1-2:30pm, Rm 37-187.

Animal Liberation (270) — M.A. Allen,** G. 2pm, Rm 26-168.

Banach Spaces of Continuous Functions on Compact Metric Spaces (180) — D.E. Alspach,** C.L.E. Moore Instructor, mathematics. 2pm, Rm 2-146.

Highlights of Aeronautics and Astronautics (2) — Rene H. Miller,** H.N. Slater Professor of Flight Transportation; head, department of aeronautics & astronautics. **Energy from Wind and Space,** 2pm, Rm 33-206.

Workshop on Amory Lovins' Proposals for Soft Energy Paths (410a) — Panel Discussion: J.W. Meyer,** Plasma Fusion Center, Energy Laboratory; **M. McKinstry,** nuclear engineering; **C.J. Ryan,** executive director, System Dynamics Group, Sloan School of Management; **W.J. Jones,** research staff, Energy Laboratory. 2pm, Rm 2-143.

Effectiveness of Government Initiatives in Energy Conservation (410) — John Boshier,** research fellow, Energy Laboratory. 2:30pm, Rm 66-144.

Physics Potpourri (293) — Daniel Kleppner,** physics. **The Shape of Atoms,** 3pm, Rm 4-231.

New Technology (448) — Robert Mann,** Uncas A. Whitaker Professor of Biomedical Engineering, mechanical engineering. **Biomedical Engineering,** 3:30-5pm, Rm 33-419.

Mathematical Logic (195) — Gerald E. Sacks,** mathematics. **Recent Work in Transfinite Arithmetic,** 4-5pm, Rm 2-390.

News Writing Seminar (567) — Mark James & David Koretz,** News Editors, *The Tech*. 7:30pm. Rm W20-483.

Darkroom Techniques (530) — Linda Wasko,** artist. Student Art Association. 7:30pm, Stu Ctr Rm 429.

Environmental Issues in Massachusetts (600) —** representatives of Massport, the FAA, MAPNAC, and industry. **Those Deafening Decibels: Aircraft Noise in the Boston Area,** 7:30-9:30pm, Rm 66-110.

MIT — A Student Report (651) — Mark Beaufait,** U, coordinator. Preliminary discussion session, 7:30pm, Rm 8-105.

Thursday, January 12

Non-Nuclear Issues & Technical Aspects of Electric Power Plant Siting (410) — Mary Shaughnessy,** EPA; **W.R. Griffin,** Boston Edison; **David C. White,** Ford Professor of Engineering, electrical engineering & computer science, director Energy Laboratory, moderator. 9:30am, Rm 66-144.

The Kibbutz (342) — Joseph Blasi,** lecturer, Harvard University. **Democracy and Human Affairs.** 10:30am-noon, Rm 7-403.

Developing a Power Plant in Boston (498)* — Edward Lashman, vice president, external projects, Harvard University; **Daniel Partan,** chairman, ad hoc committee, Harvard energy plan; **James Connelly,** Massachusetts energy policy office; **Pat Haner,** neighborhood organizer. 12-2pm, Rm E52-461.

Continued Fractions (185) — Dan Luecking,** C.L.E. Moore Instructor,, mathematics. 2pm, Rm 2-146.

National Science Foundation/Undergraduate Research Program Symposium (257) —** several student speakers. 2pm, Rm 16-134.

Performance of Fluidized Bed Combustion (401) — Prof J. Hodges,** Energy Laboratory visiting scientist. 2pm, Rm 66-144.

What is Philosophy? (272) — James F. Thomson,** linguistics & philosophy. **What is a Theory of Knowledge?** 2pm, Rm 26-168.

Workshop on Amory Lovins' Proposals for Soft Energy Paths (410a) —** Panel discussion. (See Wed, Jan 11, 2pm, for list of participants) 2pm, Rm 2-143.

Physics Potpourri (293) — John D. Joannopoulos,** assistant professor, physics. **Localization and the Nobel Prize,** 3pm, Rm 4-231.

Interior Path Methods for Heuristic Integer Programming Procedures (490) — Dr. Bruce Faaland,** associate professor, University of Washington. **Applications of Operations Research.** 4pm, Rm 24-115.

Reflections on Mechanical Engineering (214) — Henry M. Paynter,** mechanical engineering. **An Engineer Looks at Life,** 4pm, Rm 3-133.

The Answer of Islam to Drug and Alcohol Problems (601) — Ahmad H. Sakr,** director and UN representative of Muslim World League. 6:30pm, Rm 3-270.

How to make Money, Develop Marketing Skills and Have Fun At the Same Time (655) — Peter M. Santeusanio,** business manager of The Beaver. Selling Ads for the Insider's Guide and The Beaver. 7:30pm, Rm 16-139.

Friday, January 13

Energy Seminar Series (410) — David Wood,** program director, management & economics, Energy Laboratory; Prof Edwin Kun. **Independent Assessment Policy: A Case Study,** 9:30am, Rm 66-144.

World Food — A Role for MIT (263) — M. Milner,** associate director, International Nutrition Program. **Food Between Growing and Eating,** 10-11am, Rm 66-110.

What Is Human Language (164) — Samuel J. Keyser,** head, department of linguistics & philosophy. **Phonological Competence: Theory of What People Do When They Speak,** 10am, Rm 6-120.

English Discussion for Foreigners (565f) — Imelda Rojak,** Lincoln Laboratory. 12:30-1:30pm, Rm 50-250.

Studies on the Aortic Acid Lipase* — Dr. Peter Brecher, assistant professor of biochemistry, Boston University Medical School. Arteriosclerosis Center Seminar. 12:30-2pm, Rm E17-421. Bring lunch.

Energy Seminar Series (410) — A. Bar-Cohen,** visiting associate professor; Energy Laboratory. **Fluid Dynamics of Fluidized Bed Combustion,** 2pm, Rm 66-144.

Highlights of Aeronautics and Astronautics (2) — Shaoul Ezekiel,** associate professor, aero/astro & electrical engineering. **How to Measure Almost Anything With Lasers,** 2pm, Rm 33-206.

Seminar in Hemostatic Mechanisms (43) — Prof David F. Waugh,** biology. 2-4pm, Rm 16-310.

What is an Electro-Nuclear Breeder? (254d) — Peter Lam,** Argonne National Laboratory, **Pierre Grand,** Brookhaven National Laboratory, 2-4pm, Rm NW12-222.

Workshop on Amory Lovins' Proposals for Soft Energy Paths (410a) —** Panel discussion. (See Wed, Jan 11, 2pm, for list of participants) 2pm, Rm 2-143.

Physics Potpourri (293) — Bernard Burke,** physics. **Engines — Real and Imagined,** 3pm, Rm 4-231.

Energy Research Policy (67) — Dr. John Deutch,** director of energy research, US Department of Energy. **Energy Research Policy in the US,** 4-5:30pm, Rm 6-120.

Visual Field Narrowing and a New Interpretation — Prof Herschel Leibowitz,** Pennsylvania State University. 4:30pm, 79 Amherst Street, Seminar Room. Coffee at 4:15.

Monday, January 16

What It Takes To Publish A Newspaper (570) —** staff of *The Tech*. 7pm, Rm W20-483.

Tuesday, January 17

Constraints and Challenges: U S Industry in the 1980's (215) — M. Tribus,** director, Center for Advanced Engineering Studies. **Substitution Strategies for the Textile Industry in the 1980's.** 9am, Rm 66-360.

Some Issues in Industry Undertaking Government Sponsored R&D (410) — Dr. Malcolm Weiss,** acting director, center for energy policy research. 9:30am, Rm 66-144.

Textile Systems Containing Formaldehyde Derivatives (215) — H. Zollinger,** visiting prof, mechanical engineering, head Textile Chemistry Laboratory, ETH, Zurich. **Substitution Strategies for the Textile Industry in the 1980s.** 9:45am, Rm 66-360.

Environmental and Safty Analysis of Fusion Reactors (254) — M.S. Kazimi** assistant prof of nuclear engineering. 10am Rm NW12-222.

Recycling Space at MIT (632) —** 10am-12:30pm, Rm 10-105.

Symposium on Mechanical Behavior of Metastable Austenites* — speakers from MIT, University of California at Berkeley, University of Illinois. 10am-5pm, Rm 13-4101.

Substitution Strategies for the Textile Industry in the 1980s (215) — I. Pensa,** technical center, J.P. Stevens Company. **Formaldehyde and its Derivatives in the Garment Industry.** 10:30am, Rm 66-360.

The Kibbutz (342) — Michael Sela,** G. **Planning Aspects and Architecture as a Reflection of Social Ideas,** 10:30am-noon, Rm 7-403.

Unique Aspects of Melt Rhealogy of Block Copolymers — W.P. Gergen,** Shell Company Development. 11am, Rm 8-205.

Substitution Strategies for the Textile Industry in the 1980s (215) — G.C. Tesoro,** adjunct professor, mechanical engineering. **Methods for Cellulose Crosslinking without Formaldehyde Derivatives,** 11:15am, Rm 66-360.

What It Takes to Publish a Newspaper (570) —** staff of *The Tech*. Noon-midnite, Rm W20-483.

Breast Feeding — Connie Bean,** childbirth educator, Medical Dept. Noon, Infirmary, 3rd floor conference room.

NMR and Its Instrumentation (71) — Daniel D. Tranficante,** lecturer, chemistry. 1-4pm, Rm 18-290.

Overview of American Legal Systems (325) — Prof Jeffrey A. Meldman,** Sloan School, **A Brief Introduction to Law.** 1-3pm, Rm E52-143.

Cambridge Cultures — Ideas for Multi-Ethnic Teaching Tutoring (605) — Leslie Linton,** coordinator, Tutoring Plus, 1:30-3:30pm, Rm 5-231.

Substitution Strategies for the Textile Industry in the 1980s (215) — H. Zollinger,** visiting professor, mechanical engineering; head, Textile Chemistry Laboratory, ETH, Zurich. **Kinetics & Equilibria of Reactions Involving Formaldehyde,** 1:30pm, Rm 66-360.

Highlights of Aeronautics and Astronautics (2) — Charles M. Oman,** associate professor, aero/astro. **Dealing with Motion Sickness in Space Shuttle Operations,** 2pm, Rm 33-206.

What is Philosophy? (272) — Prof Judith Thompson,** philosophy. **What is Metaphysics,** 2pm, Rm 26-168.

Workshop in Amory Lovins' Proposals for Soft Energy Paths (410a) —** Panel Discussion. (See Wed, Jan 11, 2pm, for list of participants) 2pm, Rm 2-143.

Energy Options and Choices (410) — Prof Robert Seamans,** former administrator of ERDA. 2:30pm, Rm 66-144.

Engineering Internship Program (501) — Prof J.M. Sussman,** civil engineering; associate dean for education programs, School of Engineering. **Engineering Internship Program,** 2:30pm, Rm 1-246.

Substitution Strategies for the Textile Industry in the 1980s (215) — H. Zollinger,** visiting professor, mechanical engineering; head, textile chemistry, ETH, Zurich. **Analytical Methods and Toxicology of Formaldehyde and its Derivatives,** 2:30pm, Rm 66-230.

Physics Potpourri (293) —** Ulrich Becker, associate professor, physics. **Nature, Photons & Heavy Photons,** 3pm, Rm 4-231.

How Many Nursing Homes Are Enough? (491) — Prof Thomas Willemain,** urban studies & planning, **Topics in Operations Research.** 4pm, Rm 24-115.

Reflections on Mechanical Engineering (214) — Prof Ernest Rabinowicz,** mechanical engineering. **Wear, Oh Wear!** 4pm, Rm 3-133.

Human Rights in Islam (601)* — Wagar Hamdani, advisor to the Muslim World League. **Islam in Perspective.** 6:30pm, Rm 3-270.

Space Industrialization and Colonization (308) — Peter Glazer,** vice president, engineering sciences, Arthur D. Little, Inc. **Satellite Solar Power Stations & Energy Options.** 7pm, Rm 37-252.

How to Do It — Environmentally! (561) —** representatives of Cambridge Food Co-op, Oxfam, CARE, Science for the People, and others. **Ecological Eating,** 7:30-9:30pm, Rm 66-110.

Wednesday, January 18

Substitition Strategies for the Textile Industry in the 1980s (215) — G.C. Tesoro,** adjunct prof, mechanical engineering, 9am, Rm 66-360.

Legal Mechanisms in the Implementation of Energy Policy (410) — Drew Bottaro,** sponsored research technical staff, Energy Laboratory. 9:30am, Rm 66-144.

Recycling Space at MIT (632) —** 10am-12:30pm, Rm 10-105.

Substitution Strategies for the Textile Industry in the 1980s (215) — Stanley Backer,** mechanical engineering, fibers and polymers lab, The **Question of Fire Hazard, Apparel and Furnishings,** 10am, Rm 66-360.

The Why and How of MIT's X-Ray Astronomy Satellite SAS-3 (394) — W. Mayer,** Center for Space Research, **C. Canizares,** assistant professor, physics. 10am, Rm 37-571.

Bicycles in the Real World (552a) — Peter Fiekowsky,** U. **Bicycle Dynamics: How Fast Can a Bike Go?** 11am, Rm 24-612.

Substitution Strategies for the Textile Industry in the 1980s (215) — G.C. Tesoro,** adjunct professor; mechanical engineering **TRIS in Context: a Case History.** 11am, Rm 66-360.

Lasers for Poets (510) — Mike Burns,** G. 11:45am-1:15pm, Rm 8-302.

Cells in Motion (41) — Prof Eugene Bell,** biology. noon, Rm 9-150.

Mathematics of Galaxies and Plasmas (199) — C.C. Lin,** Institute Professor, mathematics. Noon-1:30pm, Rm 2-390.

Transcendental Meditation (638) — Leader, I. Rojak,** Lincoln Laboratory. **Transcendental Meditation Discussion for Those Who Practice TM Technique,** noon, Rm 50-250.

Legal Advocacy and Legal Research (325) — Prof Jeffrey A. Meldman,** Sloan School, **A Brief Introduction to Law,** film **"Case in Point."** 1-3pm, Rm E52-143.

Substitution Strategies for the Textile Industry in the 1980s (215) — C. Huggett,** Center for Fire Research, National Bureau of Standards. **What of the Future for Flame Resistant Textiles and the Fire Problem.** 1:30, Rm 66-360.

Can We Plan Ourselves Out of the Energy Crisis? (410) — Prof Ben Ball,** adjunct professor, management & engineering, Energy Laboratory. 2pm, Rm 148.

Combined Gas Turbine-Steam Turbine Power Plants (410) — Richard F. Topping** sponsored research technical staff, Energy Laboratory. 2pm, Rm 66-144.

Highlights of Aeronautics and Astronautics (2) — Jack L. Kerrebrock,** Richard Cockburn Maclaurin Professor of Aeronautics & Astronautics, **Shock Structure in Transonic Compressor Rotors,** 2pm, Rm 33-206.

Methodology For Learning Languages (211) — Frans Van Dyck,** mechanical engineering, 2pm, Rm 3-446.

Taking Molecules Apart & Putting Them Together With Photons (73) — Prof J. Steinfeld,** 2pm, Rm 6-233.

The Water Permeability of Human Erythrocyte in the Temperature Range (+25C to -10C) — Thomas H. Papanek,** doctoral thesis presentation, mechanical engineering. 2pm, Rm 37-212, coffee and brownies served prior to presentation.

Workshop on Amory Lovins' Proposals for Soft Energy Paths (410a) —** Panel discussion. (See Wed, Jan 11, 2pm, for list of participants) 2pm, Rm 2-143.

Substitution Strategies for the Textile Industry in the 1980s (215) — G.C. Tesoro,** ajunct professor, mechanical engineering. **Chemical Approaches for Flame Retardants in the 1980s.** 2:30pm, Rm 66-360.

Physics Potpourri (293) — Prof David Frisch,** physics, **Devices for Intravasal Male Fertility Control,** 3pm, Rm 4-231.

...Technology (448)** — **Albert Hopking,** Draper Laboratory, **Ultra-...liable Computers and Avionics,** 3:30-5pm, Rm 33-419.

...vironmental Issues in Massachusetts (600)** — Representatives of the ...te CZM Office, Sierra Club, **Coastal Zone Management in Mas-...chusetts,** 7:30-9pm, Rm 66-110.

...oto Sessions (530)** — Student Art Association. **Linda Wasko,** artist, ...udio **Lighting,** 7:30pm, Rm W20-429.

Thursday, January 19

...bstitution Strategies for the Textile Industry in the 1980s (215) — **H. ...llinger,** visiting professor, mechanical engineering, Head, Textile ...emistry Laboratory, ETH, Zurich. **Chemical and Optical Characteriza-...n of Effluents for Dyehouses.** 9am, Rm 66-360.

...ergy Modeling for Policy Analysis (410)** — **Esteban Hnyilicza,** spon-...ed research technical staff, Energy Laboratory. 9:30am, Rm 66-144.

...bstitution Strategies for the Textile Industry in the 1980s (215)** — **C. ...bouten,** Sandoz Company. **Low Liquor Dyeing.** 10am, Rm 66-360.

...bing Condensed Matter with Neutrons (251)** — **Prof Sidney Yip,** ...clear engineering. 10am, Rm 24-115.

...cycling Space at MIT (632)** — 10am-12:30pm, Rm 10-105.

...e Kibbutz (342)** — **Joseph Shepher,** Prof of Sociology & Anthropology, ...ifa University Israel. **Family and Familism, The Story of Non-Captive ...ves.** 10:30am-noon, Rm 7-403.

...bstitution Strategies for the Textile Industry in the 1980s (215)** — ... **Zollinger,** visiting professor, mechanical engineering, Head, Textile ...emistry Laboratory, ETH, Zurich. **Elimination of Dyes from Effluents ... Physicochemical, Chemical, and Microbiological Methods,** 10:45am, ...m 66-360.

...bstitution Strategies for the Textile Industry in the 1980s (215)** — ... **Zollinger,** visiting professor, mechanical engineering, Head, Textile ...emistry Laboratory, ETH, Zurich. **Chromium Ions in Effluents from ...fordant Dyeing.** 11:30am, Rm 66-360.

...rt Classes (530)** — Student Art Association. **Lista Duren,** author of ...me It, 12-1pm, Rm W20-429.

...ass **Transit in Boston (498)*** — meet with staff at MBTA, 12-4pm, Rm ...53-482.

...iminal **Law (325)** — Prof Sanford J. Fox,** Boston College Law School, ... **Brief Introduction To Law.** 1-3pm, Rm E52-143.

...surance — **Life, Car, Property (399)** — Various Insurance Experts, ...surance and You.** 1-3pm, Rm 10-250.

...bstitution Strategies for the Textile Industry in the 1980s (215)** — ...G. Klein, director, K and S Laboratories, **Static Electricity, Its Cause ...d Control — An Engineer's Approach,** 1:30pm, Rm 66-360.

...missions of Nitrogen Oxides in Fossil Fuel Combustion (410)** — **Joel ...evy,** sponsored research technical staff, Energy Laboratory, 2pm, Rm 66-...44.

...ighlights of Aeronautics and Astronautics (2)** — **Charles W. ...aldeman,** aero/astro, **Magnetic Levitation,** 2pm, Rm 33-206.

...hat is **Philosophy? (272)** — Prof Irving Singer,** philosophy & ...guistics, **What is Aesthetics?** 2pm, Rm 26-168.

...orkshop on Amory Lovins' Proposals of Soft Energy Paths (410a)** — ...anel discussion. (See Wed, Jan 11, 2pm, for list of participants) 2pm, Rm ...143.

... Chemist's Approach to Elimination of Static Electricity (215)** — ...C. Tesoro,** Adjunct Prof, mechanical engineering. **Substitution ...rategies for the Textile Industry of the 1980s.** 2:15pm, Rm 66-360.

...itical Phenomena in a Rat Lens (293)** — Toyoichi Tanaka,** assistant ...ofessor, physics. 3pm, Rm 4-231.

...ap-Bubble Carnival (191)** — **Frank Morgan,** C.L.E. Moore Instruc-...r, mathematics, **Math and Magic,** 3pm, Rm 66-110.

...bstitution Strategies for the Textile Industry in the 1980s (215)** — ...C. Tesoro,** adjunct professor, mechanical engineering **Soiling Tenden-...es in Textiles — Dry Dirt, Oily Dirt,** 3pm, Rm 66-360.

...il Removal: **Mechanisms of Washing, Finishes Affecting Soil Release ...215)** — S. Goldwasser,** Consultant. **Substitution Strategies for the ...extile Industry in the 1980s.** 3:45pm, Rm 66-360.

...ediction **Problems with Loss Structure Considerations (490)** — Prof ...aul Berger,** management science, Boston University, **Applications of ...erations Research.** 4pm, Rm 24-115.

...ogress in Recombinant DNA(382)** — Phillip A. Sharp,** associate ...ofessor, biology. 4pm, Rm E17-614.

...flections on Mechanical Engineering (214)** — Carl R. Peterson,** as-...ciate professor, mechanical engineering, **Mining: or Mechanical ...gineering in Depth,** 4pm, Rm 3-133.

...lamic **Law and Morality (601)* — Muddassir H. Siddigui,** religion ...rector of Islamic center of New England. **Islam in Perspective.** 6:30pm, ...m 3-270.

...ducation and the Foreign Student: **The Relevancy of Professional ...raining with Respect to Social Issues (602)** — Discussion and film, ...ve students to speak. **Role of the Professional in International Develop-...ent.** 7:30pm, Rm 14E-304.

Friday, January 20

...bstitution Strategies for the Textile Industry in the 1980s (215)** — ... **Bolling,** economics division, National Cotton Council, Memphis, Ten-...ssee. **Energy Requirements for All Cotton Fabrics.** 9am, Rm 66-360.

...ergy Seminar Series (410)** — Betty Woody, Energy Issues and ...eeds of the Cities.** 9:30am, Rm 66-144.

...bstitution Strategies for the Textile Industry in the 1980s (215)** — L. ...an Winkel, Rev,** associate professor of chemical engineering, Catholic ...niversity, Washington, D.C. **Energy Requirement for Synthetic Tex-...les.** 10am, Rm 66-360.

...bstitution Strategies for the Textile Industry in the 1980s (215)** — ...J. Sarjeant,** research director, WESTVACO Corporation, **Material ...imitations in the 1980s — Renewable Resources,** 11am, Rm 66-360.

...bstitution Strategies for the Textile Industry in 1980s (215)** — E.N. ...rightbill,** Energy and Materials department, E.I. Du Pont Co. **Material ...imiatations in the 1980s — Non-Renewable Resources.** 11:45am, Rm 66-...360.

...perconductivity — **Materials Development for Large Scale Practical ...pplications (297)** — Rene Flukinger,** visiting scientist, materials ...ience & engineering. **Theoretical Basis of Order-Disorder Phenomena ... Promising Alloy Systems,** noon-2pm, Rm 4-145.

...glish Discussion for Foreigners (565f)** — Discussion Leader: **I. Ro-...k,** Lincoln Laboratory, 12:30-1:30pm, Rm 50-250.

A Brief Introduction to Law (325) — Joseph F. Vittek, Jr.,** professor, Pierce Law Center. **Tort Law,** 1-3pm, Rm E52-143.

Substitution Strategies for the Textile Industry in the 1980s (215) — R. Goldman,** Head, Ergonomics Laboratory, US Army Laboratory, Natick. **Physiology of Comfort,** 1:30pm Rm 66-360.

Corrosion in Gas Turbines (410) — Michael McNallan,** research associate, Energy Laboratory. 2pm, Rm 66-144.

Highlights of Aeronautics and Astronautics (2) — Prof Wallace E. Vander Velde,** aero/astro, **Stabilizing the Image Seen By a Moving Camera,** 2pm, Rm 33-206.

Workshop on Amory Lovins' Propoals for Soft Energy Paths (410a) —** Panel discussion. (See Wed, Jan 11, 2pm, for list of participants) 2pm, Rm 2-143.

Substitution Strategies for the Textile Industry in the 1980s (215) — S. Backer,** mechanical engineering, Fibers & Polymers Laboratories. **Fabrics, Clothing and Comfort.** 2:15pm, Rm 66-360.

Physics Potpourri (293) — Bruce R. Patton,** assistant professor, physics. **Liquid Crystals — The Fifty States of Matter,** 3pm, Rm 4-231.

Substitution Strategies for the Textile Industry in the 1980s (215) — R. Goldman,** head, Ergonomics Laboratory, US Army laboratories, Natick **Comfort in the 1980s — Physiological Aspects,** 3pm, Rm 66-360.

Substitution Strategies for the Textile Industry in the 1980s (215) — S. Backer,** Mechanical Engineering, Fibers & Polymers Laboratories. **Comfort in the 1980s — Materials Aspects.** 3:45pm, Rm 66-360.

Saturday, January 21

Weekend Pottery Workshop (530) — Student Art Association. **David Davison,** professional potter & instructor, **Visual Language Slides: Sources for a Modern Potter,** 7-9pm, Rm W20-429.

Community Meetings

The Insider's Guide to MIT, Wellesley & Simmons (539a, 574c, 655) —** staff of The Beaver. What will the Beaver do next? Thurs, Jan 12, 10-11pm, ATO House, 405 Memorial Dr. Meet the editors and hear plans for next term.

A Visit to the Mass Public Health Labs (50) — Fri, Jan 13, 9am, Rm 16-535.

Understanding the Massachusetts Legislature (498)* — field trip to the State House. Tues, Jan 17, noon-4pm, Rm E53-482.

The Tech Lodge** — Regular communication of Richard C. Maclaurin Lodge AF & AM. Wed, Jan 18, Masonic Temple, 1950 Mass Ave, Cambridge, Opening 7pm, Regular meeting, 7:15pm. Master Masons Welcome.

Movies

Apollo 12 — Pinpoint for Science (1) — AIAA Aerospace film. Wed, Jan 11, noon, Rm 35-225.

Apollo 13 — Houston, We've Got a Problem (1) — AIAA Aerospace film. Wed, Jan 11, 12:30pm, Rm 35-225.

Great Conservation Principles (284) — Feynman Lectures on Physics. Wed, Jan 11, 1pm, Rm 26-100.

THX 1138** — LSC Movie. Wed, Jan 11, 7 & 9:30pm, Rm 10-250. Admission 75¢ w/MIT or Wellesley ID.

Apollo 14 — Mission to Fra Mauro (1) — AIAA Aerospace film. Thurs, Jan 12, noon, Rm 35-225.

The Second Pollution (608) — Ecology films. Thurs, Jan 12 noon-1:30pm, Rm 8-105.

Apollo 15 — On the Mountains of the Moon (1) — AIAA Aerospace film. Thurs, Jan 12, 12:30pm, Rm 35-225.

Symmetry and Physical Laws (284) — Feynman Lectures on Physics. Thurs, Jan 12, 1pm, Rm 26-100.

Shadow Catcher (152) — Native American Film Festival. Thurs, Jan 12, 7:30pm, Rm 66-110.

Apollo 16 — Nothing So Hidden (1) — AIAA Aerospace film. Fri, Jan 13, noon, Rm 35-225.

Apollo 17 — On the Shoulders of Giants (1) — AIAA Aerospace film. Fri, Jan 13, 12:30pm, Rm 35-225.

Distinction of Past and Future (284) — Feynman Lectures on Physics. Fri, Jan 13, 1pm, Rm 26-100.

Love & Death** — LSC Movie. Fri, Jan 13, 7 & 9:30pm, Rm 26-100. Admission 75¢ w/MIT or Wellesley ID.

Man with the Golden Gun** — LSC Movie. Sat, Jan 14, 7 & 10pm, Rm 26-100. Admission 75¢ w/MIT or Wellesley ID.

The Gold Rush** — LSC Movie. Sun, Jan 15, 7 & 9:30pm, Rm 10-250. Admission 75¢ w/MIT or Wellesley ID.

Man in Space — The Second Decade (1) — AIAA Aerospace film. Tues, Jan 17, 12:30pm, Rm 35-225.

Skylab (1) — AIAA Aerospace film. Tues, Jan 17, noon, Rm 35-225.

The Great Clean Up (608) — Ecology Films. Tues, Jan 17, 12-1:30pm, Rm 8-105.

Oceanography (96) — A Collection of Short Films Dealing with Oceanography,** Tues, Jan 17, 2-4pm, Rm 54-425.

Gumshanha (Video tape) (604) — Understanding China, Tues, Jan 17, 7:30pm, Rm 4-270.

Nuclear and Alernative Energy Film Festival (249) — Nuclear and Alternative Energy Film Festival Tues, Jan 17, 7:30pm, Rm 9-150.

Skylab — The First 40 Days (1) — AIAA Aerospace film. Wed, Jan 18, noon, Rm 35-225.

A Man's Reach Should Exceed His Grasp (1) — AIAA Aerospace film. Wed, Jan 18, 12:30pm, Rm 35-225.

Seeking New Laws (284) — Feynman Lectures on Physics.** Wed, Jan 18, 1pm, Rm 26-100.

This is Ben Shawn (17 minutes) **Marc Chagall** (26 minutes) **(530)** — Art Classes/Student Art Associates, Wed, Jan 18, 5:15pm, Rm W20-429.

Death Be Not Loud (608) — Ecology Films. Thur, Jan 19, 12-1:30pm, Rm 8-105.

Skylab — The Second Manned Mission — A Scientific Harvest(1)** — AIAA Aerospace film. Thur, Jan 19, noon, Rm 35-225.

New View of Space (1) — AIAA Aerospace film. Thur, Jan 19, 12:30, Rm 35-225.

Oceanography (96) — A Collection of Short Films dealing with Oceanography, Thur, Jan 19, 2-4pm, Rm 54-425.

Dineth — The People (152) Native American Film Festival. Thur, Jan 19, 7:30pm, Rm 66-110.

Skylab — 4 Rooms, Earth View (1) — AIAA Aerospace film. Fri, Jan 20, noon, Rm 35-225.

The Age of Space Transportation (1) — AIAA Aerospace film. Fri, Jan 20, 12:30, Rm 35-225.

Music

The Erdely Duo* — Fri, Jan 13, 8pm, Kresge. Pianist, Beatrice Erdely, and violinist, Stephen Erdely, will perform Sonatas by Mozart. Free. Info: x3-2906.

Exhibitions

Light Placed* — An exhibition of Prisms, Solar Burns, Star Maps & Environmental Projects by Charles Ross. Sponsored by the MIT Committee on the Visual Arts. Thru Sat, Jan 14, Mon thru Sat, 10am-4pm, Hayden Gallery.

The Compton Years* — A photographic essay of the lives of Dr. & Mrs. Karl Taylor Compton. Thru Wed, Feb 8, Mon-Fri, 9am-5pm, Margaret Hutchinson Compton Gallery, Rm 10-150. Designed by Historical Collections.

Unfinished Works* — Music Library, Rm 14E-109. Examples of unfinished musical compositions from Bach to Bartok.

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.**

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

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

Athletics

Home Schedule* — Thurs, Jan 12: W V Basketball, Gordon, 7pm, Rockwell Cage. **Sat, Jan 14: M V Basketball,** N.J. Tech, 8:15pm, Rockwell Cage; **V Hockey,** Clark, 7pm, Rink; **V Track,** Williams, 1pm, Rockwell Cage; **V Wrestling,** Coastguard & Harvard, 2pm, duPont Gym; **JV Wrestling,** Coast Guard, 3:30pm, duPont Gym.

Theatre

Love's Labor's Lost — Shakespeare Ensemble,** Thur-Sat, Jan 12-14, 8pm, Sala de Puerto Rico, Stu Ctr. Tickets on sale in lobby Bldg 10, 11-3pm or at the door.

Design of Theaters** — Mon, Jan 16, Ritual and Ruin: Toward a New Theater Form, slide show. 1pm, Rm 7-403.

Indonesian Shadow Puppet Play (578) — Elisabeth Van Paradijs-Soenarjati. Wed, Jan 18, 8pm, Stu Ctr Mezzanine Lounge.

Dance

Ballroom Dancing (658) — Andy Szilagyi** G. Regular meetings, Sun and Tues, 4-6pm, Burton Dining Hall. Introductory and Intermediate.

MIT Folk Dance Club — International: Sun, 7:30-11pm, Sala. **Balkan:** Tues, 7:30-11pm, Stu Ctr Rm 491. **Informal**: Fri, 12n-2pm, Kresge Oval (Bldg 7 Lobby in bad weather). **Israeli**: Wed, 7:30-11pm, Sala.

MIT Dance Workshop* — Classes taught by Beth Soll. **Modern Technique**, Wed, 6-7:30pm, W31-125; **Independent Student Work**, Wed, 7:30-9pm, W31-125. **Modern Technique**, Mon, 5:15-6:45pm, W31-225; **Improvisation/Composition**, Mon, 7-8:30pm, W31-225.

Hatha Yoga I (625) — Cynthia Friedman,** civil engineering. Tues, 11:30am, Rm 10-340.

Indonesian Court Dances (578) — Elizabeth Van Paradijs-Soenarjati,** Boston. Wed, Jan 11, 8pm, Stu Ctr Mezzanine Lng.

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 Jan 18 through Jan 29 to Calendar Editor, Rm 7-102, x3-2701, before noon, Friday Jan 13.

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. Only Institute extensions may be listed. Members of the community who have no extensions may submit ads by coming in person to the *Tech Talk* office, Room 7-102, and presenting Institute Identification. Ads may be telephoned to Ext. 3-2701 or mailed to Room 7-102. **Please submit all ads before noon, Friday, Jan 13. They will be printed on a first come first serve basis as space permits.**

For Sale, Etc.

Mdrn bdrm set, twin bd/ bureau & mrr, chest of drw $200; wool rug & mat 8 x 11, blue geo desgn, exc cond $75; tbl lamp $10; 3 way fl lamp $25; 4 snack tbls $15, Call 625-4574.

GE refrig, gd wk cond, $75 or best. Frances x3-4435.

Hndmd stuffed animals $15; baby quilt $30; wlnt wooden strg chest w/ green padded top $15; Creative Plythngs dbl-sided chalk brd $15; Tonka cemnt mxr $5, Willie x5536 Linc.

Bd mat & bx sprg yr ½ old, gd cond $25; lg org & gold rug, 3 mo, exc cond $70 or best. Call 494-8259.

Pr recap snows, $15; 14" Chevy wheels $8 ea. Lee x485 Linc.

Ice skates sz 8½, used 2X, call 494-0073 eves.

Elec waffle iron $10, Dan x7506 Linc.

Baby strllr ½ yr old $15, call 492-0946.

Snows, pr, C78-13; one 165 SR 13 snow, $20 ea, exc cond. Call 492-5369, eves.

Snows, pr Mich stl belt, 215-15 (HR78-15) $25 ea, Howard x5860 Linc.

Solid oak hnd-md coat rck $39; plnt stnd $29, Joe x3-3354.

DR ptio tbl & 4 chrs $140; Bolenes Lawn mwr $100; Frigidaire refrig, 15 cu ft $240; 200 yr old Gyspy Pot, $50. Ronald x8-4655 Draper.

Kenmore washr, 14 lb capty/ 3 cycle/ 3 temp/ 3 water lvl, gd cond $60. Don x3-3165.

Elec guitar, gd cond, $50. Michael x3-5791.

Revere 2 qt kttle, almost nw, $10. Diane x3-4737.

Dual PE trntbl, base, dstcvr, nw crtdg $60; nw 8 trck plyr $25; Akai, CS-csstt rcrd w/Dolby, cross 2 swtch $95. Call 661-8857.

Zenith 19" B&W prtbl TV, wks well, $35. Call 926-5784.

Bed matt & box spr, $50; desk w/drws, $25; bks-tand, $20; sm radio, $15; 3 lamps, $2 ea; 10-spd bike, exc cond, $75; 3-spd bike, $25; maxi shpskin coat, m or f, $100. Rene, x3-1539.

Nikon 205 mm lns, exc cond w/skylight filter, $175. or best. Call 391-3368 aft 4pm.

Daoust Hcky skts, Pro Styl sz 10, $20. Call 782-0710.

Mdrn sfa bed yr old, $100 or best. Call 494-8739.

Jade brclts, (3) 2 1/16" inner dia, $60 ea or best. Ho x3-7352.

Sunbeam Elec Snow Blwr, exc cond, $60. Dick x358 Linc.

Snows, C7814 used seas, $30. Dick Clark x7732 Linc.

Pr Sears/Michelin JR78-15 snows $40; Rim, 15x6, Sears No.10403C, $5. Hal x5809 Linc.

Pr snows 695x14 $25; pr C78x13 $15; one A78x13 on Pinto rim $8, Murray x3-7239.

Ski rack w/ lock,-gd cond, $20. Call 449-3977 eves.

Wash mach, used 2X, $55, Angela x3-4303.

Viking 26" snow blower, 6hp, 2 stg, oper cond, $60. Alan, x3-4284.

Solid wd din tbl, 42x60", leaf, 4 mtch chrs, $85. Call 354-6349 evgs.

Baby crib w/matt, exc cond, $35; fl sz bed w/matt, $50; tbl for 6, $20. Call 494-8209.

Pine 6-drw desk, exc cond, $25; 3x4' bkcase, nrly new; fl sz matt & frame, $15; (4) 2x5'x4" foam cushions; Shick 650w hair dryer, $5; Sony hdphones, $5. Bahram, x3-1409.

Bike, 10 spd, lk new, $75; 35mm enlarger, $50; fl mdl sun lamp, $35; Sears viewsaver air cond, 600-0BTU, $100. Dennis, x3-5845.

IBM exec typwr, recond in Nov, $150, nego. Eric x3-2501.

Ignis 30 3.2 cu ft refrig, $80; Toastmstr br-oven, $28; hot pl, $7; all 3 mos old, mint cond. Call 262-6079 evgs.

Adlt tricycle nw, for shop, $140. Howard x3-7755.

B hockey skates, sz 3 exc cond; X county ski boots W sz 5, B sz 4-5, exc cond, $10 ea. Pete x7284 Linc.

Vehicles

'63 Chevy Nova, well main, pwr st & br, auto, nw slip cover, best. Connie x3-1316.

'64 Olds, exc cond, $175, Jake x478 Draper.

'66 VW sq bk 66K, nds some eng wk, gd rubr, asking $100. Bill 3-3936.

'67 Dodge Valiant 73K, reliable car, $400. Frank x3-6814.

'68 Ply wg, pw st, radio, auto trsmssn, gd mech cond, body fair, $450 or best. x4475 Draper.

'68 Blue Valiant, 4 dr, 225 cu, 28 mpg, 85K, v w maint, very reliable, avail March 1, $750. Bernie x3-7221 Linc.

'69 Scout, 4 wheel drv, runs well $2,000. Ron x2818 Draper.

'69 Firebird, V-8, auto, pw br & st, runs wl, exc body, 101K, $50. x7434 Linc.

'70 Chevy, gd transpt, $500, Joe x464 Draper.

'70 Delta 88, 61.5 K, nw br, nw bttry, nw frt end & shcks, AM/FM stereo, AC, pw st & br, snows, gd cond $1,200. Marian x3-5251.

'71 Chevy Van, G-20 long whl bs, metallic bronze, mags, s b radials, interior carptd, insltd, panlld, bed, dual exh, rf rck, swvl seats, make offer, Gary x3-7006.

'71 AMC Gremlin, 6 cyl, std, gd body, gd tires, no rust, $750. Mick x3-5250.

'71 VW w/snows, exc cond, $1,275. Call 846-5513.

'71 Olds, pwr st & br, snows, 60K, exc cond, $1,775 or best. Helen x8-3501 Draper.

'72 Chevy Nova, 4 dr, rdio, p st, snows, gd cond, ask $700, Call 263-2093 aft 6pm.

'73 Audi 100 LS, red, 20K on reblt eng, Mich tires, nw brks, great car, $2,300 or best. John 659-4275.

'73 Buick Century Regal, auto, p st & br, AC, AM/FM, 50K, yel w/brwn vinyl roof, tires, runs exc, $2,300. John x3-2772.

'75 Honda Civic CVCC htchbk, green, 4 spd, AM/FM csstt, $2,500. x4334.

'76 TR7 Coupe, air cond, AM/FM, low mlg, $4,500 or best. Linda, x304 Linc.

'76 Ply Volare, AM/FM, radial, 2 dr, 15K, mint cond, $3,400 or best. Irwin x3-2239.

'77 Chevy pck up, 3K, wrrnty, 4 sp std, 4 cyl eng, 2 mtd snows, asking $3,800. Barbara Battino x5337 Linc.

Housing

Bedford, 2 BR ranch dplx, avail Feb 1, fl bsmt, convenient to base & lab, $260 + utils. x650 Linc.

Belmnt Hill, lg 10x18 furnish rm in bsmt in beautifl hm, park, non smk. Call 484-6833.

Brk, studio apt w/K & tile B, Fairbanks St, sublet, $183. Wally, x3-7805, lv msg.

Brk, spr sublet, Feb 1-May 31, $60/mo nr BU bridge. x3-6550 8-9pm.

Brk, 4 rm apt, nw K, $225. all utils w/ ww, mdrn B, T, Esther x3-5126.

East Arl, apt, 5 rm, no lease rqrd, avail immed til Sept, $260 unhtd. Mary Papas, 646-7508, aft 5pm.

Malden, Linden Sq area, child safe st, 6 mod rms, ww, lg K, master BR, B, 3 or 4BR, $35,000 firm. Barbara, x3-2710.

Revere, sublet, Feb-Mar, 2 BR apt, 1st fl, ww, dw, ht, off st pkg, chldrn ok, $300 or less, Tom x3-3703.

Som, BR apt, incl hot wtr + ht, park, dishwr, air cond, T, $235. Vicente x3-1969.

West Som, 6 rms wl main, mdrn B, T, park, no pets, $265 + heat. John x7519 Linc.

Animals

Abyssinian cat, 6 yrs, spyd, ex cond, because of allergy nds free, lovng home, call 655-3216.

Lost and Found

Lost: Camel hair W coat, Fac Club, Dec 16, Barbara x3-1623.

Lost: leather gloves. Linda x3-1782.

Wanted

Pr boy's skis, approx 140 cm w or w/o binding, x3-6811.

Babysttr, bg Mrch 1, hrs arrngd, Ron Alex 241-7218.

Spanish trnsltr of wrttn reports etc, pt time, Call Edward Polko 661-2930.

Porter Sq area, Camb, mother's help, 2 boys, 2 days/wk pssbl of time w/ 2nd family, call 661-9898.

Celts-Portland game, 2 tckts, 1/15, exc sts, not end or balc, Janie x3-3355.

Wl swap 2 tckts to *A Chorus Line*, Mzzne seats, M eve Jan 23 for sim seats any othr eve. Call 661-2092.

Sm refrig, Brian x3-5220.

Microprocessor chips, old computer eqpmnt, esplly DEC backplne, prts, Call 494-8888.

Apt 2 to 3 bdrm, furn house or apt, Feb 1-July 1 for visiting Prof & family, Jessy x3-3141.

Apt, Camb, Beac Hl, S End 3-4 rms for cpl, $200. Kathy, x3-6407.

Roommates

Rmmts, Watertown, M 25, shr furn house, grge, dw, wash/dry, 2 B, den, a/c, 3 BR, T, $125 mo, incl util. Andy x3-2164.

Milton dplx, 2 F seek F rmmate, own rm w/wood flrs, $105/mon + utils. Call 664-2341 aft 5.

Allston, rmmt pref student, own BR, $90 + util, call 787-5590 aft 5pm.

Back Bay area, rmmt, Feb & or March near MIT, 2 BR apt, call x3-2480.

Harvard St nr Cent Sq, 1 rm in a 2 BR apt avail now, livng rm furn, heat incl, park, $130, Mahmoud x3-5720.

M rmmate to share 1/3 of 3BR hse, mod duplex, roomy, view of Charles & Bos sky, furn except BR, 10 min to MIT, nr T, $132/mo + utils. Call 926-4126.

Nonsmoking M rmmate for Bk Bay apt, $135/mo incl furn. Samuel, x3-1873.

Carpools

Witman, nds rd to MIT, 8am-4pm. Deb x3-2153.

Miscellaneous

Age-discrimination a cncrn for you? Join me, PO Bx 1310, Concord, Ma 01742.

Free hair cuts at Dregs at the loft Newbury St, for apptmnt call Maggie 492-6350 aft 7pm.

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*
Mike Parr	*3-4266*
Ken Hewitt	*3-4267*
(Secretary — Paulette Chiles)	
Sally Hansen	*3-4275*
Lewis Redding	*3-2928*
Richard Cerrato	*3-4269*
(Secretary — Jenni Leibman)	

Academic Staff, Technical Instructor, in Mechanical Engineering to teach drafting including orthographic projections, dimensioning and tolerancing, technical illustration; assist in undergraduate and graduate design courses; maintain design library; prepare illustrations for publications; assist students and faculty with design projects. Applicants must have minimum of 2 years post secondary education and an excellent knowledge of drafting techniques and practice. Industrial design experience preferred. Position is for academic year (Sept.-May). C78-1 (1/11).

Admin. Staff, Director of Purchasing and Stores, will have responsibility for Institute's purchasing policies and procedures for the operation of the General Purchasing Office and the Office of Laboratory Supplies, and for general coordination of Institute warehousing and materials handling operations. Specific duties will include negotiating major purchases with private vendors or with government agencies for surplus acquisition, and developing programs to achieve affirmative action goals in purchasing areas. Applicants should have a Bachelor's degree, preferably in science or engineering, or the equivalent combination of education and experience. Extensive experience in purchasing, including inventory control, receiving and shipping, warehousing and accounting practice also necessary. An MBA is desirable. A78-1 (1/11).

Academic Staff, Technical Instructor, in the Biology Department Electron Microscope Facility will coordinate all aspects of Facility operation; instruct students and laboratory personnel in biological sample preparation and in use of electron microscopes. Position requires a minimum of a Bachelor's degree in Biology plus at least 5 years experience in the field of biological research with substantial emphasis on microscopy. Experience in preparation of cell and tissue samples for electron microscopy, fixation, embedding and ultra thin sectioning, EM radiography and histological staining is important. Position begins 3/1/78. C77-47 (1/11).

Admin. Staff, Editor/Writer, Asst. Director of the News Office to write and report, for internal and external media, news and features pertaining to art, music, theater and other cultural events, programs and activities at MIT; conceive and execute related special projects; develop and maintain personal contacts with relevant MIT community members and outside media representatives. Will also handle some comparable duties relative to MIT educational research programs. Position requires 2 years experience as reporter/writer/editor for daily newspaper, or equivalent; ability to develop and independently complete editorial projects, as well as ability to operate ordinary office equipment. College graduation, or equivalent, also necessary. Position is expected to terminate in approximately, April, 1980. A77-92 (1/4).

Systems Programmer II in the Information Processing Services, Multics Systems Programming Group to assist in the development of the Relational Data Management System and assist users in their applications. Future assignments may include network and communications programming systems assurance or general development program. Applicants must be proficient in systems programming with PL/1. Experience using Multics or comparable system required. Experience with database work, systems assurance tasks and general applications preferred. A Bachelor's degree or equivalent combination of education and experience is also required. A77-87, A77-86 (1/4).

Administrative Staff, Sr. Programming Analyst, in the Information Processing Services Office to provide computing services on a Remote Job Entry Station, Sloan School Prime 300 minicomputer, and several interactive terminals. Will monitor system usage; develop longrange plans; supervise operator/programmer and student operators. Bachelor's degree, preferably in computer science or a related field, or equivalent combination of education and experience required. Extensive experience in computing with emphasis on programming on computer applications, software and hardware also required. Proven writing and verbal skills as well as interpersonal skills a must. A77-91 (1/4).

Admin. Staff, Project Architect, to coordinate architectural design and production documents for a major building renovation. Work will involve close collaboration with other staff members and with engineering consultants outside the Institute. Position requires a Bachelor's degree in architecture plus a minimum of 5 years experience in project coordination and development of contract documents. A77-89 (1/4).

Academic Staff, Technical Instructor in the Aeronautics and Astronautics Dept. to instruct, coordinate and assist undergraduate and graduate students in developing mechanical and electronic thesis projects and experiments. Will also oversee lab activities; assume responsibility for mechanical and electronic equipment; work with small electromechanical systems. Must have sound technical schooling and 6-8 years experience in electromechanical field. Also required is a broad knowledge of electromechanical systems, subsystems and components; ability to do innovative and creative problem solving; and thorough working knowledge of lab safety procedures. C77-46 (1/4).

Sponsored Research Staff in the Cell Culture Center to prepare and control quality of cell culture media; work with mass-production of animal cells as well as large-scale concentration and purification of virus. Will also work with growth of cells from primary culture and production of cell lines in suspension and monolayers. A Bachelor's degree in Chemistry or Biology required. Some experience in animal cell culture desired. B78-1 (1/11).

Sponsored Research Staff, Chief Operator, in the Lab for Nuclear Science to operate the accelerator; oversee safety of personnel and equipment; diagnose system and subsystem faults; perform minor repairs. Will also be responsible to start entire facility and produce an electron beam to specifications. A Bachelor's degree in engineering or physics, or equivalent in experience required. R78-2 (1/11).

Sponsored Research Staff in the Lab for Computer Science to assist in the design and development of enhancements to TOPS-20 operating system to support real-time editing. Bachelor's or Master's degree in computer science or related field required. Time sharing operating system development experience also required. Experience with PDP-10 and PDP-11 assembly language preferred. Must be willing to move into applications programming. R77-231 (1/4).

Sponsored Research Staff in the Lab for Computer Science to assist in the design and development of knowledge based systems. Will work primarily in the area of design and development of a system that understands Morse code Q-sign jargon, and assist in the planning of a new project concerned with office automation. Minimum of Bachelor's degree required but Master's degree in computer science or a related field preferred. Working knowledge of LISP or LISP-like language and ability to build working systems also required. PDP-10 and TENEX or TOPS-20 experience preferred. R77-230 (1/4).

Sponsored Research Staff, temporary, in the Earth and Planetary Sciences Dept. to develop and test digital computer programs; analyze data. Must have experience with Fortran and/or PL/1 programming. Also required is 2-3 years of college level course work in computer science. Temporary 2/1/78-8/31/78 R77-235 (1/4).

Sponsored Research Staff, Programmer/Analyst, temporary, in the Harvard-MIT Division of Health Sciences and Technology to assist with the development of an innovative microprocessor-based pulmonary function testing instrument. Will write software in the assembly language of the microprocessor (INTEL 8080) and in a recently developed higher-level language (STOIC). Will also be responsible for translating programs from the assembly language of a minicomputer (PDP-8) into the assembly language of the microprocessor. Two years experience in assembly language programming and in higher level language programming necessary. Also necessary is knowledge of elementary principles of calculus and physics, (i.e., college level). Temporary 3 months. R77-238 (1/4).

Exempt, Inpatient Nurse, in the MIT Infirmary to do bedside nursing. Occasionally may be called upon to assist with first aid and emergency care. Must be a Mass. Registered Nurse. One year of medical/surgical nursing experience preferred. Work hours: primarily 7:00 AM - 3:00 PM, with every other week-end off. Will occasionally work other shifts. E77-63 (1/4).

Admin. Asst. V in the Technology Adaptation Program to answer routine correspondence; supervise publication of reports; place orders and arrange shipment for equipment required overseas; arrange travel as well as conferences, workshops, seminars; train and supervise clerical staff. Will also maintain petty cash; process library documents; describe program to foreign visitors. Several years secretarial/administrative experience required, as well as extensive experience with domestic and international travel arrangements. Ability to work accurately, often under pressure, and ability to devise and implement administrative procedures also necessary. Position involves occasional overtime. B77-752 (1/4).

Secretary V in the Ocean Engineering Dept. to the Dept. Head, to perform various secretarial duties: type correspondence, class notes, proposals, manuscripts; answer routine correspondence independently; prepare non-routine correspondence based on verbal instruction; take and transcribe shorthand dictation; schedule appointments; assist in preparation of various reports; arrange travel; edit and make some changes in typed material; maintain class records. Excellent typing skill, shorthand of speedwriting and ability to work independently required. Familiarity with technical symbols is helpful. B77-754 (1/4).

Secretary IV to perform general secretarial duties for Civil Engineering Division Head and research staff: type manuscripts, class materials; maintain budget records and process related materials; arrange large meetings and seminars; supervise temporary clerical employees; perform a variety of related duties as necessary. Position includes a large volume of telephone contact, and interaction with students, faculty and visitors. At least 3 years secretarial experience, or an equivalent combination of formal training and experience required. MIT experience desirable. B78-4 (1/11).

Secretary IV to two staff members in the Admissions Office to type correspondence; answer telephones; schedule meetings and appointments; arrange travel; maintain files. Will also share receptionist work and assist with special projects. Excellent typing skill and command of English language, as well as organizational ability required. Secretarial experience also required. Knowledge of MIT desirable. Non smoking office. B78-8 (1/11).

Secretary IV to a faculty member in the Biology Dept. to type correspondence, technical reports, proposals; monitor accounts; maintain files; arrange travel; order supplies. Excellent typing skill, facility with figures, good telephone manner and organizational ability required. Minimum of 5 years experience, technical typing skill and MIT experience preferred. B78-9 (1/11).

Secretary IV in Urban Studies and Planning to type manuscripts, correspondence and reports; file; handle course work; arrange travel; schedule meetings; occasionally do library research. Excellent typing skill, good command of English, editing skills and knowledge of dictaphone typing essential. Prior secretarial experience required. B77-736 (1/4).

Secretary IV to the Director of the Center for Transportation Studies to perform usual secretarial functions: type reports and correspondence; answer telephones; file; handle mail and answer routine correspondence; arrange travel; make appointments. One year secretarial experience and a college degree, or 3 years secretarial experience required. MIT experience desired. Ability to work well under pressure and independently important. B77-737 (1/4).

Secretary IV in the Provost's Office to handle a variety of duties: arrange travel; answer and place telephone calls; file; type and compose correspondence. Excellent typing skill and good command of English language required. Ability to recognize priorities and ability to work well under pressure also required. B77-772 (1/4).

Secretary IV in the Sloan School of Management to the Associate Dean will perform general secretarial duties: type correspondence; answer telephones; schedule appointments; arrange meetings and seminars. Excellent typing and shorthand skills required. Organizational ability and good telephone manner also important. Previous secretarial experience required. B77-768 (1/4).

Secretary IV in the Headquarters Office of the Earth and Planetary Sciences Dept. to Dept. head and 2 staff persons. Will type correspondence; arrange meetings; receive visitors; screen telephone calls; xerox; do errands. Excellent typing skill, ability to proofread and to transcribe machine dictation required. Prior office experience preferred. B77-755 (1/4).

Secretary IV in the Technology Adaptation Program to type statistical and technical material; arrange travel; maintain office supplies; supervise mail services to overseas office; keep record of publication sales; maintain mailing list; assist with administration of seminars and conferences. Excellent typing and English grammar skills required, as well as ability to work under pressure. 2-3 years secretarial experience also necessary. Experience at MIT helpful. Positions includes occasional overtime work. B77-753 (1/4).

Secretary IV, full or part-time, to several faculty members in the Architecture Dept. to type correspondence, research proposals, and reports; answer phones; handle petty cash and accounting forms; arrange travel. Excellent typing skill and ability to coordinate work of various faculty members required. 20 hrs./wk. or 40 hrs./wk. Position can be part or full time, based on preference of selected applicant(s) B77-738, B77-739 (1/4).

Secretary IV to four faculty members in the Dept. of Earth and Planetary Sciences to type correspondence, technical manuscripts, and proposals; answer telephones; maintain xerox machine; handle mail; arrange meetings; maintain petty cash account. Excellent typing, dictaphone experience and ability to handle 4 separate workloads under pressure required. Also required is 2-3 years secretarial experience. B77-743 (1/4).

Secretary IV in the Civil Engineering Dept. to 2 faculty members. Will perform various secretarial duties: type technical material; arrange travel; organize and arrange schedules for seminars and meetings; handle routine inquiries; maintain accounts; file. Technical typing experience or willingness to learn required. 37.5 hrs./wk. B77-744 (1/4).

Secretary IV to a faculty member in the Political Science Dept. to type manuscripts; compile bibliographies from basic information; answer telephones; file; schedule appointments; perform some library research. Junior college training and some secretarial experience required. Excellent typing skill, command of English grammar, as well as familiarity with library research procedures necessary. B77-747 (1/4).

Secretary IV to the Treasurer of the Corporation will perform varied duties in a busy office: including a large volume of contact with other Institute offices and representatives of outside organizations; take and transcribe shorthand dictation; arrange travel; reconcile office accounts. Position requires good organizational skills and ability to complete detailed projects with accuracy. Excellent secretarial skills including shorthand also necessary. College or secretarial school training and office experience preferred. Position begins in January, 1978. B77-647 (11/9).

Secretary III/IV to a research group in the Electrical Engineering and Computer Science Dept. to type course material, proposals, reports including technical material; arrange travel; schedule meetings; perform general secretarial duties. Technical typing skill and shorthand or machine transcription skill required. B78-7 (1/11).

Secretary III-IV to 3 faculty members in the Laboratory for Computer Science to handle general secretarial duties including manuscript typing and arranging travel. Will be trained in computer text editing. May handle some secretarial duties for 1 additional faculty member. Position requires organization skill and good typing ability. College training and/or MIT experience helpful. B77-770 (1/4).

Secretary III-IV, part-time, in the Office of the Dean for Student Affairs/Preprofessional Office to perform various duties related to the administration of Talbot House: handle reservations; make up schedules; handle publicity; supervise house staff; follow-up payroll; pay bills; maintain supplies and purchase orders; budget and fund accounts. Will also be responsible for maintenance of catalogues; maintain mailing lists; assist in report preparation. Familiarity with accounting and administration of funds necessary. 17.5 hrs./wk. B77-692 (11/30).

Secretary-Receptionist III in the Graphic Arts to handle all telephone service for the department as well as provide secretarial services to various staff members; type and route purchase orders and handle some clerical/accounting duties. Good typing, ability to use adding machine required. Applicants should be high school graduates, or equivalent. B77-771 (1/4).

Secretary III in the Sloan School of Management, Master's Program Office to handle requests for brochures and other information; answer telephones; greet visitors; answer students' inquiries. Perform secretarial work for the Associate Dean and Director of the Program. Good typing skill, accuracy with details, good telephone manner, flexibility and willingness to do a variety of tasks required. B77-760 (1/4).

Secretary III in Administrative Computing Services will type technical reports; statistical data, manuscripts and correspondence; screen telephone calls and visitors; maintain files and records; prepare various forms; handle mail and answer routine correspondence; schedule appointments; make travel arrangements. High school training with at least 1 year of secretarial experience or secretarial school graudate required. B77-742 (1/4).

EDP Project Development Librarian V in Administrative Computing Services to provide documentation support to new business project development teams in the design, development and implementation of computer systems for the Institute: gather, organize, up-date and maintain all development documentation created by analysts and programmers; assist in testing and compiling program code, flow charts and data element listing via batch or remote terminal facilities. Will also assist in developing and use programmer, operations and user manuals. Experience with EDP operation or programming, (COBOL and/or PL 1) required. Knowledge of MIT preferred. 40 hrs./wk. B78-5 (1/11).

Library Asst. III, night/weekend, in the Science Library, Circulation Section, to perform circulation routines: charge and discharge books; take telephone renewals and personal reserves; recall books; interpret loan procedures for borrowers; file; take statistical counts. Will also perform general stacking routines: sort, distribute and reshelve materials; keep statistics of room use. High school graduation required, some college desirable. Good clerical aptitude, accurate typing and handwriting and ability to function efficiently under pressure also required. Off-hours makes regular attendance important. Hours vary among several night and weekend shifts. B77-745 (1/4).

Sr. Clerk III/IV, Medical Receptionist in Medical Dept.'s Ob./Gyn. Service: answer phones, schedule a large volume of appointments; secure patient records; type; maintain various records. Will also assist Service secretary and provide back up for other Dept. personnel as necessary. Applicants must be able to deal with patients effectively, and have typing skill. Previous experience in a medical setting is preferred. 37.5 hrs./wk. B78-3 (1/11).

Sr. Clerk III/IV, part-time, in the Center for Cancer Research to post information from requisitions, purchase orders and invoices; prepare invoices; file; check accounting statements against orders; analyze expenditures and commitments; prepare reports; type correspondence and manuscripts. Aptitude for figures and good typing skill required. Familiarity with MIT accounting and purchasing procedures helpful. 25 hrs./wk. B78-2 (1/11).

Technical Typist III/IV in the Electronic Systems Lab, Publications Office to operate IBM Memory 100 typewriter; assist in distribution of lab reports; perform general clerical duties. Excellent technical typing skill, organization ability and ability to work with a minimum of supervision under pressure required. B77-741 (1/4).

Sr. Clerk III, part-time, in the Comptroller's Accounting Office to type correspondence and reports; file; assemble and distribute reports; trace missing items. Must be able to type accurately. 25 hrs./wk., 9-2, M-F B77-740 (1/4).

Sr. Clerk III in the MIT Press to receive and direct visitors; answer telephone inquiries and screen calls; occasionally take phone orders for books; responsible for cab vouchers and calling cabs; handle incoming mail (approximately 250-500 pieces of mail per day). Secretarial school training required. Experience in working with public also required. Good typing ability and knowledge of basic office systems necessary. B77-766 (1/4).

Clerk II/III in the General Purchasing Office to answer phones; greet visitors; process purchase invoices; file; handle mail; operate folding and inserting machine; assist with various other clerical tasks. Must be able to work with minimum supervision, good attendance and ability to communicate with people required. Familiarity with MIT helpful. B77-765 (1/4).

Clerk/Messenger II/III in the Energy Lab to assist the librarian with typing, processing books and reports and other supervised library work. Will also sort and distribute mail; do various errands; occasionally deliver interdepartmental mail; maintain and operate xerox machine; order office supplies; pick-up and deliver audio visual equipment; assist in office moves. Accurate typing and physical stamina for lifting required. B77-749 (1/4).

Hourly, Technician A, in the National Magnet Laboratory to contruct, test and operate complex, heavy power equipment for the Alcator C thermonuclear research machine; install large silicon controlled rectifier power supplies, high current bus bars, switches, relays and monitoring instruments; set-up and use measuring equipment, including oscilloscopes and high voltage test equipment. Applicants must be graduates of 2 years day technical school, or equivalent, and have 2 years of applicable experience. Knowledge of heavy power equipment and control wiring also necessary as well as ability to use common machine and hand tools. H77-201 (1/11).

Hourly, Campus Patrol Officer, requires 3-5 years experience in all phases of law enforcement (criminal law, court procedures, criminal investigation; report writing). Must obtain and maintain Emergency Medical Technician Certification. Must have successfully completed Police Academy training and must successfully complete any additional in-service training, qualify with use of fire arms, maintain valid fire arms permit and valid drivers license. Additional requirements: security clearance, policy authority warrant under Chapter 147 10-G and the ability to pass Institute physical exam. 40 hrs./wk. rotating shift. Position includes long hours occasionally. H77-196, H77-197 (1/4).

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).
A77-15, Director, MIT Alumni Fund (4/13)
A77-62, Industrial Liaison Officer, Ind. Liaison Off. (12/14)
A77-73, Sr. Appl. Analyst, Off. of Facilities Mngm't. Syst. (11/16)
A77-76, Dir. of Patent Marketing, Vice Pres. for Res. Off. (11/9)
A77-79, Applications Prog., Info. Proc. Serv. (12/14)
A77-80, Manager, Info. Proc. Serv. (12/14)
A77-82, Associate Director, Sloan School (12/14)
A77-83, Dir. of Personnel Relations, Personnel Relations (12/14)
A77-84, Admissions Officer, Admissions Off. (12/14)

BIWEEKLY:
B77-399, Sec. IV, Energy Lab. (11/30)
B77-518, Sec. III-IV, Mech. Eng. (10/5)
B77-590, Sec. IV, Hlth. Sci. & Tech. Div. (1/4)
B77-610, Sec. IV, Linguistics and Philosophy (1/4)
B77-611, Sec. IV, Elec. Systems Lab. (11/2)
B77-647, Sec. IV, Treasurer of the Corp. (11/16)
B77-655, Sec. IV, Chemical Eng. (11/16)
B77-667, Clk./Typist III, Resource Planning (11/30)
B77-671, Admin. Asst. V, National Magnet Lab. (12/7)
B77-672, Sec. IV, Nutrition & Food Sci. (12/7)
B77-673, Sec. IV, Nutrition & Food Sci. (12/7)
B77-684, Sec. IV, Nutrition & Food Sci. (12/7)
B77-688, Sr. Clk. V, Account Rep., Computing Serv. (12/7)
B77-694, Sr. Clk. III, Medical Dept. (12/7)
B77-696, Sec. IV, Personnel Office (12/7)
B77-697, Accounting Clk. IV, Graphic Arts (12/14)
B77-703, Comp. Oper. III-IV, Info. Proc. Serv. (12/14)
B77-704, Comp. Oper. III-IV, Info. Proc. Serv. (12/14)
B77-705, Comp. Oper. III-IV, Info. Proc. Serv. (12/14)
B77-708, Sec. IV, Architecture Dept. (12/14)
B77-710, Sr. Clk. III, Comptroller's Acctg. (12/14)
B77-711, Sec. III-IV, Info. Center (12/14)
B77-712, Tech. Asst. V, Alumni Assoc (12/14)
B77-713, Sec. IV, Economics Dept. (12/14)
B77-716, Accounting Asst. V, Comptroller's Actg. Off. (12/14)
B77-719, Accounting Clk. III, Biology (12/14)
B77-720, Sec. IV-V, Off. of the Pres. (12/14)
B77-721, Tech. Asst. IV, Ctr. for Advanced Eng. Study (1/4)
B77-724, Sec. IV, Alumni Assoc. (1/4)
B77-725, Sr. Clk. III-IV, Summer Session Off. (1/4)
B77-727, Editorial Sec. IV-V, Materials Sci. & Eng. (1/4)
B77-728, Admin. Asst. V, Child Care Off. (1/4)
B77-729, Sec. IV, Earth & Planetary Sci. (1/4)
B77-730, Sec. III, Architecture Dept. (1/4)
B77-731, Account Rep. V, Info. Proc. Serv. (1/4)
B77-733, Sec. IV, Political Sci. (1/4)

ACADEMIC STAFF:
C77-23, Mngr. of Financial Serv., Medical Dept. (5/25)
C77-29, Tech. Asst., Biology (7/20)
C77-36, Social Worker, Medical Dept. (10/5)
C77-41, Tech. Asst., Nut. & Food Sci. (10/19)
C77-43, Processing Librarian, Barker Eng. Lib. (10/26)
C77-44, Tech. Asst,, Biology (11/2)
C77-45, Tech. Asst., Nut. & Food Sci. (12/7)

EXEMPT:
E77-44, Admin. Asst., Nuclear Reactor Lab. (1/4)
E77-46, Admin. Asst., Comptroller's Acctg. Off. (10/19)
E77-47, Eng. Asst., Aero/astro. Dept. (10/19)
E77-54, Eng. Asst., Ctr. for Mat. Sci. (12/14)
E77-56, Estimator/Scheduler, Physical Plant (11/9)

HOURLY:
H77-89, HVAC Designer/Draftperson, Physical Plant (10/5)
H77-137, Tech., National Magnet Lab. (9/14)
H77-170, Waiter/waitress, Endicott House (10/19)
H77-176, Mech. B, Energy Lab. (11/30)
H77-186, Tech. C, National Magnet Lab. (1/4)
H77-195, Drafter, Physical Plant (1/4)

SPONS. RES. STAFF:
R77-37, High Energy Physics Res., Bates Linear Accelerator (3/9)
R77-51, Sr. Res. Eng., Energy Lab. (3/22)
R77-53, postdoc. res., Physics, Res. of Elec. (4/6)
R77-73, Plasma Physicist, National Magnet Lab. (4/27)
R77-74, Plasma Physicist, National Magnet Lab. (4/27)
R77-79, postdoc. res., Physics, Lab. for Nuclear Sci. (5/4)
R77-80, postdoc. res., Physics, Lab. for Nuclear Sci. (5/4)
R77-91, Sr. Accelerator Physicist, Lab. for Nuclear Sci: (5/18)
R77-93, Design Engineer, National Magnet Lab. (11/9)
R77-94, Design Engineer, National Magnet Lab. (11/9)
R77-95, Biophysicist, National Magnet Lab. (5/25)
R77-97, Chemical Eng., Energy Lab. (6/1)
R77-105, Managing Dir., Energy b. (6/22)
R77-112, Spons. Res. Staff, National Magnet Lab. (6/22)
R77-137, Spons. Res. Staff, Bates Linear Accelerator (8/31)
R77-139, Prog,, Res. Lab. of Elec. (8/31)
R77-150, Spons. Res. Staff, Res. Lab. of Elec. (9/7)
R77-153, Reactor Util. and Elec. Sup., Nuc. Reactor Lab. (9/7)
R77-161, Elec. Engineer, Mech. Eng. (9/7)
R77-170, Combustion Engineer, Energy Lab. (9/28)
R77-189, Experimental Physicist, National Magnet Lab. (10/26)
R77-192, Comp. Lanaguage Devel., Lab. for Comp. Sci. (10/26)
R77-196, Computer Prog., Lab. of Architecture & Planning (10/26)
R77-201, Prog./Data Analyst, Earth & Planetary Sci. (11/9)
R77-209, Res. Scientist, Energy Lab. (11/30)
R77-210, postdoc. res., Plasma Physics, Res. Lab. of Elec. (12/7)
R77-211, Spons. Res. Staff, Comp. Syst. Design, Lab. for Comp. Sci. (12/7)
R77-212. Spons. Res. Staff, Prog. Lang. Design, Lab. for Comp. Sci. (12/7)
R77-213, Spons. Res. Staff, Comp. Software Design, Lab. for Comp. Sci. (2/7)
R77-214, Spons. Res. Staff, seismic event res., Earth & Planetary Sci. (12/7)
R77-216, Oceanographic Res., Earth & Planetary Sci. (12/14)
R77-221, Neurochemist Res., Nutrition & Food Sci. (12/14)
R77-227, Plasma Physicist, Res. Lab of Elec. (1/4)
R77-228, Plasma Physicist, Res. Lab of Elec. (1/4)

The following positions are on HOLD pending final decision:

B77-572	Sec. III
R77-98	Spons. Res. Staff
R77-220	Spons. Res. Staff

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

B77-693	Sec. IV
A77-77	Admin. Staff
B77-750	Sec. IV
B77-677	Sec. IV
B77-385	Sec. III
B77-676	Sec. IV
B77-735	Console Oper. III
B77-769	Clk. III

Stanley R. Mitchell, far left, technical instructor in chemical engineering, had a full house when this year's glassblowing IAP offering began this week. His students, from left, are: Ken Burke, a junior in biology from Braintree, Steve McLain of Cambridge, a graduate student in chemistry, and Daryl Hymoff of Arlington, a programmer in Information Processing Services.

TVI to Offer New Subjects In Expanded Curriculum

The third semester of tutored video instruction (TVI) at MIT's Center for Advanced Engineering Study will begin Feb. 7, Dr. John T. Lynch, TVI director, has announced.

"The new semester will feature an expanded list of subject offerings in mechanical engineering and in electrical engineering and computer science," Dr. Lynch said. Subjects will be offered at the plant or, in a new program, TVI-PM, at MIT in the evenings.

TVI is a continuing education program for the engineer in industry who is committed to learning advanced material. Groups of from three to nine engineers watch videotapes of MIT classes with a tutor who is trained to stop the tape and encourage discussion.

"Learning is enhanced because the students are actively involved and have the opportunity to bring their own engineering experience to bear on the new material," Dr. Lynch said.

The video technology is attractive to industry bey because it overcomes the barriers of traveling and scheduling which often prevent practicing engineers from participating in professional development programs. It is also a highly effective method of teaching. Studies at MIT and elsewhere have shown that students studying a subject with the TVI method received higher grades than comparison groups which participated in conventional classroom instruction, live video telecast with audio talkback or videotape instruction without a tutor.

Engineers who wish to study at MIT in the evening (TVI-PM) enroll individually as special students who obtain academic credit, but are not enrolled in an MIT degree program. CAES forms TVI groups which meet one evening per week for a three-hour session. These evening TVI groups study the subject at half pace, completing a one-semester subject in two semesters. The expected work load is about six hours per week, instead of the usual twelve hours, and is thus more compatible with the demands of the engineer's professional responsibilities.

Engineers who study where they work form a group which is coordinated through the company. CAES works with the company in selecting and training the tutor, establishing communication between the tutor and the course instructor, arranging the delivery of videotapes, class notes, homework, quizzes and solutions, and monitoring the progress of the group. Engineers may enroll as special students or listeners. Listeners participate fully in the group, but do not have their work monitored at MIT and do not receive academic credit. They also have the option to participate at half pace.

The subjects to be offered through TVI will be selected from the following, depending on registration:

From the Department of Mechanical Engineering:

Solid Mechanics—Plasticity and Inelastic Deformation; Computer Methods in Dynamics; Introduction to Transportation; Technology; Modern Control Theory and Applications; Man-Machine Systems; Compressible Fluid Mechanics; Molecular Theory of Materials; Conduction Heat Transfer; Advanced Internal Combustion.

From the Department of Electrical Engineering and Computer Science:

Statistical Mechanics and Thermodynamics; Introduction to Computation; Structure and Interpretation of Computer Languages; Computability, Automatic and Formal Languages; Algebraic Systems Theory; Advanced Markov Models and their Applications; Power Electronics; Applied Probability; Electrodynamics of Waves, Media and Interactions; Microwave Circuits; Continuum Electromechanics; Semiconductor Devices.

MIT Press Announces Four Staff Appointments

Three acquisition editors have been appointed at the MIT Press and a staff editor has been given added responsibilities for acquisitions.

Announcement of the appointments was made by Press Director Frank Urbanowski.

Newly-appointed acquisition editors are:

Treville Leger, who will be responsible for acquisitions in the life, health and medical sciences at the MIT Press. He most recently was editor for neurosciences and health sciences for the publishing program at the School of Public Health, University of Michigan. He formerly had served as biology and microbiology acquisitions editor for W.H. Freeman and Co., and as an acquisitions editor at the School of Medicine, Case-Western Reserve University. Mr. Leger succeeds Arthur B. Evans who left the Press recently to join the Boston office of a Netherlands publisher.

Roger Conover, who will be responsible for MIT Press acquisitions in architecture, urban and regional planning and in the visual arts. A graduate of the University of Minnesota with a master's degree in English, he is a graduate of the Radcliffe Publishing Procedures Course, formerly held a writing fellowship from the Thomas J. Watson Foundation and studied at the Aspen Institute for Humanistic Studies. He has been a consultant for small presses and scholarly publishers and formerly worked for the Architects Collaborative, Cambridge. Mr. Conover succeeds Colin H. Jones who left the Press recently to join a trade publishing house in New York City.

Rene Olivieri, who will be responsible for acquisitions in management science, business, finance and economics. Formerly an acquisitions editor for the Praeger Special Studies program in scholarly and policy oriented books in business and economics, he holds a master's degree in economics and international affairs from Johns Hopkins University and has done freelance editing and writing for business, education and reference publishers in New York City. The position of acquisitions editor in management science, business, finance and economics is newly-established at the Press and Mr. Olivieri is the first appointee.

Laurence Cohen, who joined the MIT Press in 1974 and who has served as a staff editor for the past two years, has assumed added responsibilities for program development in the physical sciences and mathematics, including acquisition and manuscript editing in these areas. He is a graduate of Harvard College with a master's degree in physics from the University of Illinois.

Men's Basketball Team Is 2-2 in Young Season

By JILL A. GILPATRIC
Director of Sports Information

The MIT men's basketball team resumed its competitive season last Saturday night in their first game since early December. The team increased its won/loss record to 2-2 with a 71-63 victory over the US Merchant Marine Academy. The Engineers had lost their first two games of the 1977-78 intercollegiate season but went on to win against Trinity 58-53 on December 3.

Tech and King's Point were evenly matched during the first half of the contest, ending with a tie score of 30-30 at the half. Early in the second half the MIT team took the lead for good. Although the Engineers were at one time ahead by 10 points, their lead was narrowed to just five with nine minutes remaining. But with determined play and well-placed foul shots in the last minute of the game, Tech increased its winning margin to eight points and brought in a 71-63 victory.

Sophomore center **Ray Nagem**(San Diego, Cal.) played his usual outstanding game, racking up 22 points to lead the team in scoring. Junior guard **Tom Berman** (Glen-coe, Ill.) had 12 points, senior **Rick Van Etten** (Brandon, Fla.) followed with 10 and freshman **Bob Clarke** (Evanston, Ill.) scored eight points for Tech.

The Engineers will host the New Jersey Institute of Technology this Saturday night at 8:15pm.

Men's Fencing

The Tech men's fencing team got back into the swing of things last Friday at Harvard with a 14-13 victory over Army which gives the Engineers a 3-1 won/loss record to date. This win was impressive for two reasons. First, Army had been victorious over Harvard earlier that same day with a score of 14-13. The Crimson, always a strong team, had beaten MIT 12-15 in Tech's opening match of the intercollegiate season. Secondly, MIT was not fencing with their full varsity squad. Due to IAP absences, Coach Eric Sollee was forced to call upon some of his junior varsity competitors, but it all came together for the Engineers that day.

Senior captain **Mark Smith**(Jamaica, N.Y.) won all three of his bouts in the foil, as did sophomore **John Rodrigues** (Woonsocket, R.I.) in epee. Junior manager **Brian Wibecan** (New York, N.Y.) won a bout in epee and sophomore **Geoffrey Pingree** (Concord, N.H.) also won one in foil. Other good performances were turned in by freshman **Jim Freidah** (Lake Ronkonkoma, N.Y.) who usually fences foil but competed in epee in this meet, and by senior **Tom Stefanick** (Old Lyme, Conn.) who returned to the team this season after a two-year layoff.

The men's varsity fencing team's next competition is against Dartmouth at MIT on Saturday, Jan. 21, at 2:00pm.

Obituaries

Joseph V. Coyne

Word has been received of the death of Joseph V. Coyne of Boston on December 6. Mr. Coyne was a custodian in Physical Plant from 1953 until his retirement in 1969.

George L. Dodge

George L. Dodge, a custodian at Lincoln Laboratory from 1956 until he retired in 1972, died December 23. He was 71.

Mr. Dodge is survived by his widow, Florence Dunham Dodge of Somerville; two sons, George L., Jr., and Philip Dodge; two daughters, Joan Broadhurst and Brenda Szlosek, and 11 grandchildren.

Sidney H. Grant

Sidney H. Grant of North Reading, a retired custodian in Physical Plant, died Tuesday, Jan. 3. He was 68.

Mr. Grant worked for MIT for 10 years, before retiring in 1975.

He is survived by his widow, Claire Gibbons Grant; two sons, Edward of Memphis and Herbert F. Maine of North Reading; a daughter, June L. Proctor of North Reading, and two sisters.

Thompson, Carlins Plan Concert

A recital of works for viola d'amore and harpsichord, viola and piano will be presented by violist Marcus Thompson, pianist Seth Carlin and harpsichordist Maryse Carlin at 8pm on Friday, Jan. 20, in Kresge Auditorium.

The public is invited to attend the free concert organized by the MIT Music Section in conjunction with the Institute's annual winter term, Independent Activities Period.

The recital will open with a performance of *Lezione III* for viola d'amore and continuo by Attilio Ariosti, followed by Sonata for Viola and Piano, Opus 147 (1975), by Dimitri Shostakovich, the last piece the composer wrote before his death. Following intermission, Mr. Thompson and Mr. Carlin will play *Infanta Marina* for viola and piano by Vincent Persichetti, a lyrical work based on the composer's reflections on a poem by Wallace Stevens. The recital will close with Paul Hindemith's Sonata for Viola and Piano, Opus 11, No. 4, a work whose three movements are fused into one. This sonata was strongly influenced by Fauré and Max Reger.

Mr. Thompson has performed to great critical acclaim on the viola and viola d'amore as well as prepared performance editions of works by Ariosti and Vivaldi featuring the viola d'amore. The viola d'amore, a 14-stringed instrument, dates from the early 1600s and belongs to the viol family of stringed instruments. It is unfretted and has seven metallic strings that vibrate sympathetically with pitches played on the seven bowed strings immediately above them. The viola d'amore Mr. Thompson will play at the January 20 recital was made in 1779 by Johann Anton Stauffer.

Ariosti, a contemporary of Handel, was a viola d'amore player who wrote six lessons in the early 1700s to show people how the instrument was played. *Lezione III* was among them. It is a typical baroque solo sonata in four movements, slow alternating with fast.

Mr. Thompson and Mr. Carlin gave the American West Coast premiere of the Shostakovich sonata in January 1977, in performances at Arizona State University in Tempe, Stanford University in California and Ricks College in Rexburg, Idaho. The sonata is an impressive work in three movements; the final movement quotes from Beethoven's *Moonlight Sonata.*

Mr. Thompson, associate professor of music at MIT, studied viola with Walter Trampler and Abraham Skernick and chamber music with the Juilliard String Quartet and Amadeus String Quartet. He made his New York solo recital debut in Carnegie Recital Hall in 1968 and received the doctorate of music from Juilliard School of Music in 1970. He has been soloist with the National Symphony Orchestra, the Symphony of the New World and St. Louis Symphony, among others. Locally he has been soloist with the Boston Pops and has appeared with the Harvard Summer School Chamber Players, Ariel Chamber Ensemble and Boston Musica Viva.

Mr. Carlin gave his first recital in New York City at Town Hall last October. *The New York Times* music critic Donal Henahan wrote in an October 23 review of the recital, "He played these olympian works with unfailing facility and an expressiveness that deserted him rarely." Mr. Carlin, who teaches piano at Lowell University, has appeared widely as recitalist and as soloist with such orchestras as the Boston Pops, New England Chamber Orchestra and the Long Island Philharmonic. As chamber music artist he has performed in the Marlboro Music Festival, the Festival of Two Worlds in Spoleto, Italy, and is active in the Boston area where he has performed with the MIT Chamber Players. He received the BA degree from Harvard College, the MS degree from Juilliard where he studied with Rosina Lhevinne, and the *licence de concert* at the *Ecole Normale de Musique de Paris* where he studied with Jules Gentil.

Mrs. Carlin, who teaches at the New England Conservatory of Music, has performed extensively in both solo and chamber music concerts at such places as the Gardner Museum, Jordan Hall, Harvard University and the Whitney Museum. She has been guest harpsichordist at the Marlboro Music Festival, with the Boston Musica Viva and with the MIT Chamber Players. A native of France, she received the *licence de piano* from the *Ecole Normale de Musique de Paris,* where she studied with Jules Gentil, and the master of music degree from the University of Paris. She has studied harpsichord with Sylvia Marlowe and in 1975 gave her debut recital at Carnegie Recital Hall on the International Artists series.

Kinsey Named

(Continued from page 1)

1959-1960 and a postdoctoral fellow at the University of California at Berkeley from 1960 to 1962.

He came to MIT in 1962 as assistant professor of chemistry, was named associate professor in 1967, and was promoted to the rank of professor in 1974. During 1969-1970, he was visiting associate professor of chemistry at the University of Wisconsin. In addition to his teaching and research, Professor Kinsey has also served the Institute as chairman of the Committee on Academic Performance.

Professor Kinsey has been appointed head of chemistry through September, 1979, in anticipation of the return of Professor Deutch, who was named department head just last year.

Professor Kinsey's professional affiliations include memberships in the American Physical Society, the American Chemical Society, and the Chemical Society.

He and his family reside in Newton, Mass.

Repertory Ballet Set for Jan. 28

The date for the MIT performance by the Boston Repertory Ballet has been changed from Friday, Jan. 27, to Saturday, Jan. 28, to accommodate the needs of the ballet company and the schedules of working members of the MIT community.

The evening of ballet, with full costumes, sets and lighting, will begin at 8pm in Kresge Auditorium. Following the performance the audience is invited to meet the dancers at a reception in the Student Center Mezzanine Lounge.

Tickets for the performance, sponsored for IAP by the Graduate Student Council (GSC), are now on sale at $3 each in the GSC Office, Rm. 50-110, each Monday through Friday from 9am to 5pm through Friday, Jan. 27. Reservations may be made by calling Ext. 3-2195. Those placing reservations must pay for the tickets by Monday, Jan. 23, either by going to the GSC Office or by mailing a check payable to the Graduate Student Council to MIT Rm. 50-110.

Tickets will be sold in the evenings from January 16 through January 27 at the desk in Ashdown House, 305 Memorial Drive. During the week of January 23, tickets will be sold in Lobby 10 from 8:30-10:30am and from 11:30am-1:30pm. Any remaining tickets will be sold at the door.

All tickets are for unreserved seating.

Jones to Join Development Staff

Katharine Childs Jones of Arlington, a staff writer in the MIT News Office since September 1976, will join the writing staff of the Resource Planning office, effective Tuesday, Jan. 17.

Ms. Jones

As an associate writer on the proposals and publications staff, Ms. Jones will prepare material used to secure financial support for MIT's ongoing $225 million Leadership Campaign. She will write and edit publications and proposals detailing specific campaign goals for private contributors as well as brochures, newsletters and reports related to MIT's overall development objectives.

For the past year and a half, Ms. Jones has had major responsibility for publicizing cultural affairs at MIT. Earlier she had been editorial assistant on the Tech Talk staff for several months, when she also was responsible for hometown reporting.

Ms. Jones joined the News Office in 1971 as a secretary. She has been a member of the Working Group on Office/Clerical Issues since the group's inception in 1975.

A native of Holyoke, Mass., Ms. Jones received the BA degree from Wellesley College in 1969 and the MAT degree from Wesleyan University in 1972. Before coming to Boston, she taught English at Coginchaug Regional High School in Durham, Conn. She is married to Gordon M. Jones III, a doctoral candidate at Harvard University.

Ensemble to Revive 'Love's Labour's Lost'

The MIT Shakespeare Ensemble will revive its fall production of Shakespeare's early comedy, *Love's Labour's Lost,* prior to departing on a 12 day, East Coast tour on January 18.

The comedy will be staged at 8pm in the Student Center Sala de Puerto Rico on Thursday through Saturday, January 12, 13 and 14. Tickets—$3 and $2 for students—may be purchased in Lobby 10 from 11am to 3pm through Friday, Jan. 13, or at the door, or reserved by calling Ext. 3-2903 at any time.

Set in Navarre, an ancient kingdom in Spain, the play tells of four young men who decide to renounce women for three years in order to devote themselves to study and contemplation. No sooner do they make the oath than the Princess of France arrives with three ladies. The men fall in love and comedy ensues.

Murray Biggs will direct the production with Renaissance costumes by Lita Wright and set by Kostas Thomas who received the M.Arch. degree from MIT last September. Two songs and a dance composed by John Cook, Institute organist, will be performed during the play. The evening will begin at 7:40pm when the Early Music Society will perform Renaissance music coordinated by Tim Aarset, lecturer in music, and Marjorie Batchelor, a graduate student in mathematics from Washington, DC.

Those with major roles in the production are Robert Hull (Berowne), a junior in humanities and science from Broomall, Penn.; James Walker (Armado), a junior in mathematics from Wilmington, NC; Astrid Howard (Princess of France), a junior in earth and planetary sciences from Lexington, Mass., and Jo Ann Kruger (Rosaline), MIT '77.

Also Jonathan Ivester (Boyet), a senior in humanities and science from Anderson, Calif., and assistant director of the production; Jeffrey Hovis (King of Navarre), a senior in chemistry from Cincinnati, Ohio, and David Gallagher (Holofernes), a junior in electrical engineering and computer science from Lexington, Ky.

Elizabeth Soenarjati displays a puppet from Java she will use in puppet plays Wednesday, Jan. 18, at 8pm in the Mezzanine Lounge at the Student Center. —*Photo by Calvin Campbell*

Indonesian Dance, Puppetry Lend Exotic Touch to IAP

By MARY ENTERLINE
Editor, IAP Guide

When Elizabeth Soenarjati left Indonesia as a child in 1955, she never thought that 20 years later she would be devoting herself to the preservation of a disappearing part of its culture—Javanese court dances. But after years of studying Western classical ballet and music in the Netherlands, Ms. Soenarjati rediscovered the arts of her native land and now returns to Indonesia two months each year to study them.

Tonight (Wednesday, Jan. 11)—in a free concert at 8pm in the Mezzanine Lounge of the Student Center—Ms. Soenarjati will perform two court dances and show a film of some of the basic movements of the women's dances and a slide show of a gong factory. A week from today, on Wednesday, Jan. 18, at the same time and place, she will demonstrate Indonesian puppet plays and describe their relationship to court dances.

Ms. Soenarjati is performing during Independent Activities Period because her husband, Jan van Paradijs, is a visiting scientist at the Center for Space Research.

When Ms. Soenarjati describes Indonesian court dances, the flashing eyes and sparkling smiles of a performer combine with the historical and anthropological comments of a European-educated observer. Ms. Soenarjati began her study of Javanese dances in the Netherlands and she visits Indonesia each year under a fellowship from the Dutch government. On her trips she tries not only to perfect her skills as a dancer but also to gather as much information as possible from the old members of the Javanese court of Surakarta.

The dances Ms. Soenarjati performs are those of the Surakarta court, descendants of the most powerful of the four kings of Java, which is located in the center of what is now Indonesia. As a result of competition with other kinds of amusement today there is less attention given to the dances and 30 of the 100 to 110 basic movements have already been lost.

Gradually over the last three years, Ms. Soenarjati has established contact with a princess of the Surakarta court, the daughter of the late powerful king Pakubuwono X. Last summer Ms. Soenarjati was one of a few outsiders invited to witness—from behind a glass panel—a solemn, religious dance on the anniversary of the coronation of the king. This coming summer, the princess has agreed to instruct Ms. Soenarjati in court dances.

There are three types of court dances—women's, men's, and Alus dances, the latter performed by both men and women. In her performance tonight, Ms. Soenarjati will dance a woman's dance and an Alus dance.

"I have studied these two dances for three years, and I can finally say I can dance them, understand their choreography and music and teach them," she said. "I like the Alus dances. In these dances the fragility of the women's dances is combined with the strong movements of the men's dances."

In next week's demonstration of puppet plays, Ms. Soenarjati will show both the two-dimensional puppets of central Java and the three-dimensional shadow puppets of West Java. She will explain their history, iconography and the relation between shadow puppets and dance. Ms. Soenarjati will give a brief demonstration of some basic techniques of handling the two-dimensional puppets.

Jerome H. Holland to Speak

(Continued from page 1)

panies and also serves on the governing boards of national organizations such as the American National Red Cross, the Foreign Policy Association, the American Management Association, the American Arbitration Association, the Johnson Foundation, New York Hospital and the Save the Children Foundation.

Theme of this year's Martin Luther King, Jr., observance will be "Keeping the Dream Alive."

The ceremony will begin at 11:45am with a gathering in the Rogers Lobby (Building 7) and silent march to Kresge Auditorium. John M. Wynne, vice president for administration and personnel, has asked the cooperation of supervisors in releasing employees to attend the Friday convocation honoring Dr. King, if work loads permit.

A reception will follow the ceremony in the Mezzanine Lounge of the Student Center.

The observance is being organized by the Minority Interest Group in collaboration with the Office of the Special Assistant to the President and the Chancellor for Minority Affairs.

Forum to Host 'Who's a Lady?'

Who's a Lady?—a dramatic presentation of the shifting identities and perceptions of and about women—will be performed by Naomi Thornton and Annette Miller in the Sala de Puerto Rico at the Student Center on Thursday, Jan. 19, at 5:30pm.

The presentation is the third annual Gay Warner Memorial Lecture, sponsored by the MIT Women's Forum in memory of Gay Warner, an MIT employee and member of the Forum Steering Committee at the time of her death in 1975. It is open to the public, free of charge. Refreshments will be served at 5pm.

Who's a Lady? is a theatrical collage selected by Ms. Thornton and Ms. Miller from musical, dramatic and literary material ranging from Feiffer and Lessing to Brecht and Salinger. Ms. Thornton and Ms. Miller have performed extensively during the past five years for college, television, and cabaret theater audiences. They will talk informally with the audience after the performance concerning women in the dramatic arts.