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TECH TALK

November 7, 1979
Volume 24
Number 15

IAP Turns 10—Still Different

By JOANNE MILLER
Staff Writer

For ten years it has been the same—different.

It is Independent Activities Period, the January intersession at the MIT—this year January 7-30, 1980—when regular classes are suspended (almost) and imagination prevails.

Some 320 offerings are detailed in the First Guide to IAP, issued as a 32-page tabloid newspaper last week, and the number is expected to rise to 500 or more in the Final Guide to be published in early December.

Offerings range from single time events such as "Sea Song Sing Along," arranged strictly for fun, to "Introduction to Programming," which will meet three times a week for the entire three-week period.

Some activities have unexpected sponsors, for example a faculty member in materials science and engineering is offering a seminar on "Appreciating American Antiques," while a mathematics instructor plans "A Winter Bird Walk."

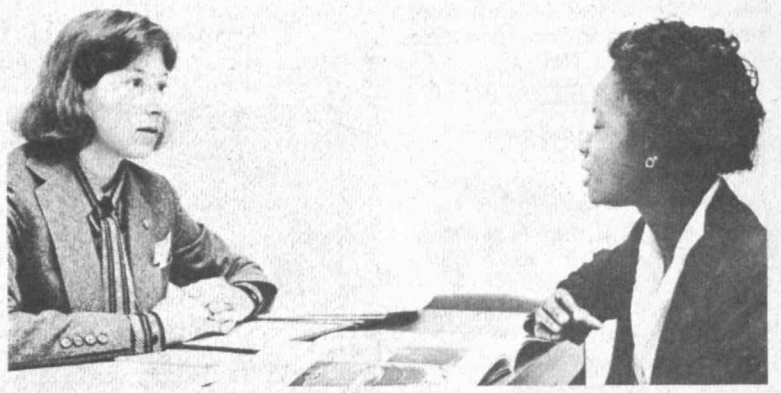
A particular focus of the 1980 IAP at MIT will be the energy crisis with no fewer than 50 events planned that relate in one way or another to energy issues. A major seminar, "Energy: What is the Problem?" is partially described as follows:

"Ever since the Arab oil embargo of 1973, Americans have been inundated with information about energy—some of it correct but not easily trusted, some of it seemingly trustworthy but incorrect, and all of it complex, piecemeal, confusing and in no way complete..."

The seminar convenors plan to assemble a group of technologists, economists, writers and media people to try to reach a common understanding of what the problems are and how to go about solving them.

Some other energy related offerings include: "The Bioregenerative Farm," "Geology, Geophysics and the Siting of Nuclear Power Plants," "Resource Recovery from Wastes," "Climate and History Workshop" and "The Economics of Alterna-

(Continued on page 8)



IN NEW ROLE—Susan Kayton, a member of the technical staff at Hughes Aircraft Co., at left in photo above, is one of a record number of industry representatives currently interviewing student job- seekers at MIT. Talking with Kayton is Connie Nathan, a junior in mechanical engineering from Rochester, NY. Ms. Kayton is no stranger to MIT. She received the SB in mechanical engineering here in 1978. The photo below shows her winning the Course 2.70 design contest in 1976. Ms. Nathan and Ms. Kayton aren't strangers either. They met when Kayton was a teaching assistant in Course 2.02 in her senior year. Ms. Kayton, who is working toward her masters degree in electrical engineering at the University of Southern California, has been with Hughes 18 months. She is a member of the MIT Educational Council and covers high schools in Los Angles and Santa Monica.

First Black Woman Wins ScD in Chemical Engineering

By ROBERT C. Di IORIO
Staff Writer

An Alabama woman who has just received the ScD from MIT, becoming the first black woman in the US to earn a doctoral degree in chemical engineering, says two of her best teachers never went past the sixth grade.

Jennie Patrick-Yeboah was referring to her parents, Mr. and Mrs. James Patrick of 201 Keeling Road, of Gadsden, Ala. They taught their five children that education was the one sure way to free themselves from the economic hardship the older Patricks had faced.

Dr. Patrick-Yeboah

Dr. Patrick-Yeboah, her two brothers and two sisters learned that lesson well. The new MIT degree holder is now an engineer in the chemical energy systems and processes branch of General Electric's Corporate Research and Development Center in Schenectady, NY. One brother is a surgeon, the other has a degree in management. One sister is a nurse, the other has a degree in finance.

"Our parents didn't want us to relive their lives, didn't want us to re-experience what they had gone through," Dr. Patrick-Yeboah said. "They had to leave school at the sixth grade. My mother worked as a maid, my father as a janitor. They always stressed that education would free us from all that. Mom and Dad were very supportive to all of us and had to live very disciplined lives in order to buy us things like encyclopedias. We all owe them so much."

Dr. Patrick-Yeboah came to MIT in 1973 after receiving the BS in chemical engineering from the University of California, Berkeley. She had transferred there from Tuskegee Institute when that school's program in chemical engi-

(Continued on page 8)

No Tech Talk

Because of the Thanksgiving holiday, Tech Talk will not be published on November 21. The Institute Calendar in the November 14 Tech Talk will cover the period of November 14 through December 2. Deadline for listings in the Institute Calendar, Institute Notices and Classified Ads will be noon Friday, Nov. 9. Regular publication will resume with the issue of November 28.

Suomi to Give Starr Lecture In Meteorology

Dr. Verner E. Suomi, professor of meteorology at the University of Wisconsin and a leading US authority on planetary atmospheres, will present the second Victor Paul Starr Memorial Lecture sponsored by the MIT Department of Meteorology at 8pm Wednesday, Nov. 7, in Rm 9-150.

Dr. Suomi, who is vice chairman of the National Academy of Sciences Committee on Atmospheric Sciences and a member of the Mariner/Jupiter/Saturn Imaging Science Team and of the Pioneer Venus Science Steering Group, will speak on "Venus Greenhouse Effect According to Pioneer Probes."

Dr. Suomi, who is director of Wisconsin's Space Science and Engineering Center, served as chief scientist of the US Weather Bureau in 1964 and as president of the American Meteorological Society (AMS) in 1968. He has carried out research on moisture measurements in the stratosphere, sonic anemometry and thermometry for studies of atmospheric turbulence, radiant temperature sensing devices, and the energy budgets of the earth's surface. Professor Suomi invented the spin scan camera system now used in geostationary weather satellites.

Professor Suomi is a member of the National Academy of Engineering, and has received the Carl Gustof Rossby Research Medal, the highest award of the AMS.

Demand For MIT Grads Holds Despite Economy

Industry's efforts to hire MIT graduates appear to be heading for a new high despite a less-than-rosy national economic picture.

Robert K. Weatherall, director of the MIT Career Planning and Placement Office, said recruiting efforts by industry in the 1979-80 academic year show every sign of exceeding the record level of the previous year when 430 companies conducted 8,500 student interviews at MIT.

"Despite talk of a recession and the tightening of the screws by the Federal Reserve Board we continue to have a high level of recruiting," Mr. Weatherall said. The new year may bring a different look, "but right now we're walking in the sunlight," said Mr. Weatherall, who has headed MIT's career planning and placement office since 1969.

Industry's demand for engineers has been rising steadily for the last four years, Mr. Weatherall said. One reason: "The ubiquity of the microprocessor."

"Just about every other company who comes to us mentions the need to build microprocessor controls into its processes. Many have plans to increase their technical staff over a four-or five-year period, no matter what the economy does—and so far, industry is making good on those plans."

Language Exchange Offers Variety

Interested in brushing up on your Spanish, Hindi, Polish or German?

If so, MIT's international community is eager to help out in exchange for practicing English skills through the Language Conversation Exchange sponsored by the MIT Wives' Group.

This year, many newcomers to MIT—students, staff, faculty, visiting scientists and their spouses—from all over the world are seeking native English speakers to talk with on an informal basis. In addition to the languages mentioned above there are speakers of French, Japanese, Hebrew, Russian, Taiwanese, Mandarin, Korean, Farsi, Portuguese and Italian available.

"We also have requests for persons to help someone with English on a non-exchange basis," said Julie Roberts, secretary to the Wives' Group, who coordinates the program.

Those interested in meeting someone learning English are asked to call Ms. Roberts who will put you in touch with a person who speaks the language of your choice. The language exchangers may then arrange meetings at their convenience.

MIT Conference to Consider Appropriate Technology Directions

The MIT Appropriate Technology Group, in association with the International Association for Advancement of Appropriate Technology in Developing Countries, will present a two-day conference, New Directions in Appropriate Technology, November 10 and 11 at MIT.

Sessions on Saturday, Nov. 10, will be held in Rm. 10-250, and will begin at 9:30 with the keynote address by William Ellis of Transnational Appropriate Technology Network. Professor Fred Moavenzadeh of the MIT Department of Civil Engineering will moderate a panel on "Appropriate Technology: Are the Channels Appropriate?"

A second panel discussion, "Appropriate Technology: Is it a second test for the Third World?" beginning at 1pm, will be moderated by Hemalata Dandekar, a postdoctoral fellow at MIT in urban studies. Professor Lance Taylor of the Department of Nutrition and Food Science, will take part in the panel discussion. The keynoter for the panel is Ali Mazrui, professor of Political Science, University of Michigan.

The late afternoon panel, starting at 4pm, will consider "Appropriate Technology: Is It Enough?" Jacob Scherr, staff attorney with the Natural Resources Defense Council, Washington, DC, will give the keynote address. Others on the panel will be William McLarney, who heads a project of the New Alchemy Institute of Cape Cod in Costa Rica, and David Dickson, Washington correspondent for Nature magazine. Dickson is the author of "The Politics of Appropriate Technology."

On Saturday, Nov. 11, a number of workshops are scheduled in various rooms at the Institute. Workshop schedules will be available Friday night at the conference reservation desk in the Mezzanine Lounge of the Student Center.

Longwell to Receive AIChE Award

Dr. John P. Longwell, professor of chemical engineering at MIT, will receive the Chemical Engineering Practice Award next month from the American Institute of Chemical Engineers.

Dr. Longwell

Professor Longwell, who joined MIT in 1974 as a visiting professor and who was associated with Exxon Research and Engineering from 1943 to 1977, will receive the award in San Francisco. Nov. 26.

At Exxon, he was director of the Central Basic Research Laboratories from 1959-1968 and senior scientific adviser from 1970-77. He became a professor of chemical engineering at MIT in 1977.

The AIChE is recognizing Professor Longwell for his scientific contributions in combustion, both in the design of industrial burners and jet combustors, and in reaction kinetics and transport. As a technical adviser to management, he contributed to the formation and development of the Central Basic Research and Corporate Research Laboratories in Exxon. The company gave him its highest technical award in 1971.

At MIT, Professor Longwell formulated and carried out research programs at the Energy Laboratory and the Department of Chemical Engineering. He was awarded the Sir Alfred C. Egerton Medal by the Combustion Institute in 1974 and gave the Plenary Lecture at the Synthetic Fuels and Combustion 16th International Symposium. He was elected a member of the National Academy of Engineering in 1976.

Professor Longwell has served on a number of national advisory panels and committees. In 1976, at hearings before the Senate subcommittee on aerospace technology and national needs, he recommended that new aircraft and fuels be developed to make better use of synthetic fuels from coal and shale.

Four Receive Edison Awards

Four MIT freshmen from widely separate parts of the nation have something in common.

As seniors in high school last year, each received $1,000 Edison Centennial of Light awards, commemorating Thomas Alva Edison's invention of the incandescent light.

The four are David M. Gauntt of Bedford, Mass.; Judith L. Passman of Houston, Tex.; Geoffrey C. Frank of Starkville, Miss.; and James T. Pinkerton of Anchorage, Alaska.

They were among 102 high school seniors throughout the country (two from each state and the District of Columbia) who received the awards.

Milne Assumes Cambridge Post

Walter L. Milne, assistant to the chairman of the MIT Corporation and special assistant to the president for urban affairs, has been named as a commissioner of the Cambridge Community Schools. The Community Schools program administers use of the physical facilities of the schools during non-school hours by community groups and organizations.

Mr. Milne is also serving this year as president of the Cambridge Chamber of Commerce.

Echoes

October 31-November 6, 1979

50 Years Ago

Freshmen will get their first glimpse of real social life when they attend this year's Dormitory Smoker, where eight professional cabaret entertainers will perform. Freshmen are warned that all front row seats go to the upperclassmen.

40 Years Ago

An experimental house designed to investigate solar energy has recently been built. This building will provide the means to accomplish part of the extensive program in solar research made possible by a gift last year from Dr. Godfrey L. Cabot. Studies in heating, air conditioning and power generation will be carried out under the direction of Professor Hoyt C. Hottel of chemical engineering.

25 Years Ago

"It was a case of love at first sight," Pete Seeger says of the long-necked five-string banjo, which he has since become famous for playing before all kinds of audiences, from street corners to Carnegie Hall. He started out riding the rods, traveling through most of the 48 states. Under the auspices of the Lecture Series Committee he will appear in 10-250 at 5:00 p.m. next Monday

Prepared by Edward J. Halligan, Jr., assistant curator, Historical Collections, x34444.

INSTITUTE NOTICES

CEP Meetings

Summary of the CEP Meeting of 18 October 1979

Discussion of the Whitaker College of Health Sciences, Technology, and Management with Professor Irving London, Director of the College.

Summary of the CEP Meeting of 25 October 1979

Discussion of the Experimental Study Group with Dean Robert Alberty.

Summary of the CEP Meeting of 1 November 1979.

Continued discussion of the Experimental Study Group.

Agenda for the CEP Meeting of 8 November 1979.

Continued discussion of the Experimental Study Group with Dean Robert Alberty.

Announcements

International Students***—International students who plan to travel outside the US during Thanksgiving or Christmas holidays should arrange for travel documents at the International Students Office, 3-107, at least 3 weeks in advance of the trip. Students with F-1 visas must request I-20 forms. Students with J-1 visas should check with the office to make sure their documents are valid.

IPS Course*—Introduction to SAS, 3pm-4pm, Nov. 14, 16 and 19, Rm 39-530. Introduces fundamental concepts and facilities of the Statistical Analysis System. Basic deck setup, control card format, basic program statements and some simple data management features. SAS procedures to be covered include PRINT, SORT, MEANS, PLOT and FREQ. Supplemental reading assignments and homework exercises. Required texts: SAS Introductory Guide and IPS Memo AP-8.

Students are advised that it is imperative to get all necessary signatures on correction cards before deadlines. Failure to do so will result in having to petition the CAP for approval to make the change. If an advisor is unavailable, contact the appropriate undergraduate office or department headquarters. Freshmen should go to the Undergraduate Academic Support Office, Rm 7-103.

The Activities Development Board is receiving applications for capital equipment funding for student and community activities until November 9. Applications at Dean Holden's Office, W20-345.

Former Marines and friends of the Corps are invited to attend the 204th birthday celebration of the U.S. Marine Corps, Friday, Nov. 9, at 4pm in the Bush Room (10-105).

MIT Furniture Exchange**—Open Tuesdays and Thursdays, 10am-2pm at 25 Windsor St. to buy or sell used furniture. Letters given for tax deductible donations. Info: x3-4293 during hours above.

Club Notes

MIT/DL Bridge Club**—ACBL Duplicate Bridge, Tuesdays 6pm, Rm W20-491.

MIT Duplicate Bridge Club*—Thursdays, 7pm, Rm 473 Student Center. All bridge players invited. Info: Adam Wildavsky, dl5-7687.

Chess Club*—Tournaments, speed chess for people of all strengths, every Saturday afternoon, fourth floor, Student Center. Info: Brad, 536-9596.

MIT Chinese Martial Arts Club-Wu-Tang*—Learn physical and mental discipline through the practice of Chinese Martial Arts, Kung-fu. Beginners welcome. New classes. Mondays and Wednesdays, 7-10pm; Saturdays, 11am-2pm, W20-491.

Exotic Fish Society*—General meeting, Thursday, Nov. 8, 8pm, Student Center basement.

Folk Dance Club*—Sundays, International, all levels, 7:30-11pm, Sala de Puerto Rico; Tuesdays, Balkan, advanced, 7:30-11pm, Rm 407, Student Center; Wednesdays, Israeli, all levels: teaching 7-7:30, dancing 7:30-11pm, Sala de Puerto Rico. Admission: 25c donation, optional. Info: d15-9185.

Hobby Shop**—Complete facilities for woodworking, metalworking, and darkroom. Mon-Fri, 10am-6pm, Wed, 10am-9pm, W31-031. Fees: $10/term students, $15/term community. Info: 3-4343.

MIT Go Club*—Meets Mondays 8pm, Rm 4-145. Instruction for novices and beginners. Players of all ranks.

MIT Outing Club*—Office open to plan hiking, canoeing, skiing, etc., trips and to rent equipment Mondays and Thursdays 5-6pm, W20-461.

Rugby Football Club**—Practice every Tuesday and Thursday, 5:30pm, on the Pitch, Briggs Field. Matches and social every Saturday.

Beginning Sailing Instruction**—Every Monday and Thursday at 5:15pm in the Shore School of the Sailing Pavilion.

MIT Rocket Society*—Regular meeting, club business and launch information, first Tuesday of each month, 7pm, International Student Lounge (W50-210), one floor below MITRS Club Room.

MIT Shotokan Karate Club**—Rigorous training for self-defense and physical and mental development. Black belt instruction. Practice Tuesdays and Fridays, 6-8pm, Varsity Club Lounge; Thursdays, 6-8pm, Dance Room. Beginners welcome. Info: Jim x3-3283.

MIT Table Tennis Club**—Meets every Monday, 8-10pm, T-Club Lounge, duPont Gymnasium.

MIT Tae Kwon-Do Club**—Korean martial arts, Wednesday, 7-9pm, Saturdays, noon-2pm, T-Club Lounge. Beginners welcome. Info: Chung Sun Kang, d15-9272.

MIT Tiddlywinks Association*—Club meetings Wednesdays, 8pm, usually West Lounge, Student Center, otherwise Rm W20-473 or 437; Saturdays, 1pm, Student Center fourth floor. Beginners welcome.

Religious Activities

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

MIT Baha'i Association*—Informal fireside discussions about the Baha'i faith Thursdays, 8pm, New House Rm 4-414. Everyone welcome. Info: Ramin, 494-7758, weekdays.

MIT Catholic Community*—Sunday Masses: 9am, 12 noon, 5pm, MIT Chapel. Weekday Masses: Tuesdays and Thursdays, 5:05pm, Fridays, 12:05pm, MIT Chapel. Charismatic prayer meeting following potluck supper, Mondays, 6:30pm, Ashdown Dining Rm. Info: Marjorie, x3-7222, Karen, 266-9525. Gospel Study and Prayer, Wednesdays, 8pm, 312 Memorial Dr.

MIT Catholic Community*—The Sacrament of Penance, Thursday, Nov. 8, 8pm, MIT Chapel.

Jewish Religious Services*—Orthodox: Fridays, Sundown, Kosher Kitchen, (50-005); Saturdays, 9am, Bush Rm (10-105); daily, 8am, Rm 7-102. Conservative/Egalitarian: Saturdays, 9:15am, 312 Memorial Dr., basement. Reform: Fridays, 5pm, 312 Memorial Dr., basement.

Lutheran-Episcopal Ministry*—Interdenominational service of Holy Communion, Wednesdays, 5:10pm, MIT chapel. Supper follows in basement of 312 Memorial Dr.

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

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

Placement

The following companies will be interviewing during the time period covered by the current Institute Calendar. Those interested may sign up in the Career Planning and Placement Office, Mon-Fri, 9am-3pm, Rm 12-170, x3-4733.

November 7—Advanced Micro Devices, Inc.; Allis-Chalmers Corp.; Bell Telephone Labs, Inc.; Caltex Petroleum Corp.; Colt Industries Inc.; GTE Automatic Electric, Labs., Inc.; Mobil Oil Corp.; National Security Agency; SofTech, Inc.

November 8—Amoco Chemicals Corp.; Boeing Vertol Co.; FMC Corp.; General Dynamics; Hughes Aircraft Co.; Institute for Defense Analyses; Department of the Navy/Civilian Careers; Oak Ridge National Lab.; Schlumberger Well Services; Watkins-Johnson Co.-CA.

November 9—AEtna Life and Casualty; Analytic Services, Inc.; Atlantic Richfield Co.; Consolidated Rail Corp.; Dranetz Engineering Labs., Inc.; Eastman Kodak Co.; Inland Steel Company; MITRE Corp.; Outboard Marine Corp.

November 13—Bell System/AT&T Long Lines; Boston University, Grad. School of Mgmt.; Burroughs Corporation; 3M CompanyCalgon Corporation; J. Ray McDermott & Co., Inc.; Pullman Kellogg; RCA; Scientific Time Sharing Corporation; System Planning Corporation; Texas Instruments, Inc.; Varian/Extrion.

November 14—Boston Edison; General Electric Co.; Lord Corporation; Nicolet Scientific Corp.; Texas Instruments, Inc.; Timeplex, Inc.; Bell System/Bell Labs.

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.

CHILDREN'S HOSPITAL MEDICAL CENTER

A student is invited to serve as principal investigator on a project designed to assess the effects of steroid compounds on the development of the free-living nematode, *C. elegans*. This project will be an integral part of a larger ongoing effort in this lab to determine if *C. elegans* is a good model system for studying how steroid hormones control gene expression at the molecular level. Familiarity with basic lab techniques required.

BOSTON V.A. HOSPITAL

This lab is engaged in research dealing with the mechanisms leading to diabetic retinopathy—the leading cause of blindness in the US. This problem is being approached using biophysical, biochemical, and neurophysiological techniques. This is an opportunity for an advanced student with a background in biology, biophysics, or bioengineering.

BOSTON BIOMEDICAL RESEARCH INSTITUTE

Research opportunities exist in the following areas: 1) Protein synthesis—changes in development; 2) Structure of myosin—location of actin sites; 3) Single fiber mechanism—calcium control of contraction; 4) Application of EPR spin label to cross-bridge motion; 5) Effect of nerve and activity pattern on fiber type; 6) Ca-control system of muscle—troponin, tropomyosin; 7) Nanosecond fluorescence—application to muscle proteins; 8) Membrane—ATPase linked Ca-transport, sarcoplasmic reticulum.

PROSTHETIC DEVICE FOR QUADRIPLEGICS

A student is invited to assist in the design of a prosthetic device to permit voice paralyzed quadriplegics to convert eye movements to motor control and speech signals. S/he should have interests in microprocessor technology and instrumentation for sensing eye position. Contact Dr. John Tole, 20A-113, x3-7421, or Dr. Howard T. Hermann, 37-219, x3-7755 or x3-7505.

MCLEAN HOSPITAL—MAILMAN RESEARCH CENTER (Belmont)

Slow motor performance and abnormal pursuit eye-movements have been documented in schizophrenic and manic-depressive patients. Additional evidence indicates that the pursuit eye-movement impairment is under genetic control. A number of studies are under way to investigate motor and dynamic characteristics of other aspects of the visuomotor system of psychiatric patients, for example saccadic eye-movements. Opportunities exist for students with experience in one or more of the following areas: physiological or psychological research with humans, programming experience with FORTRAN or assembly language, mathematics and statistics, biomedical electronics.

PLASMA PHYSICS FOR FUSION

A variety of projects are available for students interested in many aspects of experimental and computational plasma physics. Students would be assisted by faculty and staff members in conducting experiments relating to the Constance II magnetic mirror facility. Projects include: plasma gun experiments, VUV spectroscopy, electronic instrumentation, computer calculations of magnetic fields from complex coil configurations. Students should have an interest in electromagnetics or electronics. A wide range of experience can be accommodated. Contact Prof. L.D. Smullin, 38-294, x3-2502, or Dr. R.E. Klinkowstein, 38-298, x3-8145.

Graduate Studies

Graduate Student Council***—Executive Committee meeting, Thursday, Nov. 8, 5pm, International Student Lounge, Rm 50-220.

Hertz Foundation Fellowships**—Graduate fellowships for students of outstanding potential in the applied physical sciences. The fellowships may be used at one of 15 institutions, including MIT. Applicants must have U.S. citizenship or have documented proof of intent to acquire it. Proposed field of graduate study must be concerned with applications of the physical sciences to human problems. High previous scholastic performance expected of all applicants. Info: Graduate School Office, Rm 3-126. Application deadline: Nov. 15, 1979.

Dissertation Fellowships: Approximately 70 fellowships for women who will have finished all requirements except the dissertation for the doctorate by Jan. 2, 1980 and whose degree will be received by the end of the fellowship year (June 1981). Applicants must be citizens or permanent residents of the US. Period of award, 12 mos, beginning July 1, 1980; stipends, $3500-$7000. Deadline, Dec. 15, 1979.

Postdoctoral Fellowships: for women who hold the doctorate at the time of application. Applicants must be US citizens or hold permanent resident status. Funds may not be used for research equipment, publication costs, travel grants, or tuition for further course work. Awards are for 12 mos beginning July 1, 1980. Deadline, Dec. 15, 1979.

For American Women in Selected Professions: Fellowships assist women in their final year of professional training in law, dentistry, medicine, veterinary medicine, and architecture. Average awards of $4000 for one academic year beginning Sept. 1980. Deadline, December 15, 1979.

Info on all above, Dean Jeanne Richard, Rm 3-136, x3-4869.

American Association of University Women Fellowships—International Fellowships:** approximately 45 fellowships for one year's graduate study at a US institution for women who are citizens of countries other than the US. Also six awards for advanced research in any country save the Fellow's own, for women who are members of National Associations affiliated with the International Federation of University Women. Stipends cover cost of living according to need and place of study, average $2500-$5500. In special cases tuition and fees are covered but not travel. Awards for 1 year, beginning September 1980, not renewable. Deadline, Dec. 1. Info, Dean Jeanne Richard, 3-136, x3-4869.

Cable TV

November 7-14

Wednesday, November 7

Channel 8:

1-2:15pm — *COMMON SENSE FOR COMPUTATION*—John McCarthy, Director, Artificial Intelligence Laboratory, Stanford University.

2:15-3:15pm — *A SPECIAL CALCULUS LECTURE*—Prof. Emeritus George B. Thomas, Dept. of Mathematics.

3:15-4pm — *DISSECTION OF THE FROG*

Channel 12:

12-2pm — *CLASSIC LUNCH: "THE GOLD RUSH"*—Charlie Chaplin's most popular film. Using the backdrop of the Klondike, Chaplin creates some of the most inventive and humorous scenes ever filmed, including his celebrated pantomime of the eating of an old shoe.

2-4pm — *CABLE VIEWER'S DEMAND*—call x3-7363 to request a repeat of a program or movie.

Thursday, November 8

Channel 8:

1-2:30pm — *IS DNA REALLY A DOUBLE HELIX?*—Sir Francis Crick, Salk Institute.

2:30-3pm — *FIRE UNDER THE SEA: THE ORIGINS OF PILLOW LAVA*

3-4pm — *6.041—6.431* PROBLEM REVIEW TAPE D6—Prof. Al Drake

4-5pm — *6.041—6.431* PROBLEM REVIEW TAPE D7—Prof. Al Drake

5-6pm — *6.041—6.431* PROBLEM REVIEW TAPE D6—Prof. Al Drake

6-7pm — *6.041—6.431*PROBLEM REVIEW TAPE D7—Prof. Al Drake

7-8pm — *6.041—6.431* PROBLEM REVIEW TAPE D6—Prof. Al Drake

8-9pm — *6.041—6.431*PROBLEM REVIEW TAPE D7—Prof. Al Drake

Channel 12:

1-2pm — *CLASSIC LUNCH: "ORPHEUS"*—Famous cinematic poetry. Directed by Jean Cocteau.

2-4pm — *CABLE VIEWER'S DEMAND*

5-6pm — *CABLE VIEWER' DEMAND*

8-9pm — *PHYSICS 8.01 LECTURE*—Recorded 11/7/79.

Friday, November 9

Channel 8:

1-3pm — *COMMUNICATIONS SATELLITES FOR THE PUBLIC*—Russel Burke, Joint Council on Educational Telecommunications; Bert Cowlan, Codirector, Public Interest Satellite Association; Howard Hope, Dept. of H.E.W.; Prof. Herbert Dordick, U.S.C.

3-4pm — *LAST DAY OF THE DOLPHIN*—A film concerning the extermination of the dolphin by tuna fishermen.

Channel 12:

12-2pm — *CLASSIC LUNCH: "THE GOLD RUSH"*—See Wednesday, 12-2pm.

2-4pm — *CABLE VIEWER'S DEMAND*

Monday, November 12

INSTITUTE HOLIDAY—NO PROGRAMMING

Tuesday, November 13

Channel 8:

1-2pm — *DATA ARRAY MICROPROCESSORS*—James W. Herbert and Jerry Kaplan, Systems Engineer and Sales Engineer for the Data General Corporation.

2-3pm — *THE PHYSICS OF MUSIC*—Prof. Bernard Burke, Dept. of Physics.

3-4pm — *TECHNOLOGY AND WORK: WHO DECIDES?*—Frank Runnels and Frank Rosen, Pres. and Vice Pres. of the All Unions Committee to Shorten the Work Week.

Channel 12:

12-2pm — *CLASSIC LUNCH: "THE LAST LAUGH"*—The personal tragedy of a hall porter in a luxury hotel who grows too old for his job and is demoted to lavatory attendant, but has the last laugh.

2-4pm — *CABLE VIEWER'DEMAND*

8-9pm — *PHYSICS 8.01 LECTURE*—Recorded 11/9/79.

9-10:30pm — *PHYSICS 8.01 HELPLINE*—Call x3-7212 and tutor Lawrence Krauss will assist you.

TECH TALK
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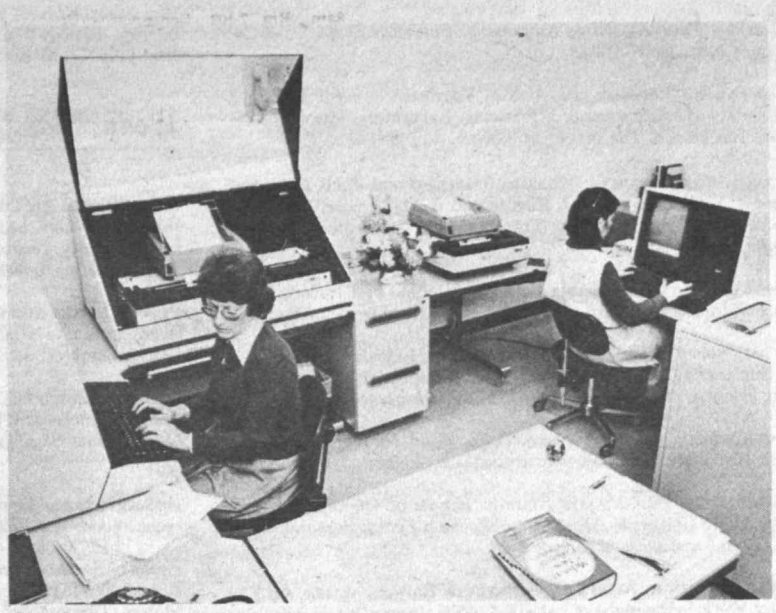
Thanksgiving Hospitality

Thanksgiving can still be a family affair even for students who live too far away to get home for the holiday, because of the welcoming families who invite students to their homes through the MIT Women's League.

Students who would like to spend the holiday with one of these families should call Mary Pinson (x3-3656) or Margaret Mann (862-4318) before November 15 to get matched up with the kind of holiday celebration they prefer, from family potluck to turkey and all the trimmings.

Families who want to share their festivities with a student or group of students can register with the Women's League by calling Mary Pinson, and indicating the type of observance they are planning.



Sarah Finigan, (left) and Doreen Antonelli (right) seated at their text editors in the Word Processing Center. Two printers are in the background and the OCR is in the right foreground.

Engineering School Opens Word Processing Center

Sarah Finigan, manager, and Doreen Antonelli, word processing technician, are in business at the School of Engineering's Word Processing Center, which began operation in Rm 9-255 on Thursday, Nov. 1.

The Word Processing Center offers the use of sophisticated equipment and trained personnel at minimal costs.

Users will send manuscripts typed and marked for editing according to directions available at the Center, along with a floppy diskette which can be purchased through the Center and will soon be available from Lab Supplies. The typescript is read into a CPT 8000 text editor by an optical character reader (OCR), the Hendrix Typereader 2. The text editor's cathode ray tube (CRT) can display up to a full page of manuscript which is then edited as marked by the user. The edited copy is stored on the user's diskette.

The text editors also feed two CPT printers, a Rotary IV, a single daisy wheel printer, and a Twin Track with two daisy wheels, which is capable of printing in dissimilar typefaces and of rapidly, in a single operation, printing out text with scientific and mathematical symbols as they occur in the manuscript without the manual work of changing wheels for the operation.

The Center's two text editors are hooked up to both the Rotary IV and the Twin Track printers. Three buffers in the editors make it possible for the machines to feed both printers while the machine is being used to edit new copy read in from the OCR.

This flexibility makes it possible to process a great deal of material rapidly and accurately. The Center offers four priorities of service to users, starting from a standard of 72 hours ranging through high (48 hours) to "ASAP." A deferred rate is also available for those who can wait a week for the work to be done. The Center will accept all work that it is set up to do efficiently. The floppy diskettes can store up to 120 pages of material, and the equipment is particularly appropriate for technical reports, class notes and longer manuscripts.

Since the users own their diskettes, they are responsible for storing them as well. Thus the users can determine for themselves how long to keep the material on hand.

MIT Class Of 1942 Hopes To Fund Chair For Reunion

The MIT Class of 1942 has passed the $700,000 mark towards its 40th reunion goal of raising $1,000,000 to endow a distinguished senior professorship at the Institute.

The Class of 1942 Reunion Gift Committee has been encouraged by a special $500,000 challenge grant from the Phoebe W. Haas B Trust, through the strong support of John C. Haas. Mr. Haas, who is vice chairman of Rohm & Haas of Philadelphia, Pa., received the SM in chemical engineering from MIT in 1942 and participated in the MIT School of Chemical Engineering Practice. Under the terms of the challenge grant, each dollar pledged by members of the Class of 1942 will be matched on a one-for-one basis. The class is launching an intensified effort to complete a major portion of the endowment before the conclusion of the MIT $225,000,000 Leadership Campaign in April, 1980.

The fund-raising effort is being led by Reunion Gift Chairman Floyd A. Lyon and the 32-member Reunion Gift Committee, including Class President George J. Schwartz, who conceived the idea of the professorship as an appropriate reunion gift.

The Class of 1942 Professorship will recongize and encourage innovative and imaginative teaching by outstanding faculty members whose careers reflect the traditional close coupling of teaching and research at MIT. Appointment to the professorship will be available to faculty members throughout MIT, but during the initial five-year term the Class has requested that the chair be awarded to a faculty member affiliated with the School of Chemical Engineering Practice within the Department of Chemical Engineering.

The Practice School program provides an opportunity for graduate students to apply basic professional principles to the solution of practical problems arising in industry, through work at the School's field stations. Usually there are two stations in the program—one at an industrial plant which is presently the General Electric Company's Plastics and Silicone Production Facilities at Albany, New York, and one at the Oak Ridge National Laboratory in Oak Ridge, Tennessee. Students spend either the fall or spring term at the field stations under the full-time direction of two members of the Institute staff, and carry out investigations on special phases of unit operations, and on problems of industrial chemistry and research.

Holton to Receive Oersted Medal

Gerald Holton, Visting Professor of the Class of 1949, has been selected to receive the Oersted Medal at the January, 1980, annual joint meeting of the American Physical Society and American Association of Physics Teachers.

Previous recipients at MIT of the Oersted Medal, awarded for outstanding contributions to the teaching of physics, were Professor Victor F. Weisskopf in 1975, Professor Philip Morrison in 1964 and the late Professor Francis Friedman in 1962.

Tamara Robertson will play harpsichord in the weekly MIT Chapel Concert tomorrow (Nov. 8) at noon.

—Photo by Calvin Campbell

Robertson to Give Chapel Concert

Tamara Robertson will present a concert of harpsichord music on Thursday, Nov. 8, at noon in the MIT Chapel.

She will perform the English Suite No. 1 in A Major by J.S. Bach and "Pieces de Clavecin" by A. Forqueray.

Ms. Robertson concertizes widely in the US, making frequent tours of the east coast. Last year she was heard live in concert on WGBH-FM radio. Her recording of Dieupart's Harpsichord Suites, for Titanic records, has been aired throughout the country. She recently appeared on San Francisco television, NBC, and at the Yale University Center for British Art.

A review in the *Tribune*, Oakland, California, said of Ms. Robertson's playing, "...the opening flourish of the Bach was amazing, breathtaking. But her greatest achievement is the direct musical sincerity of her performance."

Part of the Music Section's Chapel Series, Thursday's concert is free and open to the public.

7 Graduate Students Named National Distillers Fellows

A new fellowship program, funded by National Distillers and Chemical Corp., has made seven fellowships available to graduate students in MIT's Departments of Biology and of Nutrition and Food Science.

This year's National Distillers Fellows from the Department of Nutrition and Food Science are Masakatsu Akeda, George Avgerinos, James Leung and Bradley Snedecor, whose one year fellowships began in July, 1979. From the Biology Department, Aaron Mitchell, Eric Johannsen and Paul Riggs were awarded fellowships for the year beginning September 1. The fellowships cover tuition and fees and provide a monthly stipend of $425.

On Monday, Oct. 29, the seven Fellows met representatives of National Distillers and Chemical Corp. at a luncheon given by Kenneth R. Wadleigh, Dean of the Graduate School, at the MIT Faculty Club. Guests from National Distillers were Chairman of the Board, Drummond C. Bell; president, John J. Stookey; and executive vice president Clifford C. Oman. Robert A. Hutchinson, vice president research of Emery Industries, a subsidiary of National Distillers a Chemical Corp.; William F. McDonald, vice president and assistant general manager of US Industrial Chemicals Co. (USI), also a subsidiary of National Distillers, Jerome H. Krekeler, vice president research, and Werner C. Muller, vice president special projects for USI were also present.

On hand to greet the guests with Dean Wadleigh were Chancellor Paul E. Gray and Dr. Irwin W. Sizer, president of the Whitaker Health Sciences Fund; and members of the Graduate School Office.

Glamour Contest

MIT women students are invited to participate in Glamour magazine's 1980 Top Ten College Women competition. A panel of editors from Glamour will select winners on the basis of their records of academic achievement and/or contributions to campus or community activities.

Winners will be featured in the August issue of the magazine and will receive an expense-paid trip to New York City and a $500 cash prize. Entry forms are available from Dean Holliday C. Heine, Rm 5-104. Deadline for application is December 14, 1979.

Lucker to Head Library Group

Jay K. Lucker, director of Libraries at MIT, has been elected vice-president, president-elect of the Association of Research Libraries. He will begin his term as president in October, 1980.

The Association of Research Libraries, founded in 1932, is an organization of 110 major research libraries in the US and Canada. Its primary function is to identify and solve problems fundamental to large research libraries, so that the libraries may effectively serve the needs of their users. The stated mission of the Association is "to strengthen and extend the capacity of its member libraries to provide the recorded information needed, both now and in the future, by the research community."

Six Undergraduates Win Mining And Minerals Grants

Grants of $650 each have been awarded to six undergraduates at MIT by the Mining and Minerals Resources Institute for research during the fall term at MIT. The awards are administered through the UROP Office.

The students are Charles Cangialose, a senior from McLean, Va., majoring in mechanical engineering and economics; Howard Levine, a junior in economics from Kenmore, NY; John Muggeridge, a senior in ocean engineering from Watertown; Roy Nakagawa, a junior in ocean engineering from Westmount, Ill; Todd Sherman, a junior in ocean engineering from Walnut, Calif.; and John KC Cheung, a junior in civil engineering, from Hong Kong.

Mr. Cangialose will work with Professor Thomas Teisberg of economics on a project entitled "Estimating Costs for the Production of Synthetic Fuels."

Howard Levine will develop computer software for constructing a supply curve for the domestic steel industry, under the supervision of Professor Joel Clark of the Department of Materials Science and Engineering.

John Muggeridge, working with Professor J.D. Nyhart of management and ocean engineering, will analyze the proposed Law of the Sea Treaty and the US Deep Seabed Hard Minerals Act, with particular regard to deep ocean mining.

Roy Nakagawa will study costs and returns in deep ocean mineral mining with Professor Nyhart.

Todd Sherman will work with Professor Nyhart's project team on the MIT Deep Ocean Mining model.

John Cheung will study the effects of relative stiffness on supports of underground openings with Professor Herbert H. Einstein of the Department of Civil Engineering.

The Mining and Minerals Resources Research Institute was established last year at MIT by the Department of the Interior. Its aim is to support, strengthen and create new minerals-related programs across all of MIT's departments.

Mining Awards of $650 each will also be awarded spring term and students who have won awards during the academic year will also be eligible to apply for summer grants of up to $2,000 each.

APO Holds Celebration Of Service

Alpha Phi Omega National Service Fraternity set aside last Saturday, Nov. 3, as a "Celebration of Service" day.

The 50-member Alpha Chi chapter at MIT, founded in 1936, observed the day with four ongoing projects: the TCA-Red Cross Blood Drive, the Ugliest Man on Campus contest, which benefits Easter Seals this year; a dance marathon held at the Omega Nu chapter in New Hampshire, and a CPR course.

Other recent projects involving the Alpha Chi chapter were the reconstruction of a water tower at a Boy Scout camp that was hit by a storm in August; the building of a playground for a day care center, and running the New England Wheelchair Games for the handicapped.

Students who are interested in projects of this type can stop in at the APO office in Rm 415 in the Student Center or call x3-3788.

Golf League Ends Second Season

The MIT Golf League wound up its second successful season this fall with an awards banquet, winner's trophies going to Winston E. (Pat) Flynn and Warren D. Wells of the Registrar's Office.

The Golf League, which emphasizes having a good time over cutthroat competition, began its season on May 8 at the Fresh Pond Country Club in Cambridge. Twelve weeks of play preceded the championship rounds.

Officers of the League this year were Gordon W. Oro of the Artificial Intelligence Laboratory, President; Joseph E. Phillips, Physical Plant, Vice President; Anthony L. Tedesco, Physical Plant, Treasurer; Frank O. Melanson, Information Processing Services, Secretary.

Golfers who are interested in joining the League for the 1980 season should get in touch with Pat Flynn, Rm E19-338, x3-4788.

THE INSTITUTE CALENDAR X3-3270

November 7 through November 18

Events of Special Interest

Fall Blood Drive* — Sponsored by the Technology Community Association through Nov 9, Sala de Puerto Rico, Student Center.

New Directions in Appropriate Technology: A Conference on Appropriate Technology in This Industrialized Society* — All day conference, sponsored by the International Association for Advancement of Appropriate Technology in Developing Countries (IAATDC) in association with MIT Appropriate Technology Group, Sat, Nov 10: 9:30am-6:30pm. Workshop on Sun, Nov 11. Registration on Fri, Nov 9, Mezzanine Lounge. Info: 253-3402.

Music of 20th Century America** — Sponsored by the Women's League. Musicale on Sun, Nov 18, President's House, 3pm. Emily Gish Corbato, pianist; Ernest Bloch, *Poems of the Sea Enfantines;* Ernst Bacon, *Byways USA, The Lobo Girl of Devil's River;* Eppe-Karike Jurima-Sonin, soprano, selected songs of Samuel Barber; Rosemary Harbison, violinist and friends, Music of Seymour Shifrin. Reception for the artists and guests will follow the program.

Seminars & Lectures

Wednesday, Nov 7

Effect of Age and Early Nutrition on Intestinal Permeability to Macromolecules* — Dr. John Udall, MD, Shriners' Burns Institute. Clinical Research Center Seminar, 9am, Rm E17-415.

Undergraduate Economics Association Lunch ** — Prof E.C. Brown, Head of the Department of Economics will speak, noon, Rm E52-391. Bring your lunch. Freshmen invited.

Internal Tides in the Coastal Boundary Layer* — Paul May, W.H.O.I. Oceanography Sack Lunch Seminar, 12:10pm, Rm 54-915. Coffee and tea provided.

The Harvard Community Health Plan (HCHP) Seminar* — HCHP will become an alternative to the MIT Health Plan and Blue Cross-Blue Shield Master Medical for MIT community, on campus 1-5pm, Rm 10-105.

Alpha-Particle Confinement in Torsatrons* — Robert E. Potok, Fusion Doctoral Seminars, 2pm, Rm 38-166.

Automatic Vehicle Monitoring* — Bernard Kliem, Acting Chief, Traffic Management Branch, DOT/TSC. Aeronautics and Astronautics General Seminar, 3pm, Rm 37-212.

Coarse Mesh Cross Section Homogenization of BWRs* — Kord Smith, Seminar in Nuclear Engineering: Reactor Physics, 3-4pm, Rm NW12-222.

Distribution of Charge in Electrets* — R.E. Collins, physics, NSW Institute of Technology, Sydney, Australia. Polymer Seminar Series, 3pm, Rm 66-110.

Solar Power Satellites* — Dr. Peter Glaser, vice president of Engineering Sciences, Arthur D. Little, Inc. Macro-Engineering Research Group Seminar, 3-5pm, Rm 13-4101.

Amygdala-Tegmental Projections and Visceral Innervation* — Dr. D. Hopkins, Dalhausie University, Halifax, N.S. Sponsored by the Program in Neural and Endocrine Regulation, 4pm, Rm 66-168.

Seminar in Nuclear Engineering: Reactor Engineering Section* — Farid Bamdad, Thermal-Hydraulic Analysis of a PWR During a Total Loss of Electrical Power Accident, 4pm. **Roohallah Karimi, Qualitative & Quantitative Analysis in Reliability and Safety Studies,** 4:45pm, Rm NW12-222.

Statistical Mechanical Models of Polymers and their Solutions* — Dr. I.C. Sanchez, National Bureau of Standards, Washington, DC. Polymer Seminar Series, 4pm, Rm 66-110.

Students, Politics and Israel* — Scott Shore, American-Israel Public Affairs Committee. Sponsored by Hillel, 4pm, Rm 26-414. Free.

Contemporary Photography and the Institute of Design — Chicago* — Charles H. Traub, director, LIGHT Gallery, New York City will lecture. Creative Photography Gallery Seminar, 7:30pm, 120 Mass Ave, 3rd floor, Cambridge, Mass. Free.

Thursday, Nov 8

Energy Accountability* — Hani Bazerghi, graduate student. Nuclear Engineering Assessment Group Seminar, 1-2:30pm, Rm 24-112.

Future Network* — Lawrence G. Roberts, Laboratory for Computer Science Distinguished Leture Series, 3pm, Rm 10-250. Refreshments at 2:30pm.

Modelling and Control of Power Plant Boiler-Turbine-Generator Systems* — Glenn Masada, Doctoral Thesis Presentation, Mechanical Engineering, 3pm, Rm 3-446.

Whales Close-Up* — Charles "Stormy" Mayo to discuss whale and dolphin research at the Provincetown Center for Coastal Studies. Sea Grant Seminar, 3pm, Rm E38-302.

Analytical Methodology for Study of Zinc Metablism* — Dr. Louis Kopito, nutrition and food science. Analytical Chemistry Seminar, 4pm, Rm 8-205.

Duality for Stochastic Bolza Problems* — Roger J-B Wets, mathematics. University of Kentucky. Laboratory for Information and Decision Systems Colloquium, 4pm, Rm 39-500.

H.P.'s Approach to the "Office of the Future"* — Luis Hurtado-Sanchez, Hewlett Packard. Office Automation Seminar: Sloan School of Management, 4-5pm, Rm E51-168.

The Jupiter System Through the Eyes of Voyager* — Prof Bradford Smith, Univeristy of Arizona Lunar & Planetary Laboratory. Physics Colloquium, 4pm, Rm 26-100. Tea served at 3:30pm, Rm 26-110.

Proposed Legislative Changes Affecting International Civil Aviation* — Raymond J. Waldmann; Schiff, Hardin and **Waite,** former Deputy Assistant Secretary of State. Flight Transportation Laboratory Seminar Series, 4-5pm, Rm 35-225.

Supercritical Flow in a Collapsible Tube* — Michael McClurken, Fluid Mechanics Seminar Series, 4pm, Rm 5-233. Refreshments at 3:50pm.

A Theory of Nerve Membrane* — Prof J.Y. Lettvin, biology and Electrical Engineering and Computer Science. Committee on Biomedical Engineering Seminar, 4-5:30pm, Rm 37-212. Refreshments served.

Turbulence Models* — Prof Stephen Pope, Fluid Mechanics Seminar Series, 4pm, Rm 5-234. Refreshments available at 3:50pm.

The War Game* — Prof Martin Shubik, School of Organization and Management, Yale University. Operations Research Center Seminar, 4pm, Rm 24-121. Coffee and cookies served.

The Realities of Work in America* — Barbara Garson, author, *All The Livelong Day,* she is in the midst of a study of office automation. Technology and Culture Seminar and the Program in Science Technology, and Society Public Forum on Technology and Work: The Perspective of Labor, 4:30pm, Mezzanine Lounge.

Water Resources as an 'Appropriate Technology': Case-Studies from Egypt* — Ken Strezpek, water resources, civil engineering. International Student Seminar, 6:30-9pm, Rm 14N-313.

The Formation of the New Testament-Canon, Politics and Theology* — Holly Hendricks, doctoral candidate in New Testament, Harvard Divinity School. A 30 minute presentation followed by a 30 minute question/answer and discussion period. Baptist Student Fellowship Seminar, 8pm, Rm 4-340.

Friday, Nov 9

The Harvard Community Health Plan (HCHP) Seminar* — HCHP will become an alternative to the MIT Health Plan and Blue Cross-Blue Shield Master Medical for MIT community. Lincoln Laboratory, 9am-5pm, Personnel Conference Room A-120.

Chemical Engineering Seminars* — George Huff, Fischer-Tropsch Synthesis in a Slurry-Bed Reactor, 2pm **Prof Selim Senkan,** chemical engineering, Cryobiology: A New Frontier in Chemical Engineering 3pm, Rm 66-110.

Bifurcation Phenomena in Finite Strain Plasticity* — John Hutchinson, Harvard. Mechanical Engineering Seminar, 3pm, Rm 3-133.

GaAs-AlGaAs Heterojunction and Superlattices* — H.L. Stormer, Bell Laboratories, Murray Hill. Center for Materials Science and Engineering Colloquium, 4pm, Rm 9-150. Refreshments at 3:30pm.

On the Possibility of Achieving Ignition in High Field Tokamaks* — Dr. Carl E. Wagner, S.A.I. LaJolla. Plasma Fusion Center Seminar, 3pm, Rm NW16-212. Refreshments served.

Optical Particle Size Measurements* — W. Glanschnig, Applied Radiation Physics Seminar, 3-4pm, Rm 24-115.

Human Space Perception* — Dr. Christopher W. Tyler, Smith-Kettlewell Institute of Visual Sciences, San Francisco. Psychology Colloquium, 4:30pm, Rm E10-013. Coffee at 4:15pm.

Stimulus or Stumbling Block?* — P.S. Appu and **S. Ramakrishnan,** senior members of the Indian Administrative Service, will lead a discussion focused on change in rural India. Sponsored by Sangam, the Club for India Affairs, 5:30pm, Rm 4-145.

Tuesday, Nov 13

Exciplex Laser Chemistry: Multi-Reaction Photons* — James T. Yardley, Allied Chemical Corporation, Morristown, NJ. Spectroscopy Laboratory and Research Laboratory of Electronics Joint Seminar with Physical Chemistry, 11-noon, Rm 37-252. Coffee served at 10:30am.

Technology Adaptation Program at MIT* — Prof Fred Moavenzadeh, director, Technology Adaptation Program, professor of civil engineering. Society for International Development MIT Chapter Lecture Series, noon, Rm 3-415.

International Air Law - Series of Eight Lectures* — Arnold Kean, DBE, Barrister-at-Law, Sec. and Legal Adviser to the United Kingdom Civil Aviation Authority, London (former Chairman, Legal Committee, ICAO). Flight Transportation Laboratory, 1-2pm, Rm 9-250. Free.

Photon Anti-Bunching in Resonance Fluorescence* — Dr. M. Dagenais, Harvard University. Electrical Engineering and Computer Science Optics Seminar, 3pm, Rm 36-428.

Tool Failure by Fracture and Fracture Toughness of Tool Materials* — Prof S. Ramalingam, School of Mechanical Engineering, Georgia Institute of Technology. Laboratory for Manufacturing and Productivity Seminar, 3pm, Rm 37-232.

Computer-Aided Speech Training for the Deaf* — Prof Kenneth Stevens, electrical engineering and computer science. Seminar on Rehabilitation Engineering Research and Practice, 4-5:30pm, Rm 1-114.

Design of the 8086* — Peter Stoll, Intel Corporation. I.C. Seminar, 4pm, Rm 16-310.

Materials Limitations in Solar Energy* — Charles Grosskreutz, Black and Veatch, Consulting Engineering (previously Deputy Executive Director, Solar Energy Research Institute). Materials Science and Engineering Seminar, 4pm, Rm 9-150. Coffee served at 3:30pm.

Surface Enhanced Raman Spectroscopy* — Dr. David Weitz, Exxon Research and Engineering. Seminar in Physical Chemistry, 4pm, Rm 4-270. Coffee at 3:45pm, Rm 6-321.

The Bizarre Behaviour of SS433: The First Year* — Dr. Bruce Margon, University of California. Astrophysics Colloquium, 4:15pm, Rm 37-252. Coffee at 3:45pm.

Wake-Induced Three Dimensional Swirling Flows in Turbomachines* — D. Miller, aeronautics and astronautics. Aeronautics and Astronautics Seminar: Gas Turgine and Plasma Dynamics Laboratory, 4:15pm, Rm 31-161. Refreshments at 4pm.

Food Technology 1949-1979 — The Student Then and Now — People, Problems, Opportunities* — Dr. G.A. Goldblith, professor of food science, Vice President for Resource Development. Nutrition and Food Science Seminar, 4:30pm, Rm 16-322.

The Inheritance of the Antibody Repertoire* — Dr. Malcolm L. Gefter, biology. Biology Colloquium, 4:30pm, Rm 6-120. Coffee served at 4pm, Vestibule, 5th floor, Bldg 56.

Wednesday, Nov 14

International Air Law - Series of Eight Lectures* — Arnold Kean DBE, Barrister-at-Law, Sec. and Legal Advisor to the United Kingdom Civil Aviation Authority, London (former chairman, Legal Committee, ICAO). Flight Transportation Laboratory, 9am, Rm 9-250. Free.

Protein Intake and the Anti-Hypertensive Potency of Aldomet* — Alan Sved, graduate student, nutrition and food science. Clinical Research Center Seminar, 9am, Rm E17-415.

Jesse Jackson's Middle East Mission: A Personal Perspective* — Rev Jack Mendelssohn, of the First Parish (Unitarian), Bedford. Center for International Studies Seminar, noon-2pm, Rm E38-762. Bring your own lunch.

Undergraduate Economics Association Lunch — Prof Bishop** will speak, noon, Rm E52-391. Bring your lunch. Freshmen invited.

Areas of Social Concern - General Motors Reports to the Community* — Robert F. Magil, vice president, Industry-Government Relations, General Motors Corporation;**Abraham S. Venable,** Director, Urban Affairs, General Motors Corporation and eight GM executives. Industrial Liaison Staff Seminar, 1-2:30pm, Rm 9-150.

International Air Law - Series of Eight Lectures* — Arnold Kean, DBE, Barrister-at-law, Sec. and Legal Advisor to the United Kingdom Civil Aviation Authority, London (former Chairman, Legal Committee, ICAO). Flight Transportation Laboratory, 1-2pm, Rm 9-250. Free

Back to Basics: Numerical Studies with the Lambda-Scheme* — Manuel D. Salas, Aerospace Technologist, NASA Langley Research Center. Aeronautics and Astronautics General Seminar, 3pm, Rm 36-153.

Evaluating the Potential for Geothermal Energy in Industrial Process Heat Applications* — Michael B. Packer, graduate student, mechanical engineering. Laboratory for Manufacturing and Productivity Seminar, 3pm, Rm 37-252.

Interbasin Water Transfers* — Prof T.W. Kierans, director, Alexander Graham Bell Institute, Canada. Macro-Engineering Research Group Seminar, 3-5pm, Rm 13-4101.

Liquid Induced Whitening in Oriented Glassy Polymers* — Dr. N.H. Sung, chemical engineering, Tufts University. Polymer Seminar Series, 4pm, Rm 66-110.

Seminar in Nuclear Engineering: Reactor Engineering Section* — Chung N. Channy Wong, Wire-Wrapped Rod Bundle Heat Transfer Analysis for LMFBR, 4pm. **Song-Feng Wang, Mixed Convection in Sodium Cooled Reactors Under Transients,** 4:45pm, Rm NW12-222.

Thursday, Nov 15

Industrial Energy Conservation* — Robert Marlay, graduate student, Nuclear Engineering Assessment Group Seminar, 1-2:30pm, Rm 24-112.

International Air Law - Series of Eight Lectures* — Arnold Kean, DBE, Barrister-at-law, Sec. and Legal Advisor to the United Kingdom Civil Aviation Authority, London (former Chairman, Legal Committee, ICAO). Flight Transportation Laboratory, 1-2pm, Rm 9-250. Free.

Alternative Paths to Office Automation* — Prof Robert Alloway, Sloan School of Management. Industrial Relations Section and Center for Information Systems Research, Sloan School of Management Seminar, 4-6pm, Rm E52-461.

Asteroids and the Limits to Growth* — Dr. Brian O'Leary, Princeton University. Physics Colloquium, 4pm, Rm 26-100. Tea served at 3:30pm, Rm 26-110.

The Boston Cable Report* — Commenting on commission report: **Amos Hostetter,** Continental Cablevision, Inc.; **Howard Kay,** The Mayor's Office; **Larry Levine,** MIT; **Tomas Rivera,** President, Massachusetts Latino Media Group. Responding for commission: **Peggy Charren,** Action for Children's Television Commission Chairman; **Ithiel Poll,** MIT, Commission Member. Research Program on Communications Policy Seminar, 4-6pm, Rm 37-252, Marlar Lounge, 70 Vassar St. Camb, Mass

Current Problems Confronting the Air Transport Industry* — James Landry, Senior Vice President, Air Transport Association of America. Flight Transportation Laboratory. Seminar, 4-5pm, Rm 35-225.

Direct Frequency Domain Compensator Design for Linear Distributed Systems* — Prof John S. Baras, electrical engineering, University of Maryland, visiting Laboratory for Information Systems. Laboratory for Information and Decision Systems Colloquium, 4pm, Rm 39-500.

Flow Cytometry* — Dr. L.A. Kamensky, Director, Research and Development Orthoinstruments, Westwood, Mass. Committee on Biomedical Engineering Seminar, 4-5:30pm, Rm 37-212. Refreshments served.

A Matching Problem with Side Constraints* — Prof Gerard Cornuejols, Graduate School of Industrial Administration, Carnegie-Mellon University. Jointly sponsored by the Laboratory for Computer Science and Operations Research Center, 4pm, Rm 24-121. Coffee and cookies served.

Refilling of an Initially Collapsed Tube* — Fluid Mechanics Seminar, 4pm, Rm 5-234. Refreshments served at 3:50pm.

Science Citation Indez: ISI Lecture* — Representative from ISI will explain use of the Science Citation Indez, slide-tape show and computer demonstration. Science Library Seminar, 4pm, Rm 14S-100. Refreshments served.

Structures of Thermotropic Polymers* — S.B. Warner, Celanese Research Company. Special Polymer Seminar, 4pm, Rm 13-410.

Thermal Energy Analyzer for Determination of Nitrosamines* — Dr. David H. Fine, New England Institute for Life Sciences. Analytical Chemistry Seminar, 4pm, Rm8-205.

Growth Economics and Fallacy of Misplaced Concreteness* — Prof Herman Daly, economist, Louisiana State University-Baton Rouge. Technology and Culture Seminar, 4:30pm, Rm 9-150.

Chemical Warfare and Chemical Arms Limitation* — Dr. Matthew Meselson, professor of biochemistry and Cabot Professor of the Natural Sciences at Harvard University. Disarmament Study Group Seminar, 5:15-7pm, Rm 4-231.

Friday, Nov 16

Global Issues from the White House Perspective* — Prof Lincoln P. Bloomfield, on leave for the Political Science Department as Global Issues Chief, National Security Council. Center for International Studies Seminar, 12:30-2pm, Rm E38-762. Off-the-record.

International Air Law - Series of Eight Lectures* — Arnold Kean, DBE, Barrister-at-law, Sec. and Legal Advisor to the United Kingdom Civil Aviation Authority London (former Chairman, Legal Committee, ICAO). Flight Transporation Laboratory, 1-2pm, Rm 9-250. Free.

Chemical Engineering Seminars* — John Congalidis, Mathematical Modeling of Fluidized-Bed Coal Combustion, 2pm. **Guest speaker: Prof. W.B. Russel,** Princeton University, **Electrostatic Forces and the Rheology of Aqueous Suspensions,** 3pm, Rm 66-110.

Computer Simulation of Two-Dimensional Crystals* — K. Tougan, Nuclear Engineering Department Seminar in Applied Radiation Physics, 3-4pm, Rm 24-115.

Engines and Energy — Future Trends* — William Agnew, G.M. Mechanical Engineering Seminar, 3pm, Rm 3-133.

Progress Report on Thermoeconomic Analysis* — Myron Tribus, Mechanical Engineering Seminar, 3pm, Rm 3-133.

Community Meetings

Wives' Group* — Wed, Nov 7, "A New Look at Women's Activities Around the World," presented by Prof Alice Cook Mellon Fellow, Wellesley College Center for Research on Women, 3-5pm, West Lounge, Student Center. Babysitting provided, Rm 473, Student Center. All women in the community cordially invited.

Technology Wives Organization Monthly Board Meeting*** — Board members only. Discuss upcoming events and introduce new T.W.O. Board members. Wed, Nov 7, 8pm, Rm 303 Westgate.

Prenatal and Parent Education Group Meetings** — Mary Rowe, special Assistant to the President and Chancellor for Women and Work will speak. Wed, Nov 14, noon, 3rd floor, Conference Room, Infirmary, Bldg W5. Info: x3-1316.

Wives' Group: Wed, Nov 14 "Thanksgiving and Other Holidays - What They Mean to Americans", presented by Claire J. Kramsch, Humanities Dept., 3-5pm, West Lounge, Student Center. Babysitting provided Rm 473, Student Center. All women in the MIT community cordially invited.

Recruiting Women Graduate Students — at Home and Abroad** — Jean Chamberlain, Dean Richard, Graduate Student Council Representative. Thurs, Nov 15, 7:30pm, Rm 8-314. Refreshments served.

Weekly Exercise Class** — Taught by professional Patricia Murphy. Sponsored by the Technology Wives Organization, an hour of serious exercise. Every Monday through Dec 17 7:30pm, 2nd floor, Exercise Room, Dupont Gymnasium. $1.50 per class, discount available for TWO members. Information: Rachel Kent 494-0137 evenings.

Lobby 7 Events

Laduvani* — Fri, Nov 9, noon-1pm.

Mandalay* — Fri, Nov 16, noon-1pm, improvisational jazz.

Color photos of Jupiter Fly-by* — On view daily through Nov 26.

Social Events

New Orleans Buffet*** — Steamship round, shrimp creole, dessert, $7.50 including tax. Thurs, Nov 15, Faculty Club. For reservations call x3-4896.

Semi-Formal Dance* — Sponsored by the Ballroom Dance Club. Semi-formal dance with a live band. Sat, Nov 17, 8-midnight, Sala de Puerto Rico, Student Center. Admission: $3.50/person; $6/couple. Ticket info: Haroon 536-1300. Refreshments served. Information: Nancy x5-8291 Dorm.

Faculty Club*** — Open Monday through Friday: Luncheon served noon-2pm; Dinner served 5:30-8pm. Happy Hour: Monday through Friday, 4:30-7:30pm, wide variety of drinks $1.05.

Movies

I Stand Here Ironing* — A film by Midge MacKenzie from the story by Tillie Olsen. Sponsored by the Literature Section. Tillie Olsen's story will be available to read before the film, and Midge MacKenzie along with members of the Literature Section will be on hand after to discuss film and action. Wed, Nov 7, 3:45pm, Rm 9-150. Wine will be served.

Alice in the Cities** — Department of Humanities Film Series. German w/English subtitles. Wed, Nov 7, 7pm, Rm 66-110.

Network** — LSC Movie. Fri, Nov 9, 7 & 10pm, Rm 26-100. Admission: 75¢ w/MIT or Wellesley ID.

The Lady Vanishes** — LSC Classic Film Series. Fri, Nov 9, 7:30pm, Rm 10-250. Admission: 75¢ w/MIT or Wellesley ID.

California Suite** — LSC Movie. Sat, Nov 10, 7 & 9:30pm, Rm 26-100. Admission: 75¢ w/MIT or Wellesley ID.

In The Heat of the Night** — LSC Movie. Sun, Nov 11, 6:30 & 9pm, Rm 26-100. Admission: 75¢ w/MIT or Wellesley ID.

Crime and Punishment** — Department of Humanities Film Series. Russian w/subtitles. Wed, Nov 14, 7pm, Rm 9-150. Free.

The Front** — LSC Movie. Fri, Nov 16, 7 & 9:30pm, Rm 26-100. Admission: 75¢ w/MIT or Wellesley ID.

Shoot The Piano Player** — LSC Classic Film Series. Fri, Nov 16, 7:30pm, Rm 10-250. Admission: 75¢ w/MIT or Wellesley ID.

The President's Analyst** — LSC Movie. Sun, Nov 18, 6:30 & 9pm, Rm 26-100. Admission: 75¢ w/MIT or Wellesley ID.

Wellesley

Chamber Music Concert* — The Wellesley College Chamber Music Society will present a selection of various composers' works. Sun, Nov 11, 8pm, Jewett Auditorium, Wellesley College, Wellesley, Mass.

Music at the Court of Henry VIII* — The Wellesley Collegium Musicum will perform, directed by James Ladewig. Fri, Nov 16, 8pm, Jewett Arts Gallery, Wellesley College, Wellesley , Mass.

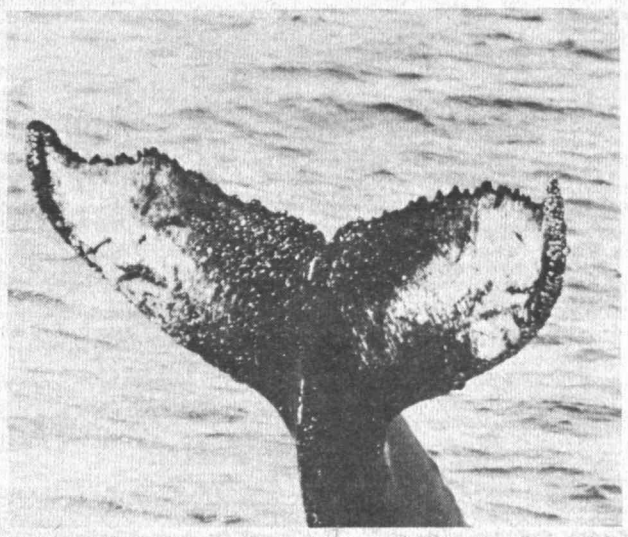
Music

The Black Graduate Student Association Wednesday Evening Jazz Series* — Nov 7: Joe Zeytoonian, BSU Lounge, Walker Memorial Building. Nov 14: Rashaida Shah, Rm 407, Student Center, 9pm. Free.

Noon Hour Chapel Concert* — Tamara Robertson, harpsichord, will perform English Suite in A Major by Bach and "Pieces de Clavecin" by Forqueray. Thurs, Nov 8. Free.

Yanquetruz** — Argentine guitarist, in a recital of songs based on the works of Pablo Neruda, Nicholas Guillen, Garcia Lorca, and others. Presented by the Foreign Languages and Literatures. Tues, Nov 13, 8pm, Brown Living Room, McCormick Hall. Free.

Noon Hour Chapel Concert* — Kathleen Pittman and Louise Treitman, viola da gamba, and Peter Sykes, harpsichord, will perform music of Sieur de Sainte-Colombe and J.S.Bach. Thurs, Nov 15. Free.



Tail markings on a whale help scientists to "fingerprint" these marine mammals. Dr. Charles Mayo will present a seminar, "Whales Close-up" Thursday, Nov. 8, at 3pm in the Sea Grant Conference Room (E38, third floor).

Theater

An Evening of One-Act Plays** — Presented by the Dramashop, directed by Robert Scanlon. *The Elephant Calf* by Brecht, *Footfalls* by Beckett, and *The Harmfulness of Tobacco* by Chekov. Nov 15,16,17 8pm, 850 Cambridge St., Harrington School, Cambridge. Free.

Dance

Hatha Yoga-Oki Zen Yoga* — Cynthia Friedman, on-going Yoga classes for both beginners and intermediates with individual attention. Beginning Wed, Nov 7, 6pm; Thurs, Nov 8, 6:30pm, and Sat, Nov 10, 10:30am. Information: contact Cynthia Friedman x3-4981 Mon-Thurs 1-5pm.

Beginning Tango Workshop* — Sponsored by the Ballroom Dance Club. An excellent opportunity to learn one of the most exciting dances - tango. Sun, Nov 11, 2-4pm, Sala de Puerto Rico. Admission: 75¢. Tickets: Haroon 536-1300 or Nancy x5-8291 Dorm.

Dance Workshop** — Regular meetings Technique classes, Mon & Wed, 3-5pm; Improvisation, Thurs, 1-3pm, T-Club Lounge, DuPont Center. For information, call 253-4456.

Exhibits

The Narrative Impulse* — From the Committee on the Visual Arts. On view Nov 17 through Dec 23, daily 10am-4pm; Wed evening 6-9pm, Hayden Gallery, 160 Memorial Drv, Camb, Mass. For information call 253-4400.

Theodore Roszak: 1930-1955* — From the Committee on the Visual Arts. On view Nov 17 through Dec 31, daily 10am-4pm; Wed evenings, 6-9pm, Hayden Corridor Gallery, 160 Memorial Drv, Camb, Mass. For info call 253-4400.

Recent Photography by Boddy Alter, Judy Black & Hideji Nagura Creative Photography Laboratory Graduate Students* — On view 8:30am-6pm weekdays, Rotch Visual Collections, through Nov 16.

Black & White & Color* — From the Creative Photography Laboratory. On view through Nov 29, Mon-Fri, 9am-10pm; Sat 10am-6pm; Sun noon-8pm, Creative Photography Gallery, 120 Mass Ave., 3rd Floor, Camb, Mass. For information call 253-4424.

Gjon Mili* — Sponsored by the Compton Gallery Committee. A '27 graduate of MIT, he is a noted photographer whose work for Time-LIFE Magazine; his pioneer use of strobe lighting; and his documentation of MIT will be exhibited. On view daily, Mon-Fri, 10am-5pm; weekends, 1-5pm, through Jan 31, 1980, Margaret Hutchinson Compton Gallery, Alumni Center, Rm 10-105. For info call 253-5014.

Max Born - Institute Archives and Special Collections, 14N-118. Max Born, 1954 Nobel laureate in physics, visited MIT in 1925-26 to lecture on crystal dynamics and quantum theory. On display is a 1927 letter from Born to MIT President Samuel Wesley Stratton, which discusses some of Born's Colleagues, including J.R. Oppenheimer, Karl and Arthur Compton, James Franck, and Norbert Wiener. The letter is part of the records of the Office of the President, 1897-1932 (AC 13). On view daily.

MIT Historical Collections* — Vannevar Bush, '16 Bldg 4 corridor. **The New Technology Exhibit,** 2nd floor balcony of Lobby 7. **Energy Exhibit,** Bldg E40, 1st floor. **Solar Energy,** Bldg 8, main corridor. **Samuel Cote Prescott,** main corridor, Bldg 4. **Rogers Building Exhibit,** Bldg 4. **Meteorology,** main corridor, Bldg 8. **Norbert Wiener,** and **Karl Taylor Compton,** Bldg 4. **Laboratory for Physical Chemistry,** Bldg 6.

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.

New Records* — Music Library, Rm 14E-109. Exhibit of record jackets of recent Library purchases.

The Outdoor Collection* — There are many fine pieces of contemporary sculpture displayed on the MIT campus, including works by Alexander Calder, Louise Nevelson, Pablo Picasso, Henry Moore, Tony Smith and Jacques Lipschitz. For information and guides to the campus, call the Information Center, x3-4795.

MIT Science Fiction Society* — Come and visit the world's largest lending science fiction library. Hours posted on door, Rm W20-421.

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

Athletics

Home Schedule* — **Sat, Nov 17: Wrestling,** Plymouth State, 2pm. **Wed, Nov 28: M Basketball,** Brandeis, 7:30pm. **Club Hockey,** Tufts, 7:45pm. **M Gymnastics,** Lowell, 7pm.

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 Nov 14 through Nov 25 to Calendar Editor, Rm 5-113, x3-3270, before noon, Friday, Nov 9.

MIT Chinese Student Club To Present Pianist Fou

The MIT Chinese Student Club will sponsor a concert by Chinese pianist Fou Ts'ong on Friday, Nov. 9, at 8pm, at New England Life Hall, 225 Clarendon St., Boston.

The pianist will play Scarlatti's Six Sonatas, Schubert's Fantasy in G Major, Chou's *The Willows Are New,* Debussy's Images, Vol. 1, and Chopin's Two Nocturnes, Op. 62, and the Ballade in F Minor, Op. 52.

Born in Shanghai in 1934, Mr. Fou studied with the Italian pianist Mario Paci. In 1953 he won third prize in the Bucharest Piano Competition. Later he won third prize at the famous International Chopin Competition and the coveted first prize for his playing of the Mazurkas. These awards resulted in a scholarship to the Warsaw Conservatory, where he earned the Conservatory's top award.

During the four years Mr. Fou spent in Poland he gave over 500 concerts in the Eastern European countries. In 1958, he was forced to choose between returning to China and continuing his life in the world of music. Leaving Poland, he was granted residence, and later citizenship, in London.

Mr. Fou tours for several months each year, playing in every continent.

Alfred Frankenstein of the San Francisco Chronicle said, "Only one pianist I have ever heard exhibits so broad and colorful a gamut of pianistic shading as the young artist from Shanghai...and that was Vladimir Horowitz at his peak."

Tickets are priced at $8 and $6 and may be obtained by calling 494-8956 or 653-3403.

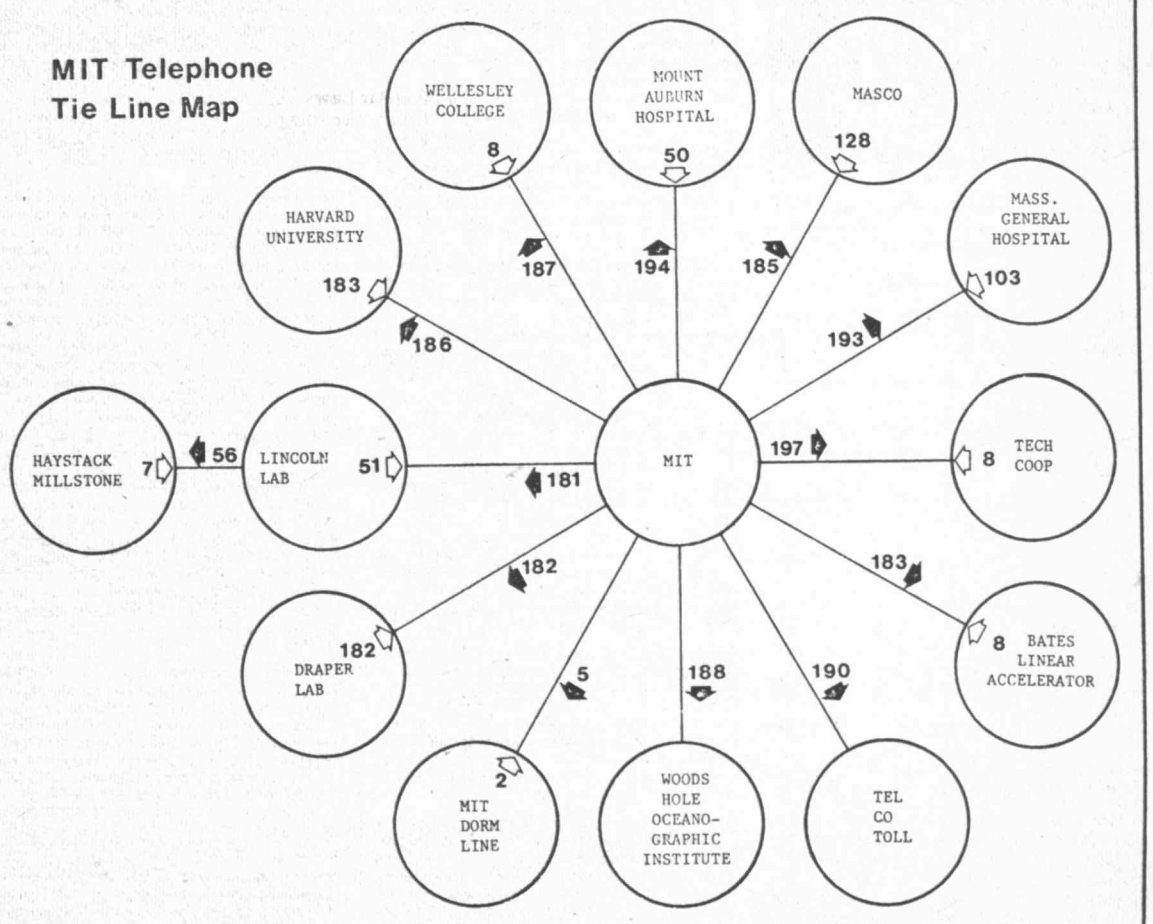
College Bowl Team to Face Rutgers

MIT's College Bowl team will compete Friday, Nov. 9, against Rutgers University at William Paterson College, Wayne, N.J.

If they are victorious—and their coach Warren A. Seamans, director of Historical Collections, is optimistic—they will win a position in the national CBS radio championships to be held in the spring.

Members of the team are: Brian Close, a senior in mechanical engineering from Columbus, Ohio, captain; Steven Karel, a junior in chemical engineering from Newton; Jeffrey Gerecht, a senior in physics from Olympia, Wash.; Todd Eddy, a freshman from Minneapolis, Minn., and Leslie Griffith, a junior in biology from Marquette, Mich., alternate.

CLIP AND SAVE



Save message units by using the direct telephone lines to the organizations shown in this chart.

CLASSIFIED ADS X3-3270

Ads are limited to one per person per issue and may not be repeated in successive issues. All ads must be accompanied by full name and Institute extension. Persons who have no extensions or who wish to list only home telephones may submit ads by coming in person to the *Tech Talk* office, Rm 5-113, and presenting Institute identification. Ads may be telephoned to x3-3270 or mailed to Rm 5-113. Deadline is noon Friday before publication.

For Sale, Etc.

Pr snows w/rims Delta Super Shure trac T78-14, exc cond, $50 pr. x3-3018.

Port typewrtr, Sears, mod Elite, 3 years old, nw ribbon, perfect as new, vy gd price. Call 864-8638.

Technics SA-5060 recvr, exc cond, $150. Call Colin x3-3213.

W wool coat sz 8, absolutely lk nw, $25. Call Larry x3-3939.

Bike M 10 spd, $65, gd cond. Call Dr. Moses x3-1716.

BSO 2 tickets, 2nd bal center, Nov 24, Haydn, Rachmaninoff, $7 ea. Call Fred x3-1740 or 484-4642.

3 spd M bike, exc for $55; snow boots W sz 7 for $5. Call x3-4914 or 494-8113.

Kowa 6 camera 2¼x2¼ SLR w/Braun Flash, exc cond, $250 both. Call Peter Waldo 247-8355.

Camp trails back pack & frme, 2 man nylon tent, Dacron II slp bag, Svea 123 stove & utensils, $20 ea. Call Davis x3-3157 eves.

Robertshaw convert auto setback heating thermostat, $50 nw, now $25; Beckett commercial standard CS25 oil gun, $200 nw, now $100; converted to gas. Call 871-0400.

Blond mahog desk 24x43, 3 drawers, $40 or best; Amana 50 cf freezer, 1 yr guar, was $360. Call 369-8489.

Critically acclaimed JR-149 loudspkrs from Britain. $275/pr, exc cond, were $475 nw. Call John x7295 Lincl or 273-3061.

Snows pr mntd E78-14, rims fit dodge Dart, usd 1 yr, Sears Guardsman, $40/pr. Call Fran x3-7446 or Dan 864-3710.

Microscope E. Lietz, binocular 4 objectives, oil, mech stage, vy gd cond, $350; also A.O. stereo microscope 4 different magnifications, latest mod in nw cond, cost over $500, $250. Call aft 6 738-7734.

M 10spd Raleigh bike, pr snows C78-14, 4 AMC custom hubcaps rowing exercisor all best offers. Wayne Brooks x3-7216 white dble bowl sink-all porcelain.

Sofa love seat & chr, 2 yrs old, multi-color, $240. Call Lloyd x3-2215.

Working frige; gas oven w/stove & htr, 36", minor problem, best offer on both. Call 661-6326 eves.

Panasonic stereo sys, recvr/BSR trntble, spkrs, $75 complete. Call 492-3168 eves.

M Jacket blck wool fur collar, sz 38, pract nw, purchased at Kennedy's $30; brnd nw, nvr worn W coat, sz 20, cranberry color, cost $125 wl sell for $75. Phyllis x8-3428 Draper.

2 prs skiis, poles, gd for beginners, $15 for both. Chris Kirchberg x3-4765.

Rad bltd snows & whls for Ford Dart, yr old. Call x3-6313.

W 9½B navy leather wedge shoes, $14; M med ski parker down, $35 both nw nw worn twice Call x3-2726.

Heathkit color TV, GR484 w/short in power transformer, free. Call x3-7538.

Spinet piano, exc cond, $75 or best. Call Oscar x3-6310.

Guitar Gibson 12 string mod B25 deluxe, exc cond, $250. Call Phyllis x7156 Lincl.

Pr snows w/rims 5.60-15, VW fastck, $30; unbrella stroller, back carrier, hi hr, car seat & bed; bottle warmer all for $12; 3 lg window drapes, rust, 62x90 approx, nice cond, $300. Call x3-3102 or 327-2592.

Ladies sz 5, suede, jacket, $50, worth $100, nvr worn. Call x3-7106 Susie.

Organ, Thomas mod A by Heathkit 2 3 octave keyboard, 12 voices, 13' pedals, ask $800. Call x3-5551 or V02-0681.

90" sofa w/match chr, vibrating recliner, bl vnyl all 3 pcs, $200; Arvin 13; 650/6, 820BTU, 220 volt fan forced elect htr, $50. Call Bill x7316 Lincl kp try.

Sears molding head, drafting mach, draft board, dirt bike, reasonable. Call 774-2045 aft 6pm or x8-3705 Draper.

Minolta 110 zoom SLR auto w/filter, case Vivitar auto 200 flash, $135; also lg Citadel bike lock, $25. Call Matthew lv msg x5-6676 Dorm.

Baldwin 2 key board organ, $400; C78-13 snows, $9 ea; elect paint remover, $9; nw gold bag cover, $15. Bob x8-1418 Draper or 862-5955 eves.

B&O 1900 flly auto trntble in perfect cond, w/3 mo old cart, $225; carefully used Smith Corona 7000 port elect typewriter w/case, carbon ribbon & correct tape, $325. Call x3-6048.

3 tickets for sold out Billy Joel Concert on Nov 12 at Bos Garden. Tom x3-2347 or aft 7pm 494-8245.

Cakes! Have one decorated & personally delivered anywhere at MIT, many flavors, szes, great for birthdays. Call Helen x5-6615 Dorm.

Free old 19" Magnavox color TV; old Scott Stereo amp, mod 222C, $10. Call x8-3386 Draper.

Snows, pr Goodyr 7.35-14 B78-14 bias ply studded, 60% tread, $15 ea. Call Doug x8-3156 Draper.

10-12 CF refrig exc cond $100 or best; pr snows studded with rims $50 F78-14; Zenith AM/FM wood cabinet radio exc cond $15; Cannon 8mm movie camera w/leather case $20. Call J. May x8-2843 Draper or 492-1403 aft 5pm.

$3 haircuts at Lord & Lady in West Roxbury, Wed only. For info call 492-6350.

IBM Eleexec typewriter, best offer. Call 275-9070, Barbara A. Robbins , Lincl Lab x302.

Toyota Corolla snow ties w/rim, $8. Call x3-2342 or 646-5928.

Teak/cane headboard for dble bed, $70; mod teak desk, 26x60 top, $325; both exc cond. Call 56-291 Haystack or 779-6473.

Mtd snows, vy gd tread: pr G78-14 studded Ford rims, $25; G78-15 Dodge/Ply rims, $25; pr C78-14 AMC rims, lk nw, $30; 1 E78-14 studded Chevy rim, fair, $5; pr C78-14 reg tread on AMC rim lk nw, $30. Call Terry x3-1606.

Recliner rust tweed, $70; purple Lord & Lady coat w/hd, sz 9/10, $30; Toaster, Serti sun lamp w/mini goggles; dark blue wedge heel shoes. Call 868-2099 eves.

Sm refrig, $10; metal desk, $40. Call Adron x3-1923 or 354-4036 eves.

Sngle bed, matt, box spng & frme, $20; you pick up. Call S. Siwolop 661-6405 aft 5pm.

Sears Dynaply 24, G78-14 tires on Chevy rim, almst nw, $15. Call x3-3772 or 864-4527.

Fur coats racoon & skunk, sz 8-19, $75 & $200 or best. Call Patty x3-3649.

Pr Ford rims, $10. Call x8-4486 Draper.

Walnut dresser w/lg frmed mirror, exc cond, $150 or best, mst sell. Call Mary 232-7582 eves.

Kryptonite 3 lock, purchased Oct 10 '79, $17 or best. Call Diana x5-7641 Dorm.

Usd ski equip, wide selection. Call Sureau x8277 Lincl.

Elect oven/range, $35; BSR trntble w/cart, $25. Call Steve x5-9521 or Jim x5-9520 Dorm.

A.R. 4xA spkrs, exc, $80 for pr; B&S TV, GE portable, 12 cf, perfect cond, $50. Call Neil 776-3038 anytime.

2 prs mntd & balanced Dunlop 185/70 steel-bltd rad snows on std BMW 320i rims, lss than 3K, $90/pr or $160 for all 4. Bruce x3-2363 or 828-2523 eves.

Ski package, wood skiis, 76" w/marker bindings, Nordica boots sz 13, & alum poles, $50, also Head metal skiis, 83", $15. Call x3-3106.

Granite blocks, grey & wht, 15x10x4, approx 80 linear ft, $3.50 per foot, nego wl deliver. Call 648-8460 eves.

3-pc maple bdrm set, dbl chest of drawers, breakfront w/cabinet, formica top surfaces $225; kitchen maple table, $25. Women's walking shoes 8½, espadrilles 8. x3-3461.

TRS-80 Microcomputer w/expansion interface & RS-232 port barely used, nw in Aug, nego. Call Michael x3-5053 or 926-4126 eves.

Tandberg TCD 310 cassette deck; pd $525, sell for $275 or best. Lv msg for Carl McPhee at 825-6700.

Cannon AE1 exc cond, mst sacrifice $250. Call (1) 620-1572 Fran.

Vehicles

Classic '55 Ford, V8 bl & wh, bdy & eng gd, $795. Call Manny x7565 Lincl.

'67Chevy 4 dr hdtop black elect ign, A/C, PS & PB, AM/FM, vy clean in & out, mech exc cond, nw brks, 2 mtd snows, Call x5792 Lincl.

'68 Mercury Cougar, maroon, exc rn cond, 150K, mostly reblt eng, 17-22 mpg, slight rust, $900. Call 536-5527 aft 4pm.

'69 VW Bug, reblt eng, snows, bdy rough, inside gd. Call 272-4129 aft 3:30pm.

'70 Chevy Kingswood wg, PS/PB, gd run cond, bdy gd cond, nw carb, $600 or best. Call Don x3-2541.

'70 Fiat 124 sport coupe, runs nds brk work, $200. Call x3-3242.

'70 MGB Convert w/nw Mich, nw brks, roll over bar, gd top, AM/FM, clean solid bdy, fun car, 30 mpg reg gas $1250. Call x8-3116 Draper.

'70 Pontiac Lemans Sports, 70K, nw radiator & brks, PS, man brks, ask $490, nego. Call x5-9640 Dorm or 494-8447 for Chen-dao Lin.

'71 Buick Skylark, vy gd cond, gd bdy, PS & PB, nw trans, $1500. Call Linda x633 Lincl.

'71 Ply-Valiant 6 cyl, gd run cond, $850 or best. Call Dave Gaigal 661-9779 aft 5pm.

'72 Ford Capri, runs well, bdy fair, many extras, mst sell, $700. Call Fran (1) 620-1572 Framingham.

'72 Ply stat wg, PS & PB, A/C, gd run cond, $550. Call 494-9020.

'72 VW super beetle, sunrf, AM/FM, r/defrost, auto stick shift, Mich tires, perf cond, best offer over $1500. Call 443-8343.

'73 Fury, V8, A/C, cruise, stereo, etc, 70K, $575 or best. Call Lee 354-1732.

'73 Gremlin, 6 cyl, auto, 31K, gd cond, owner lv country, $1400. Call 494-8980 or x3-1634.

'74 Chevy Nova, PS & PB, A/C, recent reblt auto trans, gd bdy 4 nw tires, snows, $1900. x3-6702 or 494-0028 eves.

'74 Fiat 128 4 spd, 50K, 5 Mich, exc cond, $1250. Call Rony x5-9636 Dorm or 494-8459.

'74 Ply Valiant, 6 cyl, auto, PS, reg gas, 58K, $1600 or best incl snows. Call 344-5382.

'75 Cordoba Brougham, 37K, show rm cond, always garaged, gold beige velour int, PS, PB, AM/FM stereo w/mntd studded snows, nw $8000, ask $3650. 444-5293 aft 5pm.

'75 Dodge Dart, auto, 4 dr, PS, A/C, 35K, 1 owner, always garaged, no rust, $2800. Call 964-6164.

'76 Ply Arrow H-Back, exc cond, 28K, 4 spd w/snows, $2000. Call 494-8912 aft 5pm.

'77Datsun 280Z, gr w/strip, 5 spd, A/C, AM/FM stereo csstt, $6500. Mike x8-2884 Draper.

'77Volare wg, 8 cyl, 36K, exc cond, A/C, other special options, $3500. Call x3-1313.

'78 Dodge Diplomat, 225 slant six, A/C, vnyl top, AM/FM PS & PB, 20K, super cond, well maintained ask $3800. Call x3-2772.

'78 Ford cust blck, pickup, lttle usd, 5400 mi, reg gas, auto PS, PB radio, exc cond, $4500. Call 489-0594 or 648-6197 eves.

'78 Moped Columbia, under 400 mi w/basket, $390. Call Carol x3-4765.

Cape Dory 14' day sailer, incl sals, fiberglass bdy, oars, trailer, gd cond, $1150. Call Ted x7177 Lincl or 862-6085 aft 6pm.

Housing

Arl mod 2 BR duplex, 5 rm & unfinish basement gas ht, 2 car park, cls to T inc quiet dead end st, $335/mo inhtd. Call x3-6919.

Beacon Hill, 1 BR apt for short term sublet, lg LR, BR, eat-in K, B, flly carpeted, avail Nov 15 until Jan 1, '80, $75/wk, $300/mo, $450 for entire period. Call Hans or Lori x3-7764.

Studio sublet Jan-Aug '80, prime loc in Beacon Hill, 2 min, Charles St. Station, security, hot water & ht incl, $290/mo. Call x3-2618 or 742-9631.

Belmnt, quiet attractive rm in hme nr woods, K prv, park, nonsmoker, $38/wk. Call 484-6833.

Sngl rm & dble rm for rent in Camb, nr Central Sq. 661-4111 ask for Tom.

Chelmsford well kept 3 BR, 7 rm +/- ranch, ½ acre wded lot, gas ht & ht water, well insulated, many extras, move-in cond, $66900. For more info Dave x7689 Lincl.

Eastgate sublet, Dec 21-Jan 30, 10th fl, 1 BR furn w/king bed, carpet, $300/mo nego. 494-8157 aft 6pm.

Melrose, 5 renov rms, 2 BR, 1st fl, mod K & B, dishwah, gar, dead-end st, no pets, hw floors, sec depos, couple preferred, $375, no util. Call x3-7792 or 665-5017.

West Roxbury, 2 BR apt, 2 fam, 2nd fl, $350/mo + ht. Call Oscar x3-6310.

Animals

2 lovable affectionate cats free to gd home, 1½ siamese, solid black altered M; other orange & wh fixed F. Call x3-7188.

Pedigreed blck Persian F cat, yr old, both for $325; selling for best. Call 10am-6pm x3-6754 aft 6pm or 628-7536.

Gentle riding horse, standard bred gelding, 14 yrs $550. Call x3-4336.

Lost and Found

Lost: Key ring, West or Main bldg. Call x3-6452.

Lost: Gold cross pen, betw bldg 9, 37 & 33. Call Bob x3-2272.

Lost: Reward for lady's wrist watch w/blck band, possibly on Amherst St, 10/31. Call Laura x3-5658.

Wanted

Visit scholar '80-81 academic yr, married, teenager, sk 2 BR furn hse or apt, Belmnt preferred. Call Ellen x3-2675.

Wanted: Bassist to join intermission trio + 1. Music of '20's-40's. Call Prof Roy Lamson x3-4003, 20D-220.

Wanted: Dead storage for 2 cars in Bos area. Call Prof Marks x3-1992.

Wanted: French doors, apprx 2½x80" 15 panes of glass on ea, nd 3, wl buy 4, if necessary. 924-7239.

Non-student subjects needed to participate in a study of memory & motor functions. Payment is $30 for 6 2hr sessions. Call Psychology Depart 253-5793 aft 5pm lv name & number on tape.

Visually-impaired MIT student in nd of volunteer readers, pls contact Social Serv, Stefan Krug x3-4911.

Wanted: bass viol, Full or 3/4 sz, cond not important if playable. Call Bill x8-3407 Draper.

Wanted: Sublet rm or apt during Dec 15-Feb 1 for 1 person. Call Nick x3-3993.

Visit prof sk clean quiet rm w/B or studio within 45 min walk distance of MIT, wl pay to approx $200. Call x3-5130 or lv msg x3-4330.

Wanted: Used encyclopedia set, wl pick up. Call x3-1638 or 876-8734.

Roommates

M non-smoking rmmate to shr 1st fl of family hse on Lake St, Arl, 2 BR, 1 blk from Mass Ave, $160/mo plus util, avail now. Call Phil x3-2306 days or 643-4578 eves.

F rmmate 25+ to shr 7 rm apt, 2 & 3rd fl of 2 fam hse, 2 rms for prv use, shr K, LR, DR, frnt & back porches, tree lined st, 3 min walk to Inman Sq & T. $125/mo + util. Call 625-2393 or x3-6235.

F rmmate wntd for 3 BR apt in Back Bay, frplc, 2 B, exc cond, $220 per mo, incls ht. Call 646-5310 aft 6pm.

Mature, quiet neat, non-smoker M rmmate to shr lg 6 rm apt in No. Camb, $175/mo + util start Dec. 1. Call x3-7133 or 227-4376.

Carpools

Ride in style '80 in deluxe Dodge 15 pass van to & from Hampstead NH, Plaiston, Haverhill, Andover, No. Andover, No. Reading, Wilmington to MIT, 8:30-5pm. Call Carl x3-2250.

Parking Stickers

Note to parking sticker swappers: please remember to inform your supervisor and the Campus Patrol of the exchange you have made so that their records accurately reflect your new parking area.

Swap Albany for East. Call Jenny x3-4710 or Alan x3-2181.

Miscellaneous

Experienced tech typist wl do all kinds. Call Scotti x3-6345.

Wl type thesis, ms, tech, fast & accur, IBM Correct Select. Call Debbie x3-1848.

Let my fingers do your typing technical, 80 + accurate, satisfaction guar. Call 246-2187 eves.

Wl do all kinds of typing, thesis, reports, fast & accur, reasonable rates. Call x3-6870.

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).

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

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

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

Dick Higham	*3-4278*
Pat Williams	*3-1594*
Susan Lester	*3-1593*
Appointments: Tertia Perkins	*3-4270*
Virginia Bishop	*3-1591*
Richard Cerrato	*3-4266*
Ken Hewitt	*3-4267*
Appointments: Marsha Gens	*3-4268*
Sally Hansen	*3-4275*
Lawrence Milan	*3-2928*
Kathleen Rick	*3-4269*
Appointments: Jenni Leibman	*3-4274*

Academic Staff, Inpatient Nurse, in the Medical Dept. will perform bedside nursing in an 18 bed inpatient facility. Duties include general medical-surgical nursing. Massachusetts registration and at least 2 years nursing experience required. Experience in medical-surgical nursing preferable. C79-31 (11/7)

Admin. Staff, Operations Manager, in the Food Service to assist in all aspects of the food service, with major emphasis on unit operations; assist in personnel selection; develop menu structure for contract and case unit operations; evaluate new and currently used products; assist in preparing unit budgets, identify and recommend revisions in unit operational procedures. A Bachelor's degree, or equivalent, plus at least 5 years' administrative experience required. A strong food background, preferably within a commercial food operation also necessary, as well as merchandising ability. A78-84 (11/7)

Administrative Staff, Coordinator of Dining/Residence Programs in the Office of the Dean for Student Affairs will design, implement and evaluate recommended dining programs (i.e. consumer education, food co-op, faculty and alumni participation programs) in conjunction with other Institute offices, student organizations and other involved parties; provide staff support to Institute committees concerned with dining issues; assist in studies related to dining programs; initiate related long-range planning; and participate in other activities and projects as necessary. Position requires a Bachelor's degree and 1 to 3 years' college-level student services experience (preferably in residence/food service area). Temporary for 1 to 3 years. A79-84 (11/7)

Admin. Staff, Applications Programmer, in the Information Processing Services Office, to translate external specifications to internal program specifications for new or modified programs; prepare logic diagrams; program; test and debug programs; document programs; assist users. An Associate's degree, or equivalent, some programming experience required. A79-81 (10/31)

Admin. Staff, Subcontract Administrator, in Purchasing and Stores will perform high dollar subcontract procurement and administration under Institute Federal contracts and grants on cost reimbursement, fixed price, time and materials, and labor hour basis involving research and development of extraordinary technical complexity. Bachelor's degree in accounting or business and several years of applicable subcontract administration experience, including responsibility for procurement from commercial contractors in areas such as cost reimbursement, negotiated fixed price, etc. required. A79-82 (10/31)

Admin. Staff, Alumni Regional Director for Southeast Region to have responsibility for all Alumni Association activities in this area (Alumni Fund, Club activities, Alumni Relations Programs.) Position includes interaction with MIT alumni, faculty and administration as well as considerable travel. MIT degree or extensive knowledge of the Institute is required. A79-83 (10/31)

Sponsored Research Staff, Technical Asst., in the Dept. of Nutrition and Food Science will employ analytical techniques in the preparation and chemical analysis of biological samples to determine trace mineral content, amino acid composition and various other components. Bachelor's degree in chemistry, medical technology or biology and 2 years experience using analytical techniques required. Knowledge of atomic absorption spectrophotometry, automated amino acid analysis, HPLC and fluorescence techniques preferred. R79-323 (11/7)

Sponsored Research Staff, Research Specialist, part-time, in the Cell Culture Center will grow cells from primary culture and produce cell lines in suspension and monolayers. Techniques include preparation and quality control of cell culture media and propagation of animal cells and viruses. A Bachelor's degree, preferably in Biology or Chemistry, required. Experience in animal cell culture is desirable. R79-182 (11/7)

Sponsored Research Staff, Research Specialist, temporary, to provide support in data acquisition, analysis and computer modelling for environmental, health and safety problems in government and private contracts. Interest in health, safety and environmental problems, strong analytical skills, working familiarity with the regulatory activities of OSHA, EPA or similar agency required. Master's degree in public policy, management, economics, or interdisciplinary science or related degree also required. Knowledge of engineering or technology a plus. Temporary for less than 12 months. R79-316 (10/31)

Sponsored Research Staff, Digital Design Engineer, temporary, in the Research Laboratory of Electronics will design PDP 11 and PDP 12 peripheral controllers and DMA I-0 processors, audio signal processing units, devices incorporating microcomputers and microprocessors. Bachelor's degree required. Psychoacoustics experience helpful. R79-320 (10/31)

Sponsored Research Staff, Research Engineer, temporary, in the Energy Laboratory will test and further develop a computing system for simulation and design of synthetic fuel processes: design and implement FORTRAN computer programs; test and develop computer models; consult on application and use of computer models; maintain, update and document programs and subsystems; train users; prepare reports; direct students on technical projects. Advanced degree in chemical engineering and 1 year's experience in process simulation, or Bachelor's degree and 1-3 years' experience required. Proficiency in FORTRAN programming, good analytical and math skills (including knowledge of numerical methods) and background in process modelling and design and applied thermodynamics also required. Temporary for 6 months. R79-317 (10/31)

Sponsored Research Staff, Project Coordinator, will manage and coordinate activities, records and reports for project dealing with housing choice and human aging in the Laboratory of Architecture and Planning. Ability to organize and maintain record systems, schedules, communications and report writing and excellent interpersonal skills necessary. At least 3 years experience in project research or management also necessary. R79-319 (10/31)

Sponsored Research Staff, Technical Asst., in Nutrition and Food Science Dept. will help to develop a novel sustained-release polymer system that can be used for the long-term administration of important drugs. Bachelor's or Master's degree in chemistry, chemical engineering or biochemistry required. Laboratory experience also required. R79-318 (10/31)

Sponsored Research Staff, Technical Asst., in Toxicology Laboratory, Nutrition and Food Science to investigate alteration in nucleic acid structural function resulting from binding of chemical carcignogens. Work involves isolation and manipulation of bacteriaphage DNA. Bachelor's degree in chemistry or biology required, as well as familiarity with modern analytical techniques required. R79-312 (10/31)

Sponsored Research Staff, Medical Laboratory Technologist, will perform clinical tests on patients in a 12-bed research unit and on research studies done on an outpatient basis. Will be working with various types of automated equipment, and a PDP computer system performing hematology, clinical microscopy and chemistry tests. Bachelor's degree and graduation from accredited medical technology school with ASCP registration necessary. At least 2 years' hospital laboratory experience and ability to work accurately and efficiently also necessary. B79-314 (10/31)

Exempt, Animal Laboratory Specialist, temporary, in the Center for Cancer Research will supervise a mouse breeding program: wean young; maintain a running census; participate in a variety of genetic and immunological experiments. Bachelor's degree in Biology or Veterinary Science and animal care experience required. Knowledge of mouse breeding and pedigree maintenance also required. E79-46 (11/7)

Exempt, Coordinator for Women Student Interests, Office of the Dean for Student Affairs. Responsible for service to all women student groups and individuals including information and referral to faculty and staff resources, offices and other sources of support both within the Campus and in the Greater Boston area; assistance to activities of various women student; publicity of events and meetings. Qualifications include demonstrated communications and organization skills, ability to take initiative in finding out and disseminating information and understanding of and ability to encourage diverse views and interests. Prior MIT experience desirable. E79-45 (10/31)

Admin. Secretary to the Dean, School of Humanities and Social Science to handle varied responsibilities: read and route correspondence for action; schedule meetings and appointments; arrange travel; type and edit correspondence, and compose routine replies; maintain personnel records; monitor office accounts; coordinate fellowship application processes, and provide support services to Assistant to the Dean. Excellent general secretarial skills, ability to work independently required. Institute experience and shorthand skills desirable. Non-smoking office. B79-254 (10/31)

Admin. Secretary to the Director of the Nuclear Reactor Laboratory to type letters, technical reports; arrange meetings and travel; coordinate and supervise work of other support staff; prepare reports for publication. At least 4.5 years' applicable experience, ability to deal effectively with others and to organize priorities required. 40 hrs/wk. B79-696 (10/31)

Sr. Secretary in Admissions to two staff members will maintain calendar; handle mail; arrange travel; perform reception duties; answer phones; provide assistance for miscellaneous tasks as necessary. Excellent typing, organizational and interpersonal skills and ability to transcribe from machine dictation required. At least 2.5 years' applicable experience also required. B79-711 (11/7)

Sr. Secretary to the Manager of Purchasing Field Office and Subcontract Administrator in Purchasing and Stores Dept. will type subcontracts, purchase orders and correspondence; set up and maintain files; schedule meetings and appointments; assist with analysis, reporting and recording of business; maintain budget, invoices, records and logs; issue reports on subcontract business. Excellent clinical, communicational and organizational skills, good typing skill required. At least 2.5 years' applicable experience also required. B79-716 (11/7)

Sr. Secretary, part-time, in the Office of Personnel Services to perform secretarial and word processing functions to support the policy manual project and the resume acknowledgement system. Will type and edit manual copy on word processing equipment, maintain mailing list and make publication arrangements through Graphic Arts and outside vendors; arrange for and attend Editorial Board meetings. Resume acknowledgements tasks involve preparing letters on word processing equipment and distributing them for signature. Good to excellent typing skill, ability to meet deadlines and to work accurately with detail required. Knowledge of English grammar also necessary. Ability to operate work processing equipment is preferred, but selected applicant can be trained. B79-709 (10/31)

Sr. Staff Asst. to three Personnel Officers in the Office of Personnel Services will type letters, reports, forms, etc., compose some correspondence; process mail; prepare office forms; maintain calendars; answer phones and inquiries; update job books; assist new employees with forms completion and arrange medical and Benefits/Orientation appointments; process resumes; check references; assist with reception area coverage and monthly evening interview coverage. Ability to interact with a variety of people, establish priorities and good typing skill and pleasant telephone manner necessary. At least 2.5 years applicable experience also necessary. B79-704 (10/31)

Sr. Secretary in the Center for Policy Alternatives will type reports, correspondence and proposals from draft or machine dictation; arrange travel, meetings and appointments; answer routine correspondence and inquiries; operate Wang word processor. Good secretarial skills and ability to operate Wang word processor required. At least 2.5 years direct/related experience also required. B79-705 (10/31)

Sr. Secretary in the Center for Policy Alternatives will transcribe machine dictation; type proposals, reports and correspondence (some on word processor); arrange travel, appointments, meetings and conferences; review accounting statements; organize and maintain files; answer phone calls. Good secretarial and organizational skills, initiative and willingness to learn word processing necessary. At least 2.5 years' applicable experience also necessary. Secretarial school training a plus. B79-706 (10/31)

Sr. Secretary in the Radioactivity Center will type letters, memos, forms from handwritten or dictated material; handle petty cash, payroll reports, voucher payments and requisitions; order and maintain office supplies; assist in questionnaire preparation; arrange travel and process travel vouchers; escort patients to other areas on campus for appointments. Excellent secretarial and interpersonal skills, ability to compose routine correspondence and command of English language and grammar required. At least 2.5 years applicable experience also required. Professional secretarial background and knowledge of MIT procedures helpful. 37.5 hrs./wk. B79-698 (10/31)

Sr. Secretary in the Provost's Office to handle varied duties in a busy office involving much contact with faculty members, senior officers and outside visitors from corporations, other universities, etc. Will have responsiblity for a major filing system, complicated travel arrangements, telephoning, preparing correspondence and a variety of other secretarial duties. Must be willing to take direction and work closely with other staff members, able to anticipate and recognize office priorities. The ability to work with frequent interruptions, a command of the English language and very good typing also necessary. At least 2.5 years applicable experience also necessary. 37.5 hrs./wk. B79-702 (10/31)

Sr. Staff Asst. in the Libraries Archives section to type various materials from written draft or machine dictation; maintain files; statistics; answer phones; distribute mail; compose correspondence; handle a variety of other tasks as necessary. Good typing skills, ability to work with a group and to perform tasks independently required. At least 2.5 years' applicable experience also required. B79-697 (10/31)

Secretary, temporary in Career Planning and Placement Office will assist students with sign-ups for recruiting interviews; handle mailings; collect and process return cards; type lists; compile various data; assemble recruitment schedules; perform miscellaneous duties as necessary. Good typing skill, ability to work well with others and good punctuality and attendance record required. At least 1 year's applicable experience also required. Temporary 10/29/79-4/1/80 B79-714 (11/7)

Secretary,part-time, in the Office of the Dean of Engineering will type correspondence and reports (involves almost exclusively tape transcription); maintain files; arrange meetings; answer phones and inquiries; distribute mail; assist in routine tasks as necessary. Excellent typing skill, command of English grammar and tact required. High school graduation and 1 year's direct/related experience also required. 18 hrs./wk., flexible hours. B79-718 (11/7)

Secretary, part-time, in the Center for Cancer Research to two faculty members involved in research on cancer and immunology. Will type and proofread reports, manuscripts, grants and correspondence; answer phones and provide routine information or refer callers to appropriate persons; schedule appointments and meetings; maintain files and records as necessary; compare actual expenditures with budgetary projections; make travel arrangements. Good typing, at least 1 year's secretarial experience and ability to take responsibility required. 17.5 - 20 hrs./wk. B79-351 (11/7)

Secretary in the Medical Dept. to primarily act as department "floater": relieve in secretarial offices as necessary; assist secretaries with heavy work loads which involves transcription, typing, filing, handling mailings, etc. Will also transcribe reports for part-time physician and generally perform a variety of duties. Excellent typing skill, and flexibility required. Secretarial experience also required, preferably in a medical setting 37.5 hrs./wk, B79-167 (11/7)

Secretary/Receptionist, in Graphic Arts Service will handle complete telephone system; perform routine secretarial and clerical duties; type and handle purchase orders. Good typing skill and ability to operate a calculator necessary. High school graduation and at least 1 year's related experience also necessary. B79-699 (10/31)

Editorial Asst. will provide assistance to Production Manager of *Technology Review*: copyread; proofread; file; handle correspondence and layout according to instructions. Command of English language required. At least 2.5 years applicable experience also required. Printing management and/or production experience preferred. B79-712 (11/7)

Sr. Technical Typist, part-time, in the Center for Space Research will type technical material on a DEC word processor for several faculty and staff members. Excellent typing skill required. At least 2.5 years applicable experience also required. Word processing experience and/or secretarial or business school training preferred. 20-25 hrs./wk. B79-715 (11/7)

Sr. Office Asst. in Housing Office to assist in areas involving student family housing: answer student inquires; maintain waiting lists; type agreements; maintain various records and perform various clerical and administrative duties related to the provision of housing services to students. Excellent communication skills and ability to work in a service oriented function required. Applicants must have at least 1 year's applicable experience in addition to general secretarial skills. B79-578 (11/7)

Sr. Office Asst. in the Industrial Liaison Office will order, replace and organize publication stock and ensure prompt and accurate filling of orders; maintain equipment and supplies; perform library searches; type lists, labels, etc.; train new students. Excellent typing and telephone skills, ability to organize work and set priorities necessary. At least 2.5 years applicable experience also necessary. B79-703 (10/31)

Sr. Office Asst. in the Libraries Historical Collections will answer written and telephone inquiries; assist visiting researchers in the use of the files; catalogue and file new material; research and write texts for historical exhibits and artifacts. Accurate typing skill and demonstrated writing and organizational ability required. At least 2.5 years applicable experience, or equivalent, also required. Museum experience a plus. 40 hrs./wk. B79-708 (10/31)

Office Asst. in the Alumni Association will process and distribute mail; act as messenger; maintain supplies; verify, distribute materials for staff signatures and mail Alumni Fund acknowledgements. Ability to stand all day and push a two wheel cart from building to building necessary. Ability to handle detailed work accurately and 1 year's experience also necessary. B79-713 (11/7)

Office Asst. in the Registrar's Office will assist in student registration; maintain related records through use of IBM record-keeping terminals; handle student requests for registration corrections; type form letters. Good typing skill, ability to handle figures accurately and to work in a versatile environment necessary, as well as a desire to handle detailed work. At least 1 year's applicable experience also necessary. College background (student or employee) desirable. B79-719 (11/7)

Office Asst. in the Purchasing and Stores Dept. will expedite deliveries; coordinate problematic invoices and incorrect deliveries; type purchase orders and correspondence; maintain files. Good typing skill and at least 1 year's applicable experience required. Experience in purchasing, production control or program administration a plus. :B79-717 (11/7)

Office Asst., part-time, in Earth and Planetary Sciences: answer phones; provide information to callers and visitors; handle reprint requests; xerox manuscripts and other material; type forms and other material; assist with special projects. Position involves contact with students, faculty and staff. High school graduation or equivalent, ability to work with interruptions and typing skill also necessary. 20 hrs./wk., 4 days, preferably mornings. B79-701 (10/31)

Service Staff, General Helper, temporary in Graphic Arts Service will clean, oil, and supply raw materials to the bindery, press room, ozalid room, etc.; operate xerox machine. Graduation from high school, or equivalent, necessary. Must be willing to work overtime when required. Temporary 4-6 months. H79-184 (11/7)

Service Staff, Cook's Helper, in the Food Service will prepare food products for breakfast, lunch and dinner menus; stock and set up meal stations; assist in preparation of soups, sauces and graview; maintain work area; perform other duties as necessary. Ability to speak and read English and to compute standard recipe changes required. Experience in quantity food preparation also required. Mon.-Fri., 7:00am-4:00pm. H79-185 (11/7)

Service Staff, Animal Technician, part-time, in the Dept. of Nutrition and Food Science/Toxicology Research Laboratory will weigh animals; clean and change cages; prepare diets; perform miscellaneous related tasks. 10 hrs./wk. H79-186 (11/7)

Service Staff, Counter Person, in the Food Service to assist in food portioning; serve food; set up and dismantle work station; maintain sanitary work area; handle other related duties as necessary. Applicants must be able to read and speak English H79-158 (11/7)

Service Staff, Technician B, Radiation Protection, in the Environmental Medical Service Linear Accelerator, Middleton, MA to advise personnel on radiation hazards; operate radiation monitoring systems; establish safe radiation zone entry conditions; supervise radiation protection aspects of research. Position requires 2 years post high school, technical school training, emphasizing radiation protection or health physics and some applicable experience. H79-156, H79-157 (10/31)

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

ADMINISTRATIVE STAFF:

A77-3, Admin. Staff, Systems Programmer, Information Processing Services (2/16)

A79-9, Admin. Staff, Mechanical Engineering (2/14)

A79-47, Admin. Staff, Mechanical Engineer-Operations, Physical Plant (8/15)

A79-53, Admin. Staff, Asst. Editor, Technology Review (8/29)

A79-54, Admin. Staff, Director of Alumni Fund, Alumni Association (8/29)

A79-55, Admin. Staff, Asst. to Manager of Central Utilities Plant, Physical Plant (8/29)

A79-58, Admin. Staff, Industrial Liaison Officer, Industrial Liaison Program (9/5)

A79-59, Admin. Staff, Systems Analyst, Information Processing Services (9/5)

A79-60, Admin. Staff, Technical Supervisor, Information Processing Services (9/5)

A79-62, A79-63, Admin. Staff, Applications Programmer, Information Processing Services Office (9/12)

A79-64, A79-65, Admin. Staff, Systems Analyst, Information Processing Services Office (9/12)

A79-67, Admin. Staff, Building Maintenance Manager (Structural), Physical Plant (9/12)

A79-71, Admin. Staff, Associate Director, Housing and Food Service (10/10)

A79-73, Admin. Staff, Programmer Analyst, Information Processing Office (10/17)

A79-74, Admin. Staff, Industrial Liaison Officer, Industrial Liaison Program (10/17)

A79-75, Admin. Staff, Asst. Director, Associates Program (10/17)

A79-77, Admin. Staff, Administrative Officer, Provost's Office/Technology Adaptation Program (10/24)

SPONSORED RESEARCH STAFF:

R77-91, Spons. Res. Staff, Sr. Accelerator Physicist, Lab for Nuclear Science (5/18)

R77-137, Spons. Res. Staff, Experimental Physicist, Bates Linear Accel. (8/31)

R77-228, Spons. Res. Staff, Plasma Physicist, Res. Lab of Electronics (1/4)

R78-93, Spons. Res. Staff, Res. Engineer, Civil Engineering (5/10)

R79-102, Spons. Res. Staff, Research Associate, Mechanical Engineering (5/30)

R78-105, Spons. Res. Staff, Temp., Lab for Nuclear Science (5/31)

R78-135, Spons. Res. Staff, Research Lab of Electronics (7/26)

R78-136, Spons. Res. Staff, Laboratory for Computer Science (9/12)

R78-145, Spons. Res. Staff, Electronics Engineer, Lab for Computer Science (8/16)

R78-168, Spons. Res. Staff, Programmer, Center for Space Research (8/30)

R78-105, Spons. Res. Staff, Physicist, temporary, Laboratory for Nuclear Science (9/5)

R78-208, Spons. Res. Staff, Postdoctoral Research, Nuclear Materials, Nuclear Reactor (9/27)

R78-209, Spons. Res. Staff, Postdoctoral Research, Nuclear Materials, Nuclear Reactor (9/27)

R78-217, Spons. Res. Staff, Research Associate, Civil Engineering (10/18)

R78-228, Spons. Res. Staff, Research Engineer, temporary, Energy Lab (10/18)

R78-246, Spons. Res. Staff, Systems Programmer, Lab for Computer Science (11/1)

R78-279, Spons. Res. Staff, Electron Microscopy Engineer, Material Science and Engineering (12/13)

R78-285, Spons. Res. Staff, Accelerator Physicist, Lab for Nuclear Science (12/13)

R78-286, Spons. Res. Staff, Systems Programmer, Lab for Computer Science (12/13)

R78-306, 307, 308, Spons. Res. Staff, Laboratory for Information and Decision Systems (1/10)

R78-311, 312, Spons. Res. Staff, Lab for Computer Science (1/10)

R79-21, Spons. Res. Staff, Research Scientist, Energy Lab (1/24)

R79-22, Spons. Res. Staff, Lab for Nuclear Science (2/7)

R79-24, Spons. Res. Staff, Research Associate, Heterocyclic Chemist, Chemistry (3/7)

R79-27, 28, 29, Spons. Res. Staff, Transportation Systems, Center for Transportation Studies (2/14)

R79-38, Spons. Res. Staff, Policy Analyst, Energy Laboratory (2/28)

R79-105, Spons. Res. Staff, Research Associate, Meteorology Dept. (5/2)

R79-106, R79-107, Spons. Res. Staff, Experimental Plasma Physicist, Plasma Fusion Center (5/9)

R79-125, Spons. Res. Staff, Counselor, Upward Bound Program (6/6)

R79-129, Spons. Res. Staff, Experimental Plasma Physicist, Plasma Fusion Center (6/6)

R79-131, Spons. Res. Staff, Electrical Engineer, temporary, Center for Materials Science and Engineering (6/6)

R79-135, Spons. Res. Staff, Microwave Engineer, Research Laboratory of Electronics (6/13)

R79-147, Spons. Res. Staff, Research Associate, Architecture Dept. (6/27)

R79-150, Spons. Res. Staff, Laboratory for Nuclear Science (7/11)

R79-155, Spons. Res. Staff, Laboratory for Nuclear Science (7/11)

R79-156, Spons. Res. Staff, Project Specialist, Center for Space Research (7/11)

R79-157, Spons. Res. Staff, Technical Asst., Chemistry (7/11)

R79-170, Spons. Res. Staff, Research Specialist/Technical Asst., Biomechanics and Human Rehabilitation Laboratory, Mechanical Engineering (8/15)

R79-171, Spons. Res. Staff, Specialist/technical Asst., temporary, Mechanical Engineering (8/15)

R79-172, Spons. Res. Staff, Research Specialist/Technical Assistant, temporary, Mechanical Engineering (8/15)

R79-176, Spons. Res. Staff, Research Engineer, Electronic, Haystack Observatory (8/15)

R79-179, Spons. Res. Staff, Electric Utility Systems, Programmer/Analyst, Energy Laboratory (8/15)

R79-180, Spons. Res. Staff, Design Engineer, National Magnet Laboratory (8/15)

R79-192, Spons. Res. Staff, Electronics Engineer, Lab for Nuclear Science (8/29)

R79-196, Spons. Res. Staff, Lab for Computer Science (8/29)

R79-206, Spons. Res. Staff, Computer Systems Engineer, Meteorology Dept. (8/29)

R79-209, Spons. Res. Staff, Center for Space Research (8/29)

R79-210, Spons. Res. Staff, Postdoctoral Associate, Lab for Nuclear Science (8/29)

R79-211, Spons. Res. Staff, Research Scientist, Nuclear Engineering (8/29)

R79-212, Spons. Res. Staff, Staff Scientist, National Magnet Laboratory (9/5)

R79-213, Spons. Res. Staff, Plasma Physics Experimentalist, Plasma Fusion Center (9/5)

R79-215, Spons. Res. Staff, Research Associate, Energy Laboratory (9/5)

R79-216, Spons. Res. Staff, Technical Asst., Dept. of Nutrition and Food Science (9/5)

R79-219, Spons. Res. Staff, Electrical Engineer, Plasma Fusion Center (9/5)

R79-222, Spons. Res. Staff, Technical Writer, Energy Laboratory (9/5)

R79-223, Spons. Res. Staff, Center for Transportation Studies, (9/5)

R79-225, Spons. Res. Staff, Research Associate, Materials Science and Engineering (9/5)

R79-227, Spons. Res. Staff, Programmer, Meteorology Dept. (9/12)

R79-228, Spons. Res. Staff, Research Associate, Division for Study and Research in Education (9/12)

R79-229, Spons. Res. Staff, Technical Systems Programmer/Analyst, Energy Laboratory (9/12)

R79-232, Spons. Res. Staff, Oil Market Analyst, part-time, Energy Lab (9/19)

R79-235, Spons. Res. Staff, Research Specialist, Materials Science and Engineering (9/19)

R79-250, Spons. Res. Staff, Sr. Shift Supervisor, Nuclear Reactor Laboratory (10/3)

R79-263, Spons. Res. Staff, Programmer, temporary, Center for Space Research (10/10)

R79-264, Spons. Res. Staff, Financial Manager, Energy Laboratory (10/10)

R79-266, Spons. Res. Staff, Systems Designer/-Computer Programmer, Architecture Machine Group (10/10)

R79-267, Spons. Res. Staff, Computer Systems Programmer, Architecture Machine Group (10/10)

R79-271, Spons. Res. Staff, Scientific Programmer, Meteorology Dept. (10/24)

R79-280, Spons. Res. Staff, Group Leader, Plasma Fusion Center (10/17)

R79-281, Spons. Res. Staff, Programmer, Materials Science and Engineering (10/17)

R79-282, Spons. Res. Staff, Materials Science and Engineering (10/17)

R79-287, Spons. Res. Staff, Research Scientist, Energy Laboratory (10/17)

R79-288, Spons. Res. Staff, Technical Asst., Harvard-MIT Division of Health Sciences and Technology (10/24)

R79-293, Spons. Res. Staff, Research Specialist, Cell Culture Center (10/24)

R79-297, Spons. Res. Staff, NMR Spectroscopist, National Magnet Laboratory (10/31)

R79-300, Spons. Res. Staff, Experimental Physicist or Electromechanical Engineer, National Magnet Laboratory (10/31)

R79-301, Spons. Res. Staff, Biophysicist, Electrophysiologist, National Magnet Laboratory (10/31)

R79-302, Spons. Res. Staff, Research Metallurgist, Materials Scientist, National Magnet Laboratory (10/31)

R79-304, Spons. Res. Staff, Research Associate, Dept. of Civil Engineering (10/31)

R79-305, Spons. Res. Staff, Research Chemist, Nuclear Reactor Laboratory (10/31)

R79-306, Spons. Res. Staff, Postdoctoral Associate, Nuclear Reactor Laboratory (10/31)

R79-307, Spons. Res. Staff, Laboratory Supervisor, Center for Materials Science and Engineering (10/31)

R79-309, Spons. Res. Staff, Solid State Spectroscopist, National Magnet Laboratory (10/31)

ACADEMIC:

C79-7, Academic Staff, Associate Director of Libraries (5/9)

C79-17, Academic Staff, Asst. Librarian, Rotch Library (7/25)

C79-21, Academic Staff, Librarian Documentation Specialist, Rotch Library (9/5)

C79-23, Academic Staff, Radiation Protection Office, Medical Dept. (9/5)

C79-24, Academic Staff, Asst. Librarian, Rotch Library (9/12)

C79-26, Academic Staff, Postdoctoral Associate, Dept. of Nutrition and Food Science (10/31)

C79-28, Academic Staff, Manager of Masters Program, Sloan School of Management (10/17)

C79-29, Academic Staff, Inpatient Nurse, Medical (10/17)

C79-30, Academic Staff, Nurse Practitioner/Physician Asst., Lincoln Laboratory's Medical Clinic (10/24)

EXEMPT:

E79-20, Exempt, Shift Supervisor, Physical Plant (7/11)

E79-24, Exempt, Engineering Asst., National Magnet Laboratory (8/15)

E79-25, Exempt, Engineering Asst., National Magnet Lab (8/29)

E79-26, Exempt, Supervisor, Food Service (9/5)

E79-28, Exempt, Asst. Auditor, Audit Division (9/5)

E79-30, Exempt, Supervisor — Illustration Service, Graphic Arts (9/26)

E79-34, Exempt, Facility Manager, Food Service (10/10)

E79-36, Exempt, Registered Nurse, part-time, Clinical Research Center (10/17)

E79-37, Exempt, Veterinary Research Technician, Laboratory of Animal Medicine (10/17)

E79-40, Exempt, Facilities Inventory Auditor, temporary, Office of Facilities Management Systems (10/24)

E79-43, Exempt, Journals, Advertising and Promotion Asst., MIT Press (10/31)

SUPPORT STAFF:

B79-167, Secretary, Medical Dept. (4/11)

B79-214, Secretary, National Magnet Laboratory (5/9)

LB79-320, Sr. Staff Asst., Electrical Engineering and Computer Science (10/17)

B79-321, Sr. Secretary, Mechanical Engineering (7/11)

B79-331, Secretary, Laboratory for Information and Decision Systems (7/11)

B79-351, Secretary, part-time, Center for Cancer Research (10/3)

B79-357, Sr. Secretary, Physical Plant (7/25)

B79-364, Sr. Secretary, Mechanical Engineering (7/25)

B79-373, Sr. Office Asst., Artificial Intelligence Laboratory (7/25)

B79-387, Project Documentor, Information Processing Systems Office (9/5)

B79-421, Office Asst., Registrar's Office (8/29)

B79-436, Reactor Operator, Nuclear Reactor Lab (8/29)

B79-440, Sr. Secretary, Alumni Association (8/29)

B79-443, Library Asst., Lab for Computer Science (8/29)

B79-481, Office Asst., Admissions Office (9/5)

B79-488, B79-489, Secretary, Chemical Engineering Dept. (9/5)

B79-494, Sr. Office Asst., Treasurer's Office (9/5)

B79-496, Secretary, Office of Minority Education (9/12)

B79-505, Sr. Secretary, Mechanical Engineering (9/5)

B79-542, Secretary, Personnel Office (10/31)

B79-552, Secretary, National Magnet Laboratory (9/12)

Three More Teams End Fall Season Campaigns

The fall sports season at MIT is rapidly coming to a close as three more teams ended their campaigns over the weekend.

Coach John Benedick's water polo team finished third for the second consecutive year at the New England Championships held at Yale. The Engineers (9-8) beat Dartmouth (21-8) and Harvard (23-6) and lost to Brown (16-9) and Yale (13-6) during the two-day event.

"Overall, I thought we did well this year," said Benedick. "The team had plenty of spirit and drive, and showed a lot of enthusiasm."

MIT's soccer team ended its season on a winning note by blanking the Coast Guard Academy, 2-0, Saturday in New London, Conn. Jay Walsh and Tim Miexsell scored goals for the Engineers, who finished the fall at 2#10-1. Goalie George Kraynak recorded his first collegiate shutout by stopping seven shots.

"The team played well the last five games," noted MIT coach Walt Alessi. "We have several players returning next year and we'll hope to be a better team."

The Engineers were a hard-lucked squad in 1979 losing five games by a goal and eight by two goals or fewer.

In club football, MIT dropped a 34-12 decision Sunday to Stony Brook State to finish their second season of competition at won-3, lost-4. The team was 0-6 in its football debut last year.

Despite playing with an injured knee, quarterback Bruce Wrobel completed 17 of 33 passes (mostly from the shotgun formation) for 197 yards. He and Mike Barrett scored the only Tech touchdowns on the day.

Wrobel, a senior, was one of the top players nationally in passing this season. In seven games, he was 72-for-141 (51.1%) for 987 yards and three TDs. Freshman Jeff Olson was the leading rusher with 226 yards in six games while freshman Barry Jordan and senior Greg Henley were the top receivers with 29 and 20 receptions, respectively.

Among the defensive standouts were safety Doug Gouchoe, end Art Aaron, tackle Tom Harrington, and linebacker Joe Gassette.

SHE'S NUMBER ONE. Julie Neuringer, a junior from Wellesley, was the top player on the MIT women's field hockey team this fall. She scored 12 of the team's 20 goals to lead the Engineers to a 6-4-2 record, its best mark in three years of varsity competition.

In Other MIT sports...

Coach Hatch Brown's men's sailing team qualified for the Atlantic Coast Dinghy Champizn-ships November 17-18 by finishing sixth in the Schell Trophy Sunday on the Charles River.

The cross-country team, meanwhile, finished 17th among 20 schools in the New England Championships held Saturday in Franklin Park.

Tennis Time

Contract time is still available at the J.B. Carr Tennis Center for the 1979-80 indoor season. Please call Hank Motroni, x3-1451, or x3-2912, for further information.

B79-571, Sr. Secretary-Technical, Chemistry Dept. (9/26)

B79-572, Account Representative, Information Processing Services Office (9/26)

B79-577, Sr. Secretary, Sloan School of Management (10/31)

B79-579, Office Asst., Comptroller's Accounting Office (9/26)

B79-583, Sr. Secretary-Technical, Chemistry Dept. (9/26)

B79-584, Sr. Secretary, Center for Materials Processing (10/3)

B79-587, Office Asst., Admissions Office (9/26)

B79-589, Secretary, temporary, Biology Dept. (9/26)

B79-592, Office Asst., Graphic Arts Dept. (9/26)

B79-598, Console Communications Operator, Physical Plant/Telecommunications Office (10/3)

B79-601, Sr. Secretary, Nuclear Reactor Laboratory (10/3)

B79-605, Office Asst., Plasma Fusion Center (10/3)

B79-612, Office Asst., Resource Planning and Development (10/3)

B79-615, Secretary, Campus Information (10/3)

B79-616, Sr. Secretary, Nuclear Engineering Dept. (10/3)

B79-620, Sr. Secretary, MIT Leadership Campaign District Office (10/10)

B79-624, Jr. Programmer, Laboratory for Computer Science (10/10)

B79-625, Secretary, part-time, Dept. of Mechanical Engineering (10/10)

B79-628, Word Processing Operator, Word Processing Center (10/10)

B79-639, Sr. Secretary, Vice President for Financial Affairs (10/10)

B79-641, Admin. Secretary, Planning Office (10/17)

B79-644, Sr. Secretary, Center for Policy Alternatives (10/24)

B79-651, Library Asst., Libraries (10/17)

B79-652, Sr. Secretary, Center for Space Research (10/17)

B79-653, Office Asst., Registrar's Office (10/17)

B79-656, Sr. Secretary, Earth and Planetary Science (10/17)

B79-657, Technical Asst., temporary, Energy Laboratory (10/17)

B79-658, Sr. Staff Asst., Nuclear Engineering (10/24)

B79-665, Admin. Asst., Harvard-MIT Health Sciences and Technology Dept. (10/24)

B79-668, Technical Asst., Psychology Dept. (10/24)

B79-674, Secretary, Dept of Ocean Engineering (10/24)

B79-677, Library Asst., Energy Laboratory Information Center (10/31)

B79-678, Sr. Staff Asst., Libraries Collections Development Dept. (10/31)

B79-680, Office Asst., Libraries' Microreproduction Lab (10/31)

B79-681, Library Asst., Libraries' Collections Development Dept. (10/31)

B79-682, Sr. Secretary, technical, Plasma Fusion Center (10/31)

B79-683, Sr. Staff Asst., technical, Research Laboratory of Electronics (10/31)

B79-685, Sr. Office Asst., Comptroller's Accounting Office (10/31)

B79-689, Office Asst., Comptroller's Accounting Office (10/31)

B79-690, Sr. Word Processing Operator, Sloan School of Management (10/31)

B79-691, Library Asst., Humanities Library (10/31)

B79-692, Sr. Office Asst., Alumni Association (10/31)

B79-693, Secretary, Student Financial Aid Office (10/31)

SERVICE STAFF:

H78-106, Service Staff, Sr. Technician (Electronic), Plasma Fusion Center (8/16)

H79-33, Service Staff, Technician A (Electronic), Chemistry (4/11)

H79-118, Service Staff, Technician B (Electronic), Architecture Dept. (9/5)

H79-121, Service Staff, Machinist A, Nuclear Reactor Laboratory (9/26)

H79-126, Service Staff, Technician A, National Magnet Lab (9/19)

H79-129, Service Staff, Machinist A, Nuclear Reactor Laboratory (8/29)

H79-134, Service Staff, Technician A (EM), Chemistry Dept. (9/5)

H79-137, Service Staff, Swimming Pool Attendent, Physical Plant Dept. (9/12)

H79-159, Service Staff, Electrician, Physical Plant (10/31)

H79-162, Service Staff, Technician A (EM), National Magnet Laboratory (10/31)

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

B79-679	Sr. Secretary
B79-659	Sr. Secretary
C78-17	Acad. Staff (canceled)
B79-663	Sr. Secretary
H79-171	Service Staff
B79-684	Office Asst.
B79-634	Sr. Secretary
B79-688	Secretary (canceled)
H79-164	Service Staff
H79-170	General Helper
E79-42	Exempt
B79-619	Secretary
B79-671	Service Asst.
B79-643	Sr. Secretary
B79-686	Office Asst.
H79-166	Service Staff
H79-161	Service Staff
B79-596	Sr. Secretary
B79-642	Sr. Secretary
R79-247	Spons. Res. Staff
B79-666	Sr. Office Asst.
B79-597	Communications Console Operator
B79-687	Sr. Secretary
H79-158	Service Staff
H79-152	Service Staff

The following positions are on HOLD pending further decision:

A79-66	Admin. Staff
B79-627	Sr. Secretary

Custodians Have Unique Training Center

By ELIZABETH HUNTINGTON
Staff Writer

The basement of Building 12 houses a unique training center for MIT's building services staff.

The center is unique because MIT's training program for building custodians is unique. Ted Doan, manager of building services, explains that most custodians are hired without experience, and adds that "those with experience have the wrong kind, and need training in our methods." Most custodians on the job work alone and at night, without direct supervision, so it cannot be assumed that sending them off with a cleaning cart will ensure proper cleaning of the areas of their responsibility.

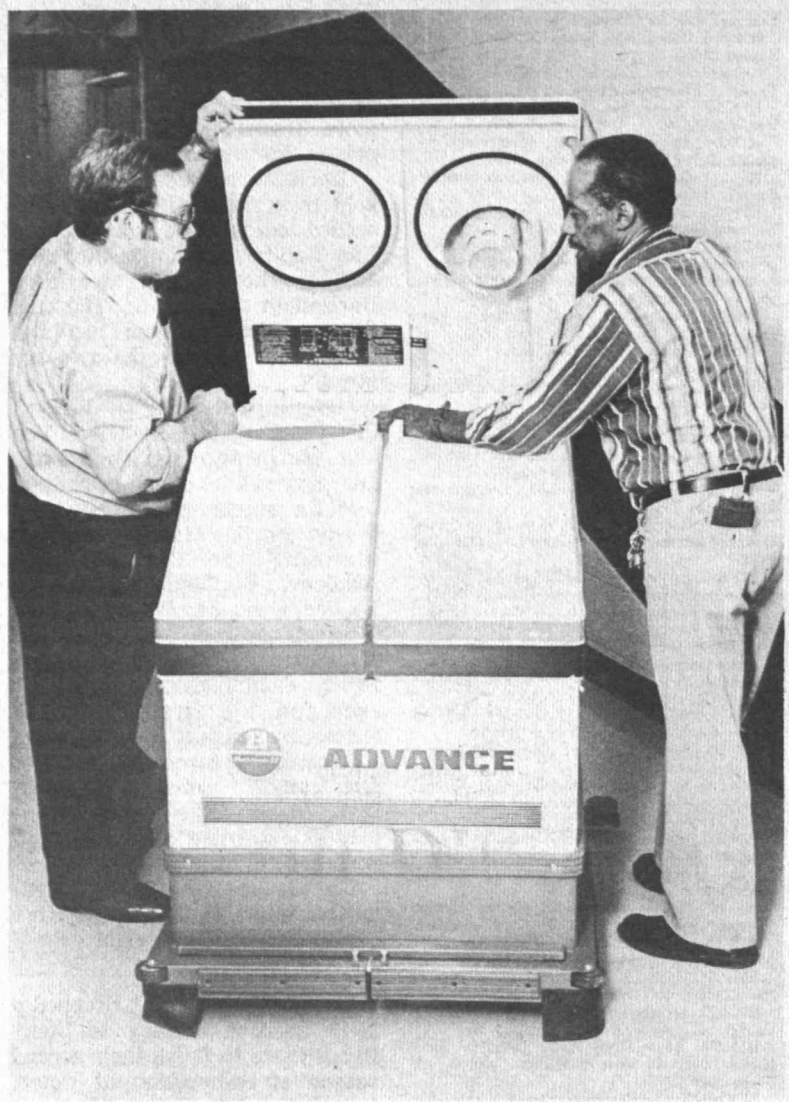
A group of six new employees began the training program on Monday, Nov. 5. Though they will be assigned to different duties, all will receive training in every phase of the work done by MIT's custodial staff.

Lynne Shea of Chelsea, who has been working as a cleaner at Logan Airport, will be an evening custodian on the 4-12 shift, as will Cosmo Spinosa of Cambridge, a former restaurant worker, and Jack Schatz of Jamaica Plain, who worked for Coca Cola in Needham before coming to MIT.

José Ferreira of Somerville and Raimundo Bavaro of Medford, a former construction worker, will be trained as polishers, working on the 4 to midnight shift, and Tom Halpin, Jr., of Malden, who has been working in a liquor store, will be running a floor scrubber on the 11pm-7am shift.

Except for Lynne Shea, they will all be learning an entirely new profession. And she, of course, will be learning MIT's way of doing the job. One of the main reasons that the Institute is maintained as well as it is is the standardization of methods of cleaning. Each worker carries a checklist of the separate jobs to be done to take care of the different areas in which they work. (If you sometimes wonder why your office chalkboard isn't washed when the office is cleaned, it is because custodians are instructed not to do so unless the board has been erased. Classroom chalkboards on the other hand are routinely washed.)

The training program had its beginning in 1972, when Mr. Doan found one of his custodians, an ex-truck driver, about to clean toilets with a bottle of undiluted floor cleaner. The man had no idea that there was a better product available to him. Mr. Doan got a rough training session together in two weeks, which he describes is as "how to use what supplies on which jobs."



Ralph V. Jackson, (right) Building Services supervisor shows Tom Halpin, Jr., (left) the ins and outs of the floor scrubber Mr. Halpin will operate when he completes his training.

Over the years, a very sophisticated program has evolved, with a dual purpose. One, of course, is to teach new employees the most effective and efficient ways of doing the many different cleaning projects around the Institute. The other is to instill in people, most of whom work in isolated places during the night and evening hours, a feeling of identity and community in the Institute.

At present there are nine film presentations for new employees, and the formal training period takes place in the first three days on the job. The use of slides cuts around possible language misunderstanding, and introduces the terms of their jobs to the employees. The pictorial presentation clarifies questions easily. To describe in words the process of wetmopping and the instrument itself can be confusing. A simple statement that "you will wet-mop," accompanying a picture of someone applying a wet mop to a floor leaves no question as to the equipment to be used and the place to use it.

Separate presentations are made for each type of cleaning job and, after seeing the presentation and asking questions, the class is taken into the real situation where they go over the operation again. Mr. Doan says that after having seen the slides of how the work should be done, the trainees generally recall about 80 to 90 per cent of the material—sometimes more, and repeat the activities they have seen, not perfectly, but in the correct order. A few more practice sessions and they are ready to go on the job.

Throughout the program, an effort is made to instill a sense of community and a feeling of pride and professionalism in a job well done. The new custodians are urged to try to help visitors, and direct the lost if they can, and generally to feel that they are a vital and necessary part of the MIT community. Identification with MIT is reinforced even in the cleaning supplies. Containers, rather than bearing the manufacturer's label, carry the logo of MIT Building Services.

4 Young Faculty Members Named Edgerton Professors

Four young MIT faculty members in the School of Engineering have been appointed Esther and Harold E. Edgerton Assistant Professors for two years. Announcement of the appointments was made by Provost Walter A. Rosenblith. Those named were: Randall Davis, assistant professor of computer science and engineering, Department of Electrical Engineering and Computer Science.

David G. Jansson, assistant professor, Department of Aeronautics and Astronautics.

Richard K. Lester, assistant professor, Department of Nuclear Engineering.

Hillary Max Irvine, assistant professor, Department of Civil Engineering.

The Edgerton professorships were established by the MIT Corporation in 1973 to honor Dr. Harold E. Edgerton, Institute Professor, emeritus, and his wife, who have been associated with the Institute community since 1926.

The professorships are intended to provide opportunities in research and career development for younger faculty. The professorships also provide funds needed by the faculty members to involve undergraduate students directly in their research.

"There is no more fitting way for us to honor this man and this woman for the devotion, affection and warm friendship they have given freely to young people at this university over a period of half a century," said the chairman of the MIT Corporation, Howard W. Johnson, and MIT President Jerome B. Wiesner when the formation of the Edgerton professorships was announced six years ago.

Professor Davis, 31, holds the AB (Dartmouth College, 1970) and the PhD (Stanford University, 1976). His main fields of interest are artificial intelligence, knowledge-based systems, distributed problem solving, and problem solving methods. He is the author, with D.B. Lenat, of *Knowledge-based Systems in Artificial Intelligence*, published by McGraw-Hill.

Professor Jansson 33, received the SB, the SM, and the ScD, in aeronautics and astronautics from MIT in 1968, 1970 and 1973, respectively. His particular interests are in control systems, the process of innovation, especially in the Third World, and noninvasive diagnostics for respiratory diseases. He has been director of the MIT Innovation Center since October 1.

Professor Lester, 25, who has specialized in nuclear chemical engineering, nuclear waste management and policy issues on nuclear waste, holds the BSc (Eng) in chemical engineering from Imperial College of Science and Technology, University of London (1974) and the PhD in chemical engineering from MIT (1979). He is the author, with Mason Willrich, of *Radioactive Waste: Management and Regulation*, published by Free Press.

Professor Irvine, 32, received the BE and the ME from the University of Canterbury in 1970 and 1971, the CE from California Institute of Technology in 1974 and the PhD from the University of Auckland in 1976. His principal fields of interest are steel structures, tension structures and earthquake engineering.

First Black Woman Earns ScD in Chemical Engineering

(Continued from page 1)

neering was disbanded.

Deciding on a career in chemical engineering was in keeping with the educational philosophy Jennie Patrick worked out for herself as a high school student: avoid the easiest way through because it may not be the most rewarding.

"I was always interested in science. Whatever was more challenging interested me the most in high school. Chemical engineering attracted me for the same reason."

As a women who has succeeded in a field that has attracted few females, and as a black woman who has had to face prejudice and discrimination, what advice would she offer to those who might follow her path?

"The most important thing is confidence and being somewhat independent in thought. Most of the time what matters is emotional strength, one's ability to endure, rather than whether one has intelligence or not. For a black woman, the first issue is racism; the fact of being a woman becomes secondary.

"The best advice I can give a young girl is to be positive about herself and her capabilities and to set her own standards in terms of what she wants to achieve. Then use only those standards as levels to strive for. Never allow anybody else to arbitrarily set standards for you. Those standards are usually far below what you would set for yourself. Don't let others establish your potential."

Dr. Patrick-Yeboah's doctoral thesis at MIT involved a study of superheated limit-temperatures of non-ideal binary mixtures and pure components. Her work led to new insights into the behavior of vapor explosions.

"I was able to discover that a liquid fluorocarbon that had previously been used primarily as a lubricant for space missions had applications as a heating medium in studying superheated liquids." Her discovery opened up new research approaches which enabled her to report for the first time experimental superheat-limit temperatures of several complex mixtures and their pure components.

Her thesis adviser was Professor Robert C. Reid, internationally recognized as an expert on the behavior of liquefied natural gas and vapor explosions.

The National Organization of Black Chemists and Chemical Engineers says that Dr. Patrick-Yeboah is the first female member of her race to achieve a doctoral degree in her field. She also may be involved in another "first"—the most MIT degrees held by a married couple. The number is six.

Her husband, Yaw D. Yeboah, whom she met shortly after coming to MIT, earned four degrees in 1975—the SB in chemistry, chemical engineering and management, and the SM in chemical engineering. Last June, Dr. Yeboah, a native of Ghana, received the ScD in chemical engineering. He also is employed by General Electric in Schenectady.

Woodward Service

A memorial service for Harvard Professor Robert B. Woodward will be held Friday, Nov. 9, at 4pm in Memorial Church in Harvard Yard.

Dr. Woodward, a 1936 graudate of MIT, became a world leader in synthetic organic chemistry and received the Nobel Prize in chemistry in 1965. He was a member of the MIT Corporation from 1966-71. He died following a heart attack on July 8.

Robert Holz

Word has been received that Robert Holz, a member of the Class of 1958 and a staff member in the Registrar's Office and the Office of Institutional Studies from 1959 until 1967, died September 8.

Mr. Holz, who lived in Bellingham, Washington, is survived by his wife, Cosette Holz, who was also an employee at MIT, and two sons, Roark and Kirk Holz.

IAP Turns 10—Still Different

(Continued from page 1)

tive Energy Sources."

Several competitions also are being organized for IAP. The fourth annual Institute-wide College Bowl will pit four teams against each other in a play-off in what has become a very popular activity.

Ten problems (including some that have never been solved) will be offered in the fifth annual Math Club contest open to all undergraduates (except Math Club members).

Among student-organized competitions is one called "The Incredible Egg Drop," in which contestants will design devices intended to protect an egg "from a perilous drop of some great distance." Another student is hoping to organize an Institute Spelling Bee—a repeat of a very successful IAP event in 1975.

Music—so much a part of MIT during the rest of the year—will be well represented during IAP as well. A daylong Chamber Music Marathon, a tradition in recent years, will open IAP, January 7, 3-11pm in the Music Library. Both the mathematics and physics departments are planning recitals given by their faculty, musically inclined staff and students.

In addition, there are a dozen or more seminars on various aspects of music, including one called "Politics and Music—Rock Around the World," described as follows:

"This workshop will include a multimedia presentation and discussion of the relationship between popular music and political movements in the US and around the world. It features Danny Schechter, WBCN News Dissector, and others. This will be the only lecture you can dance to."

American Music Program Planned

A program of 20th century American music will be presented by Emily Gish Corbató, pianist, Epp-Karike Jurima-Sonin, soprano, and Suzanne John, flutist, at the annual concert of the MIT Women's League at the President's House, Sunday, Nov. 18, at 3pm.

Ms. Corbató will open the program with piano compositions of Ernst Bacon including *Byways, USA* and *The Lobo Girl of Devil's River*, an unpublished work written in 1967 which she premiered at Harvard University last spring and will present in New York later this year. Ms. Sonin will present songs of Samuel Barber, which she and Ms. Corbató will be performing several times together this year.

The second part of the program will be devoted to music of Ernest Bloch, whose centennial birthday will be celebrated in 1980. Ms. John will join Ms. Corbató for a performance of the Suite Modale for flute and piano. The program will conclude with Poems of the Sea, for piano.

Ms. Corbató has performed extensively in the Boston area. A graduate of Syracuse University and New England Conservatory, she studied with Ernst Bacon, David Barnett and Bela Nagy.

Ms. Sonin has given numerous voice recitals in the Boston area, as well as in New York, Chicago, Toronto and other cities. She holds degrees from Mannes College of Music and the Manhattan School of Music.

Ms. John, a graduate of Wellesley College, studied also at Columbia University. She has studied flute with James Pappoutsakis, Doriot Dwyer and William Kincaid, and appears regularly in concerts in the Boston area.