Massachusetts Institute of Technology

TECH TALK

June 20, 1984
Volume 28, Number 37

Read this

Though it has been *two years* since we stopped taking ads on the telephone, approximately 50 calls a week are still coming in to the Tech Talk office. Many callers want merely to know how to place an ad. Ad policies and instructions for placing ads are printed at the top of the ads in every issue. Please read the instructions before you call us.

Now for the good news. Because Tech Talk will be issued only four times during the summer, we are relaxing the rule that ads will not be published in successive issues. However, we will assume that your ad will run in the issue for which it is submitted only. If you want to run it again, you'll need to send it in again.

The next issue of Tech Talk will be published July 11. After that it will be published every two weeks and resume weekly publication August 22.

Detour

Easy access to the Medical Department from Main Street suddenly stopped last week when construction of the new Kendall Square MBTA station began. The section of Main Street that includes the Carleton Street intersection is scheduled to be closed until early 1986.

But there are still two ways to get to the Medical Department from Main Street:

—Turn right on Ames Street and left on Amherst Street to Carleton or Hayward.

—Turn right on Dock Street (near the fire station) and continue through to Carleton.

Access to the Medical Department from Memorial Drive will not be affected by the construction.

Club hours

The Faculty Club will adopt new summer hours effective July 2. A luncheon buffet will be served daily noon-2pm but the Club will be closed for dinner. During July private dining rooms and special parties can be booked for luncheon or dinner, but in August, only private parties of fifty or more will be accommodated for dinner.

The bar will be open Monday-Friday noon-9pm with last call at 8:30pm.

The Club will return to its regular hours Tuesday, Sept. 4.

Video transfer

Effective Monday, July 2, the rentals of video projectors and playback units and duplication of video tapes will be transferred from Educational Video Resources (EVR) to MIT Graphic Arts Audio-Visual Services (A-V). A-V will also maintain classroom monitors, but the taping and editing of classroom materials will remain a function of EVR.

A-V will offer hourly, daily, weekly or monthly rental of video playback units, monitors and record kits as an addition to the audio visual equipment it presently rents. Pickup and delivery service of the equipment will be available at a reasonable rate. Blank video tapes and copying of video tapes also will be offered.

"This transfer will combine all audio visual and video rentals in one central location," said James W. Coleman, director of Graphic Arts, "which will enable us to monitor user relations and respond quickly to difficulties. Individuals and meeting planners will have access to the expanded equipment reservoir and the assistance of trained personnel in selecting the most appropriate equipment and solving technical problems posed by their programs."

The Audio-Visual Services staff includes sound engineers, A-V service people and skilled projectionists.

"haute Culture (Part II)," a video installation using a seesaw by CAVS fellow Antonio Muntadas, was installed in Lobby 7 as a special preview for the MIT community before moving to the Boston Now Sculpture exhibition at the Institute of Contemporary Art in Boston, June 26-August 15. At right is Muntadas, consulting with artist and photographer Nishan Bichajian, fellow at the CAVS and lecturer in the Department of Architecture, who was making studies of the installation. The installation was supported by the Council for the Arts at MIT, the Lobby 7 Committee, Educational Video Resources and the CAVS.
—Photo by Calvin Campbell

LCS to adopt prototype PC network

The Laboratory for Computer Science is about to put into service a prototype network of 30 powerful personal computers with the aim of weaning its research from large central processing units used on a time-shared basis, a concept the laboratory itself pioneered 30 years ago.

The unique personal computer that makes this possible is called the Nu Machine. It has the ability to sidestep obsolescence, thanks largely to a special communication standard called the NuBus and a flexible distributed operating system called TRIX, both developed over the past six years at the Laboratory for Computer Science. The NuBus has been licensed to Texas Instruments, Inc., of Dallas, Texas, which made the 30 machines in the first network.

Texas Instruments is marketing products based on what the company is calling NuBus technology, a reference to the MIT-developed 32-bit data bus. In a computer, a bus conducts information from any of several sources to any of several destinations. The TRIX operating system being developed at the MIT laboratory is written in a high-level computer language. It makes possible the transition from centralized time-shared systems to decentralized, geographically distributed systems which are expected to become inceasingly more dominant in the next decade.

The Nu Machine will play an important role in future research, both at MIT and at Texas Instruments, on new approaches to computer architecture.

Dr. Michael L. Dertouzos, director of the Laboratory of Computer Science and professor of computer science and electrical engineering in the Department of Electrical Engineering and Computer Science, views the development of the Nu Machine and associated operating systems as revolutionary.

"Using a Nu Machine will be like working with a timesharing system, but with the convenience of having one's own database at hand, of being able to dedicate the machine to experimental use in the lab, and of never having to wait in a queue. Unlike a time-shared system that can have at most 50 or 100 users, a network of interconnected Nu Machines can scale up to an arbitrarily large number of users who see the same services now seen by the users of a single centralized machine. The revolutionary aspect of these developments is the transition from single-computer environments to large computer 'tribes' that can accomplish useful things through their intercommunications.

"Nu will give the equivalent, and possibly more than the equivalent, of the computation speed found in time-shared systems while offering network communication, electronic mail, word processing and shared data bases

(continued on page 4)

Weisskopf receives Stratton Award

A joining of important MIT names occurred recently when Dr. Victor F. Weisskopf, Institute Professor and professor of physics emeritus, received the 18th annual Julius Adams Stratton Award, named for MIT's 11th president.

The Friends of Switzerland make the award to either a Swiss or an American who has worked for cultural understanding. Both President Stratton and Professor Weisskopf have lived in Switzerland: Dr. Stratton received the DSc degree in mathematical physics from the Eidgenossische Technische Hochschule in Zurich in 1928, and Professor Weisskopf was was assistant to Professor W. Pauli at the same school from 1933-36. Later he was director-general of the European Center for Nuclear Research (CERN) in Geneva from 1960 to 1965.

Under the terms of the Stratton Award, the recipient must designate a recipient for the $2,000 cash gift accompanying the award. Dr. Weisskopf chose Rafael Carreras, a young Swiss journalist who has popularized the work of CERN in articles in European magazines.

Reunion gifts top $8.2 million

By CHARLES H. BALL
Staff Writer

Reunion class gifts of more than $8.2 million were announced Friday (June 8) at MIT's annual Technology Day Luncheon. The luncheon, in the MIT Athletics Center, was attended by some 1,200 alumni and their guests.

The gifts from the three major reunion classes—totalling $4 million—were presented to President Paul E. Gray by the reunion gift chairmen. The gifts from these quinquennial classes, the Classes of 1934, 1944 and 1959, comprise all gifts and pledges made to MIT by members of the classes during the five-year period preceding the reunion.

The 50th Reunion Class of 1934 announced a total gift of $2,300,000 with 77.5 per cent participation. In addition, plans for future gifts from members of the class total $1.2 million. Henry B. Backenstoss, chairman of the 50th Reunion Gift Committee, made the presentation on behalf of the class, whose level of participation sets a record for MIT.

The Class of 1944, celebrating its 40th

(continued on page 8)

Conference to address decline of blacks on white campuses

The declining number of black professionals working at predominantly white campuses and the apparent erosion of black programs developed during the 1970s will be among the major discussion items at a national conference to be held June 21-24 at MIT.

More than 800 people have registered for the Second National Conference on Issues Facing Black Administrators at Predominantly White Colleges. Its organizers believe the conference is the only national public forum that exclusively addresses issues unique to the black administrator at a largely white college or university. The first conference, held two years ago at MIT, drew about 600 people.

Dr. John B. Turner, associate dean of the graduate school and assistant provost at MIT, and Dr. Clarence G. Williams, special assistant to the president at MIT, are the conference coordinators and the cochairmen of the National Advisory Committee of the Association of Black Administrators at MIT, the organization convening the conference.

"We are deeply concerned about the declining numbers of black professionals on white campuses and the apparent erosion of black programs and the gains made in the 1970s," they said in a letter to colleagues at hundreds of colleges across the nation announcing the conference. "It is time to put our issues and concerns back on the table for discussion and action."

Helping in that effort will be President Paul E. Gray, who will be the moderator of a "Presidents' Panel" that will be a highlight of the first day of the conference.

Panel members, who will discuss the development of black leadership on their campuses, will be Dr. Colin Campbell, president, Wesleyan University; Dr. John DiBiaggio, president, University of Connecticut; Dr. Joseph Hankin, president, Westchester (N.Y.) Community College; Dr. Michael Heyman, chancellor, University of California, Berkeley, and Dr. Stephen Wright, former president of Fisk University, now senior advisor to the College Entrance Examination Board.

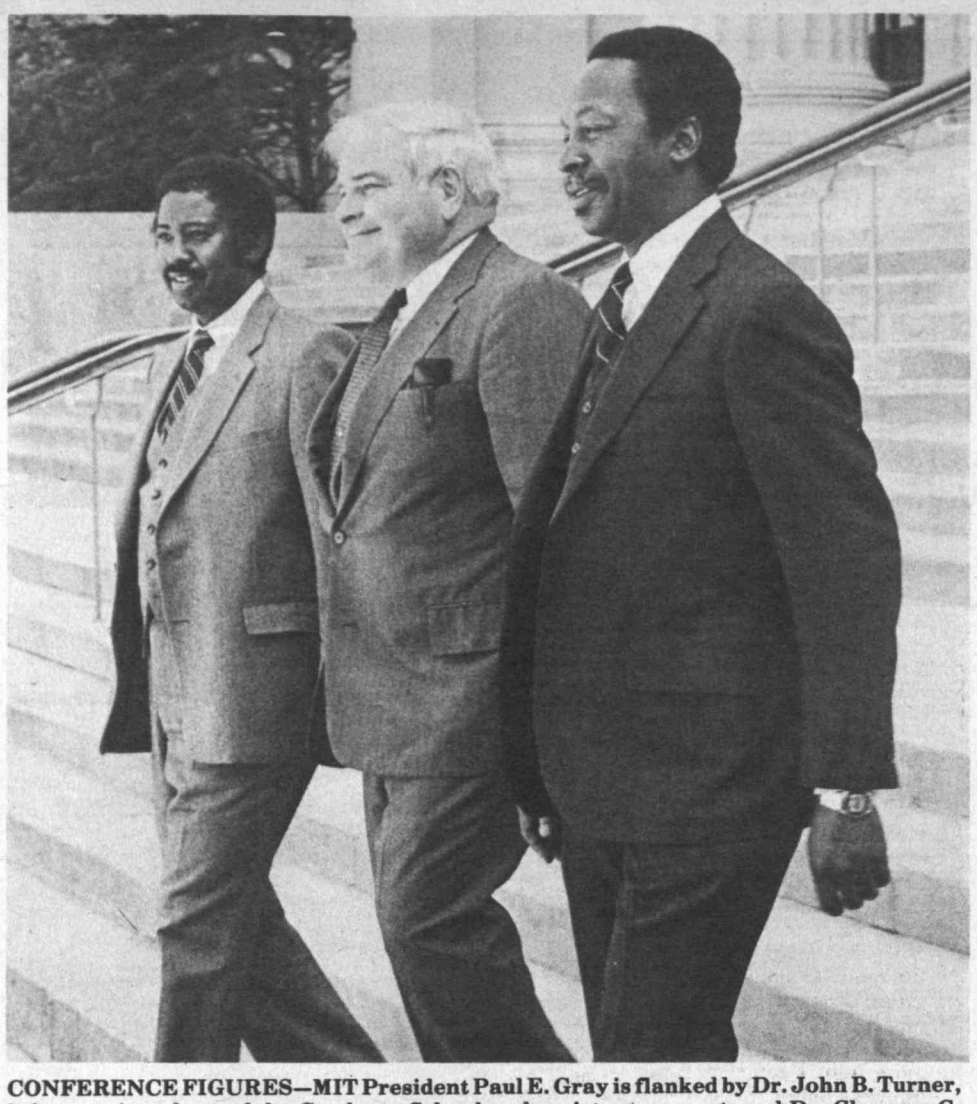
"MIT is delighted to host the Second National Conference on Issues Facing Black Administrators at Predominantly White Colleges and Universities," Dr. Gray said. "We see this conference as an important step toward building professional networks among black and white colleagues in diverse positions of responsibility in schools throughout the country."

Other conference highlights include:

Thursday, June 21—Remarks from Dr. Brunetta R. Wolfman, president of Roxbury Community College, Boston, and the keynote address by Dr. Samuel Proctor, Martin Luther King Professor of Education at Rutgers University, both at the opening dinner.

Friday, June 22—A plenary session on "Black Women's Issues at Predominantly White Colleges and Universities," at which Dr. Barbara Sizemore, professor at the University of Pittsburgh and former superintendent of schools in Washington, D.C., will speak; a luncheon address by Dr. Helen G. Edmonds, professor emerita at North Carolina Central University, on "Strategies for Developing Black Leadership and Career Transitions at Predominantly White Colleges and Universities."

Saturday, June 23—A plenary session on "Strategies for Improving Job Competency and Making Adjustment to the Computer Age," at which Dr. John Slaughter, chancellor of the University of Maryland, College Park Campus, and former director of the National Science Foundation, will speak; a luncheon address on "Strategies for Coping with Stress at Predominantly White Colleges and Universities," by Dr. Price Cobbs, psychiatrist, coauthor of *Black Rage;* a closing banquet address on "Developing Strategies for Success: Black Administrators at Predominantly White Colleges and Universities," by Lerone Bennett, Jr., senior editor of Ebony magazine.



CONFERENCE FIGURES—MIT President Paul E. Gray is flanked by Dr. John B. Turner, left, associate dean of the Graduate School and assistant provost, and Dr. Clarence G. Williams, special assistant to the president. Dr. Turner and Dr. Williams are coordinators for the Second National Conference on Issues Facing Black Administrators at Predominantly White Colleges. Dr. Gray will be the moderator for a "panel of presidents" on Thursday, June 21, first day of the conference that runs through June 24.

—Photo by Calvin Campbell

Karl Reid to head NSBE

Karl W. Reid, a senior in the Department of Materials Science and Engineering, has been elected to a one-year term as chairman of the National Society of Black Engineers, an organization with about 3,500 members at 114 engineering schools across the nation.

Mr. Reid, who has been accepted for graduate work at MIT, says the major goal of his term as leader of the society will be to increase academic excellence and improve the national retention rate for black engineering students, now at approximately 40 per cent.

In his campaign literature for the NSBE post, Mr. Reid said the major issue facing the society "is the high attrition rate of minority engineering students. At some schools only one-third of those who enter engineering disciplines graduate in four years because of lack of effective academic support systems, insufficient financial aid and the underrepresentation of minority faculty and students."

In his campaign, which was conducted during the four-day national convention of the organization earlier this spring in Washington, Mr. Reid said he would address those issues by organizing workshops to demonstrate the effective use of support programs that have proven to be successful at various schools, by sponsoring letter-writing campaigns at colleges where financial aid, admissions and minority faculty recruitment policies are considered to be inadequate; by creating a national outreach program to encourage young people to become scientists and engineers, by seeking corporate support through scholarships for minority youth, and by spotlighting the "good works of NSBE to promote a positive national image."

Mr. Reid has had a busy and successful undergraduate career at MIT. Last November he was presented the Monsanto Award, honoring the black engineering student with the highest academic achievement in the junior year.

Last month he won a Karl Taylor Compton Prize which recognizes outstanding contributions in promoting high standards of achievement and good citizenship within the MIT community. He was also recognized by the Office of Minority Education as the male student with the highest cumulative grade average.

Dr. William D. McLaurin, director of the Office of Minority Education, has high praise for Mr. Reid, citing his "unstinting participation" in a wide variety of student activities and his exemplary character.

Mr. Reid is active in the Black Student's Union as well as in the NSBE. He has taught an IAP seminar on the destruction of African civilizaton and he organized the NSBE's Ambassador Program at MIT. The program brings to the campus high school students from the Boston-Cambridge area for an introduction to college life and provides counseling and academic support services.

INSTITUTE NOTICES

***—Open to public**
****—Open to MIT Community only**
*****—Open to members only**

Announcements

International Staff or Faculty—If you need Visa Documents to return to US this summer, please request them early. Contact International Visitors Office, Rm 7-121, x3-2851 for info.

International Student ID Cards—now available in Office of Career Services, Rm 12-170. The ISIC is an asset when studying or travelling abroad as it is recongized internationally and offers a multitude of discounts and benefits. Foreign students holding F-1 visas also eligible. For more info contact Marianne Ciarlo, Rm 12-170, x3-4735.

Jeffrey M. Frank Scholarship—available through the Combined Jewish Philanthropies. Preference given to Jewish students from the greater Boston area. Contact Lucy Van der Wiel or Lisa Oteri in the Student Financial Aid Office for further information.

Morgan Stanley Undergraduate Grant Program—Juniors of all majors eligible for 2 grants of $8,000 awarded for fall of 1984. Requirements: GPA of 3.8 (on scale of 4.0) and combined SAT score of 1500. Applicants must submit an 8-10 page research paper discussing the application of some area of study to the securities industry. Deadline: June 30, 1984. Brochure and information available from Elizabeth Reed or Diane Wilhoite, Career Services Office, Rm 12-170.

Nightline—a student-run hotline** open every evening of the term, 7pm-7am. If you need information about anything or you just want to chat, give us a call. We're here to listen. x3-7840.

Faculty Members—Technology Review would like to hear about books being published by MIT faculty members. Please notify us, as far in advance as possible, of your upcoming book. Technology Review, 10-140, x3-8250.

Club Notes

WMBR**—is looking for students interested in radio and technical work. Contact Eli Polonsky, x3-4000. Leave name and phone number.

ACBL Duplicate Bridge at MIT*—Bridge games every Sat, 7pm; every Thur, Sun & Mon, 6:30pm, $.75 entry fee, Rm 407, Student Center. Lessons free w/entry at 6:15pm from Bridge Senior Masters. No partners necessary, all welcome. Info, Rajan Batta, x3-6185, 494-1968, 876-4515 or x5-9563 dorm.

MIT/DL Bridge Club*—ACBL Duplicate bridge, Tues, 6pm, MIT Student Center Rm 345. Novices welcome. Info call Gary Schwartz, x8-1484 Draper, or Mark Throop, 497-7838. Admission: $.75/students, $1.25 non-students.

MIT Aikido Club**—meets Mon-Fri, 5:30pm, DuPont exercise room. Aikido is a non-competitive Japanese martial discipline. Beginners welcome.

MIT Hobby Shop**—Complete facilities for wood working and metal working. Hours: Mon-Thurs, 8:30am-6:30pm, Fee $15/per term students; $25/per term MITcommunity. Info call x3-4343.

Tech Sports Car Club**—Will be active this summer. Activities include autocross events, driver's schools & preparation of club's alcohol powered car. For info call Eric Balles, x3-3146.

MIT Nautical Association**—Memorial Dr. opposite Walker Memorial, x3-4884. Pavillion open 7 days/wk, 9am-sunset. Basic Sailing Shore School every Mon & Thurs, 5:15pm during April & May. Boardsailing and Cruising Club also available later in the season. Membership cards available in Cashier's Office, Rm 10-180: $10/students; $30/staff & faculty; $40/alumni.

MIT Women's Water Polo Club**—Women students, faculty, staff & others: Club practices M & F/5-7pm; T & Th/3-5pm, MIT Alumni pool. All levels of experience are welcome—try it, you'll like it! For more info, call Amy, 628-0821 or George, x5-9321 dorm, or just show up at a practice.

MIT Hunger Action Group*—is interested in local and world hunger, as well as developmental issues. We also participate in local volunteer work. See our bimonthly announcement outside Rm 5-106. For more info, call Patrick Cheung, 494-8751 anytime.

MIT Women's Soccer Club**—Play women's soccer. Beginners and all levels of experience welcome. Practice three times a week—work out all your aggressions, have fun, make friends and get exercise. For additional info: Leslie or Inge, x3-6799.

MIT Women's Rhythmic Gymnastics**—now being organized. Women interested in joining, contact coach Helena Goldfarb, 596-2396 eves, or Yana, x3-2427.

MIT Wu-Tang Club*—teaches northern Chinese martial arts Mon, 4pm, Tues & Thurs, 6pm, Burton Dining Hall. Beginners welcome.

MIT Tae Kwon Do Club**—Tae Kwon Do is a Korean martial art. Meetings Sundays, 4pm, T-Club Lounge; Mon-Wed, 6pm, Burton Dining Hall; Fri, 6pm, T-Club Lounge. For info call Charlie Park, x5-9123 dorm.

Scuba Club**—The club sponsors dives throughout the year with practice sessions in the pool every other week. For further info contact Jon Powell x3-6031 or see our notice board at the pool.

MIT Guild of Bell Ringers*—meets Mondays, 6:30-9pm, 2nd floor Lobby 7, for change ringing on handbells. We also ring the tower bells at Old North Church. Beginners are welcome. Contact Eric Brosius, Rm 2-270, x3-3773 for more information.

Religious Activities

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

Christian Science Organization at MIT*—Weekly Testimony Meeting, Thurs, 5:45pm, Rm 4-159.

The Lutheran Ministry & Episcopal Ministry—Weekly service of Holy Communion Wed, 5:10pm, Chapel. Supper, scripture study & discussion follows at 312 Memorial Drive. Call x3-2325 or x3-2983.

Tech Catholic Community*—Roman Catholic Sunday Masses: June 10-Aug 26, 10am only, MIT Chapel.

MIT Hillel**—The Hillel office (W2-A) will be open all summer. For a listing of city-wide Hillel activities, call x3-2982.

Meditation and Discourse on the Gita—Swami Sarvagatananda** of the Ramakrishna Vedanta Society of Boston. Sponsored by MIT Vedanta Society. Fridays, 5:15-6pm, MIT Chapel.

Charismatic Prayer Group*—Mon eves, 6:45, Miller Rm 1-114. Pot-luck supper followed by prayer meeting, Bible sharing, music & praise. Jim Mahoney, x3-3074.

Islamic Society*—Daily prayers, Ashdown House (basement), 5 times a day. Call 225-9837 for schedule. Friday prayer, Ashdown House 1-2pm, Khutba starts at 1:15pm, congregation at 1:45pm.

MIT Seekers Christian Fellowship*—Park Street Church Seekers Teaching and Worship Time, Sundays, 4:45pm, enjoy our biblical teaching, worship and sharing at Park Street Church, right in front of the Park Street T stop. MIT Seekers leave from McCormick at 4pm. Come join us.

Campus Crusade for Christ**—Family time, 7:15pm, Fri, eves, Rm 37-252, (Marlar Lounge). Fellowship, scripture teaching, prayer, singing, refreshments & fun. Tues, prayer time, 7:30-9am, W20-441, Student Center. Call x5-9153 dorm.

United Christian Fellowship**— (Inter-varsity chapter)-Large group fellowship every Friday at 7:30pm in Moore Rm 6-321. Call Chavonne x5-8537 dorm for more info.

Lincoln Laboratory Noon Bible Studies*—Tues & Thurs, Kiln Brook III, Rm 239. Annie Lescard, x2899 Linc.

Morning Bible Studies—Fri, 7:30-8:30am, L-217. Ed Bayliss, x3456 Linc.

Noon Bible Study*—Every Wed, Rm E17-438, bring lunch. Ralph Burgess, x3-8121. (Since 1965).

Prayer Time*—Fri afternoons, 1-2pm, Bible Class, Rev. Miriam R. Eccles, founder & director of Alpha and Omega Missionary Society. Guest speakers & refreshments. Center for International Studies, Seminar Rm III (E38—6th flr).

Edgar Cayce Study Group*—Tuesdays, 7-9:30pm, Ashdown House First Floor Lounge. Edgar Cayce's Search for God material will be used as the basis for group discussion & meditation. For info: Dave Rosenblitt, 267-7693, Douglas McCarroll, 497-5539 or Scott Greenwald, 494-8530.

The Church of Christ in Cambridge—Christians meet for worship, study, discussions, fellowship, Tang Hall, 1st & 3rd Sunday each month, 6:30pm. Robert Randolph, x3-4861/3-5085 or Claudia Lewis, 494-1326 (Ashdown).

Graduate Studies

Unless otherwise indicated, contact Dean Jeanne Richard at the Graduate School Office, Rm 3-136, x3-4869 for further information.

1985-86 Fulbright Scholars. 275 appointments for university lecturing and postdoctoral research abroad. Doctorate required at time of application. Deadline: September 15, 1984 for Africa, Asia (except India), Europe, Middle East. Applications materials available upon request from Dean Chamberlain, Rm 5-106, x3-3795 or by writing Council for International Exchange of Scholars, 11 Dupont Circle, Suite 300, Washington, DC 20036.

1985-86 Graduate Fulbright Awards in Creative and Performing Arts. Applicants must be US citizens at time of application, who will hold a bachelor's degree or equivalent before the beginning date of the grant and, in most cases, be proficient in the language of the host country. Except for certain specific awards, candidates may not hold a PhD at time of application. Candidates for 1985-86 are ineligible for a grant to a country if they have been doing graduate work or conducting research in that country for 6 months or more during the academic year 1984-85. Contact Dean Chamberlain, International Student Office/Student Assistant Services, Rm 5-106 for more information and applications.

UROP

For more detailed information on UROP opportunities listed, MIT undergraduates should call or visit the Undergraduate Research Opportunities Program Office, Rm 20B-141, x3-5049 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.

Get Your Proposals In For Overhead Waiver Immediately—Summer has begun.

Experimental Work of Immobilized Enzyme Reactor For Removing Blood Anti-Coagulants. A junior or sophomore in either chemical engineering or biology with a strong interest in medical sciences is needed to do research which will involve testing of an immobilized enzyme reactor for removing blood anti-coagulants. Contact Howard Bernstein, x3-3136, x3-3125 or Prof. Robert Langer, x3-3107, Rm E25-342.

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Primrose revisited

Three students have been named winners of the literary competition held in connection with the Primrose Path Installation on Kresge Oval this spring.

In prose the winning entry was written by Elizabeth C. Bashoff of Poughkeepsie, N.Y., who received her SB in biology earlier this month and is continuing her studies at MIT this summer. In poetry, the winners were Deborah R. Wolfson '86, of Teaneck, N.J., a physics major; and Diane Tener '86, of Rego Park, N.Y., a civil engineering major.

They will share the $100 honorarium established for the competition by China Altman, who created the installation with the assistance of Alpha Tau Omega and with a grant from the Council for the Arts at MIT.

Judges for the literary competition were Professor John R. Myer, head of the Department of Architecture; Stephen J. Tapscott, associate professor of literature; Robin Becker, assistant professor in the Writing Program; Fanny Howe, lecturer in the Writing Program, and Ms. Altman.

The Path

An Artist brushed a pansy
of dusty blue
And mixed with lavender
Pale magenta primroses.

The rain washes away watercolors,
And in the light rain, the wheelbarrows
Cart away the flowers.

I went to look—Gone!
I stood still where they had been,
The rain washing me away in thought.

—DianeTener

An Essay

I felt like the Elephant Man as I slumped slowly across Kresge Oval on a frisbee-weather spring day three years ago; a circus freak, bloated with my "freshman ten," the fatigue of fading mononucleosis, and the discovery of my latest 8.02 quiz grade. Trudging through the crowd that was enjoying Friday Afternoon Club hot dogs, soda, and laughter, I hunched down into my pile of books, kept my eyes on the familiar shortcut path worn through the grass beneath me, and tried to ignore the music from the band on the Student Center steps. The taunting happiness in the air was more than I could stand in the face of my limitless list of "must-do's," and I went back to my room to cry.

I can't remember the first time I saw the "Nerd Path," but, like most MIT students, I've used it frequently in times of panic, despite its well-known connotation. While usually unnoticed in its familiarity, the path sends out a subliminal message to passers-by, an accusing reminder to would-be frolickers of the academic demands of the Institute. At every picnic and concert, its presence symbolizes the pace of the place and the intensity of students who rush in blind flight so harried they forge a beaten trail through the grass on their way to classes.

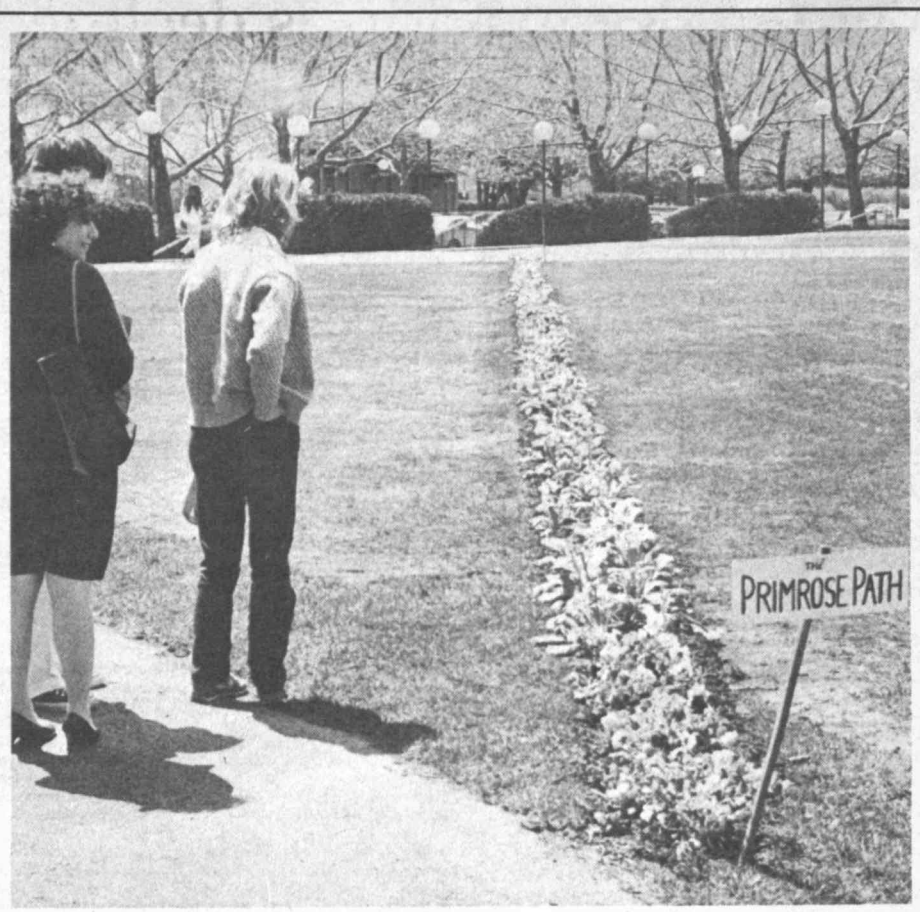
I was in my own usual frenzy, dashing to class a few weeks ago, when I was stopped short by an anomaly on the oval. I squinted in the sunlight, shaking shadows away as I emerged from my mental closet. Genie magic had left a trail of springtime flowers in the dirt of the Nerd Path. I blinked, stunned by the unexpected colors—yellow, red, maroon. I looked around for explanation and noticed the sign. "The Primrose Path." I smiled. The path of pleasure. Was someone trying to offer me an alternative? I slowly walked down the row, obligations forgotten. Others sat in the grass beside the spectacle, and I paused, tempted, but some inner signal sombered me, and I moved on. Perhaps it was the sight of the impatiens at the end of the row that spurred me on. The unstable, transitory "Touch-me-nots." Sighing, I hurried on, damning the Institute and my inability to conquer it, wondering why I chose to attend a school that demanded so much uncompromising sacrifice of the *now*.

However, as I paused to wait for the traffic light on Mass. Ave., a thought struck me, and I turned to look back at the dazzling colors... I had just *made* that compromise, hadn't I? I looked at my watch. I'd given up ten minutes of lecture for ten minutes of *Now*. I had walked *beside* the Primrose Path—enjoying its beauty—bent to smell the aromas, touched petals. . .but always progressed.

A few weeks later, I walked back from the Institute, worrying about my finals, hardly noticing the sunbathers dotting the grass of Kresge Oval. I walked along the sidewalk, because the nerd path had been roped in once the flowers had been removed, in the hopes of letting the grass grow. As I glanced at the area in passing, I stopped on the cement, remembering. I looked at the blue sky overhead. And a dog sleeping under a tree. With a deep breath,I walked onto the grass, threw down my books, and pulled off my shoes.

I took off my watch as I lay down. . .but I placed it nearby.

—Liz Bashoff



The Redirecting

Now a crossing wears primroses where
Their crossings wore it thin. One night's kind hours
Have lent us ease, and what feet bared now bears
One hundred twenty two thick feet of flowers.

Although I'm unaccustomed to a count
Of flowers in feet, I measure by the to's
And from's displaced—the redirecting round:
There's substance in these unassuming hues.

And dressed the sore in motley mauves, asked why
This is a passing, lay a wreath instead,
For going to and not just going by.

Five hundred eager buds have taken route
From scientific minds. They would not stay,
Not wanting to impose. They'll not dispute
The end—just gently reassess the way.

—Deborah Wolfson

Gray urges more funds for electric power R&D

MIT President Paul E. Gray told leaders of the electric power industry today that the funds they have budgeted for research and development are "completely inadequate."

In a speech prepared for delivery to the 1984 Convention of the Edison Electric Institute, President Gray said the nation's electric utilities are "just getting started on a transformation" that will require both new technology and new operational concepts and an investment in research and development "on a far different scale than the industry has known in the past."

Currently, he said, research and development efforts "can best be described as disaggregated, episodic and ad hoc." In addition, he said, the industry's focus has been on short-term needs and "not with the issues and problems posed by the coming decades."

While the Electric Power Research Institute (EPRI) funds some contract research, President Gray said, "its current budget of $264 million, even projected to $435 million in 1988, is, I suggest, completely inadequate." He added, "Your industry had total revenues last year of $130 billion and represents an in-place capital investment of $345 billion. Even the short-term requirements of the industry cannot be met with a research program of $300 million per year—and the longer term needs are simply not addressed in such programs."

Noting that the electric power industry has developed "some of the world's most complex, sophisticated and reliable technology," the MIT president said it now "must continue that record of development, at an accelerated pace and under adverse conditions."

"The challenge," he said, "is to develop a program of basic research and development that can look to the long run needs of the industry, a program that calls on basic engineering sciences to identify and develop the technologies required by the electric power industries for 1995 and beyond."

"Now," he continued, "is the time to invest in the future."

Such an investment, he said, would enable the industry "to tap the superlative scientific, technical, and management resources—the human resources—of this nation." In seeking new levels of excellence, he told his audience, "you can—and should—enlist the bright, able, creative men and women who thirst for the challenges and satisfactions of difficult problems."

President Gray said there were "many areas" in which new technological developments "can contribute to efficient, cost effective and environmentally sound construction and operations in the industry." In still other areas, he said, "a more vigorous program of fundamental research would bear fruit in the long run."

For example, he said, new technological developments should make it possible for the industry to overcome its "principal environmental problem," acid rain, by substantially lowering the cost of removing sulphur oxides from the emission of electric power plants.

In addition, he said, continued improvements in photovoltaic solar cells will eventually lead to economic solar electric systems for residential and other low-intensity consumers.

President Gray also said he was convinced that nuclear power, "in a new and politically acceptable form," must continue as an important source of electric energy and heat.

"Perhaps the most important area in which fundamental research is needed is in nuclear fission," he said. "As we understand the effects of burning coal, particularly the potentially devasting effects on weather patterns caused by increasing carbon dioxide in the atmosphere, our choice of courses for electric energy becomes increasingly limited."

Nuclear power plants, properly designed and operated, produce very little environmental pollution, President Gray said. He added that "it is possible to design and build reactors which by means of concept and scale can address public concerns over health and safety...in more readily demonstrable ways."

He noted that MIT's Advanced Nuclear Reactor Design Program, for one, is seeking to develop conceptual designs that will reduce construction costs, improve capacity utilization factors, reduce financial risks, greatly increase plant safety, and prolong the useful life of the plant.

MIT presents gift —$639,630— to Cambridge

An MIT official presented to the City of Cambridge a gift of $639,630 Friday, June 15.

Walter L. Milne, assistant to the MIT president, said the check he formally presented to Mayor Leonard J. Russell, City Manager Robert W. Healy and Collector of Taxes James P. Maloney, Jr., represented the balance of the 1984 gift the university is making to the city in lieu of taxes on the university's otherwise tax-exempt campus properties. Presentation of the check was made in the Mayor's office at City Hall.

Mr. Milne told the city officials that MIT had made a payment of $35,370 earlier this year and Friday's contribution brings the university's 1984 gift in lieu of taxes to $675,000. This year's gift, Mr. Milne said, is $30,000 more than MIT contributed to the city last year.

Mr. Milne noted that MIT has been making annual gifts to the city in lieu of taxes since 1928.

Mr. Milne cautioned city officials not to confuse the annual gift the university makes to the city in lieu of taxes on its campus properties with the regular property taxes the university pays the city on investment properties MIT owns in Cambridge.

This year, Mr. Milne said, MIT paid the Cambridge collector of taxes $2.2 million in property taxes on its investment properties in Cambridge. Those taxes, he said, include some $700,000 in taxes MIT had to pay the city on property the university owns in the former Simplex area, which MIT hopes to redevelop.

Mr. Milne noted, also, that MIT paid the city another $1 million last year in water and sewer charges and that represented 11 per cent of all the water and sewer fees collected by the city.

Moreover, Mr. Milne said, the Cambridge Electric Light Co., the city's largest single taxpayer, receives nearly $7 million annually from MIT for electric service and four per cent of that—or about $270,000—is passed along to the city in taxes by the light company.

"MIT really is a rich source of revenue for the city," Mr. Milne said. "All told, our taxes, fees and gifts amount to $4.5 million this year.

Computing classes set

Information Processing Services Academic and Research Computing Services (ARCS) is offering summer computing courses to the MIT and Wellesley community. The courses come in two varieties: free classes in basics and low-fee courses of greater depth.

Free "Survival Training" classes are available in UNIX and EMACS for Athena users and in Multics and CMS for users of the IPS mainframe computers.

Low-fee courses covering Athena resident software include Introduction to C, Word Processing with SCRIBE, Programming in LISP, Introduction to Programming: Pascal, and Fundamentals of FORTRAN 77.

ARCS will provide non-Athena users with IPS accounts for the LISP, Pascal and FORTRAN courses. Those interested in learning C or SCRIBE must have access to the software on Athena or their own machines.

For those interested in learning more about the IBM system, ARCS offers Fundamentals of CMS and Introduction to Database Management Systems: FOCUS. Temporary accounts on the IPS IBM computer are provided for these courses.

All free classes and courses require preregistration. For more information, call Janette Hyde, x3-1744, or visit Rm 11-315 9:30am-noon and 1:30-4:30pm.

ARCS also has planned a series of seminars on topics relating to microcomputers. Watch the Institute Calendar for subjects and dates.

Tufts honors Pierce

Dr. Chester M. Pierce, MD, psychiatrist with the MIT Medical Department and an authority on the psychiatric effects of extreme environmental stress, was among seven persons awarded honarary doctoral degrees at Tufts University's commencement recently.

Dr. Pierce was presented an honorary doctor of science degree in recognition of research he has performed both in Antarctica among workers subjected there to extreme environments and among children in this country who are victimized by racism and segregation.

Dr. Pierce is chairman of the National Research Council's Ad Hoc Committee on Polar Biomedical Research, a former president of the American Board of Psychiatry and Neurology, and founding chairman of the Black Psychiatrists of America. A mountain is named for him in Antarctica.

THE INSTITUTE CALENDAR

June 20-July 16

Seminars and Lectures

Friday, June 29

Recent ICRF Results in the Phaedrus Tandem Mirror*—Dr. Stephen Golovato, Univ. of Wisconsin, Plasma Fusion Center Seminar, 4pm, Rm NW16-213. Refreshments served at 3:45pm.

Thursday, July 5

Variational Method for 3-Dimensional Equilibria*—Dr. Amitava Bhattacharjee, Univ. of Texas at Austin, Plasma Fusion Center Seminar, 4pm, Rm NW16-213. Refreshments served at 3:45pm.

Friday, July 6

Structure of Edge Turbulence in the Caltech Tokamak*—Dr. Stewart Zweben, California Institute of Technology, Plasma Fusion Center Seminar, 4pm, Rm NW16-213. Refreshments served at 3:45pm.

Thursday, July 12

Introduction to Microcomputers*—Zita Wenzel, MIT staff, IPS introduction to microcomputers for people with little or no experience, covers anatomy and physiology of the processor and peripherals, terminology and what to look for when buying a personal computer, 2-4pm, Rm 1-390.

Community Meetings

Al-Anon—**Meetings every Tues, noon-1pm, Rm 18-290; every Fri, noon-1pm, Health Education Conference Rm E23-297. The only requirement for membership is that there be a problem of alcoholism in a relative or friend. Call Ruth or Shirlee, x3-4911.

Alcohol Support Group—Meetings every Wednesday, 7:30-9am, sponsored by MIT Social Work Service. For info call Ruth or Shirlee, x3-4911.

MIT Faculty Club—The Club is open Mon-Fri. Luncheon hours: noon-2pm; dinner hours: 5:30-8pm. For dinner and private party reservations call x3-4896 9am-5pm daily.

Commodore VIC Users Group—meets monthly at noon time. For more info, call Gil, x8-3654 Draper.

**MIT Chinese Student Club Pastry Sale*—Tasty Chinese pastries on sale, Lobby 10, every Fri, 11am-2:30pm, thru the summer.

Exercise Fitness Classes—Session I: M-W-F, through July 13, 12-1pm, instructors Bernice Manello & Carole Sureau; Session II: M-W-F, July 23-Aug 24, 5-6pm, instructor Sheila Filippone, duPont Wrestling Rm. For more info, call x3-4291; for PE credit, register at Physical Education Office (Rm W32-127) prior to start of each session.

Parent Support Group—Medical Department sponsored meetings for parents with newborn to 2-yr old children, June 19, July 3, 17, 31, Aug 14, 28, Sept 11, 25, 12-1pm, Rm E23-501. Expectant parents encouraged to attend.

MIT Wives' Group—For info about summer activities, phone Julie Roberts, x3-1614 or stop by Rm E23-376.

MIT Women's League Informal Needlework Group—Wednesday lunchtime gatherings, 9:30am-1:30pm, Rm 10-340. Bring sack lunch, projects, swap ideas. Coffee and tea served. Meeting dates: June 20 (Killian Court), July 11, 25, Aug 8, 22, Sept 5.

Alumni Activities

The Entrepreneurial Life: Starting Up, Stepping Out, Starting Over-A Personal Perspective—George McQuilken, former CEO of Spartacus Computers and designer of the IBM 4300 Series,** Under 10 Club of MIT Club of Boston dinner and talk, June 26, 6pm, MIT Faculty Club (6th flr Sloan Bldg). Admission: $11.50/club members & guests; $14/non-members. For reservations, send check payable to the MIT Club of Boston to Phil Doucet, 7 Totman Dr., Woburn, Mass., 01801. For more info, call 935-6976.

MIT Activities Committee

MITAC, the MIT Activities Committee offers discount movie tickets for General Cinema ($2.50), Showcase and Sack Theaters ($2.75). Tickets are good 7 days a week, any performance.

Tickets may be purchased at MITAC Office, Rm 20A-023 (x3-7990), 10am-3pm, Mon through Fri. Lincoln Lab employees may continue to purchase these discount passes from Malcolm Coley, Rm C-280, Mary Kowal, D-250, and Linda Wesley, C-447, Wed & Fri 1-3pm, only. Check out our table of discounts for camping, dining, musical and cultural events available to you through MITAC and MARES (Mass Assoc of Recreation and Employee Services).

Social Activities

Table Francaise*—Henri Mura, Ecole Normale Superieure, Tous les Mardis, 13.00 a 14.00 h, Venez dejeuner avec nous et parler Francais, Muddy Charles Pub. French Table with Henri Mura, exchange student from Paris as host with the assistance of Sabine Raffy, Visiting Assistant Professor from Wellesley, every Tuesday, 1-2pm, Muddy Charles Pub. All francophones and francophiles are invited to join!

Hillel Bar-B-Que & Volleyball*—With students from all Boston-area schools, Thurs, June 28, 5:30pm, MIT B-B-Q pits behind Kresge Auditorium. Cost: $3.50. If weather is questionable, call Hillel, x3-2982.

Movies

The Great Waldo Pepper**—LSC Movie, June 22, 7pm, Rm 10-250. Admission: $1 w/MIT or Wellesley ID.

The Way We Were**—LSC Movie, June 22, 9:15pm, Rm 10-250. Admission: $1 w/MIT or Wellesley ID.

Chinatown**—LSC Movie, June 23, 8pm, Rm 10-250. Admission: $1 w/MIT or Wellesley ID.

Robert H. Goddard-the Dream that Wouldn't Down,* and *Flying Machines-Aeronautics at NASA, Aero/Astro Summer Films, Thurs, June 28, 12-1pm, Rm 33-206.

Jaws**—LSC Movie, June 29, 7pm, Kresge Auditorium. Admission: $1 w/MIT or Wellesley ID.

The Deep**—LSC Movie, June 29, 9:45pm, Rm 10-250. Admission: $1 w/MIT or Wellesley ID.

The Dead Zone**—LSC Movie, June 30, 8pm, Kresge Auditorium. Admission: $1 w/MIT or Wellesley ID.

The F-15 Eagle at the Farnborough Air Show; Tradition Blue Angels;* and *STS-2: The 2nd Flight of Space Shuttle Columbia, Aero/Astro Summer Films, Thurs, July 5, 12-1pm, Rm 33-206.

The Vital Link-The Story of Apollo Tracking and Communications,* and *Apollo 8, Aero/Astro Summer Films, Thurs, July 12, 12-1pm, Rm 33-206.

Friday the 13th**—LSC Movie, July 13, 7pm, Rm 10-250. Admission: $1 w/MIT or Wellesley ID.

The Omen**—LSC Movie, July 13, 9:15pm, Rm 10-250. Admission: $1 w/MIT or Wellesley ID.

Young Doctors in Love**—LSC Movie, July 14, 8pm, Rm 10-250. Admission: $1 w/MIT or Wellesley ID.

Dance

Dance Classes/Contemporary Dance Club*—Summer classes: Danceaerobics, Mon & Thurs, 5:30-7pm; Beginning Jazz, Thurs, 7-8:30pm; Jazz II, Mon, 7:30-9pm, thru Aug 16, W31 T Club Lounge. Instructor: Cynthia Mallick.

MIT Ballroom Dance Club*—Workshops in Swing I, June 25, 7-8:15pm; Salty Dog Rag, July 5, 8:30-9:45pm, Student Center Sala de Puerto Rico. Admission: $.50/members, $1/non-members. No experience or partner necessary.

MIT Folk Dance Club*—weekly dancing - Sundays, International Dancing, 7:30pm, Student Center Sala de Puerto Rico; Tuesdays, Balkan and Western European Dancing, 7:30pm, Rm 407 Student Center; Wednesday, Israeli Dancing, 7:30pm Sala de Puerto Rico.

Children's Dance Classes*—Pamela Day, instructor. Creative Movement/Modern Dance classes for children 3-12. Children may join anytime throughout the term and may attend once or twice a week. Ages 3-4 meet Wed, 2-3pm & Sat 10-11am. Ages 5-6 meet Wed 3-4pm. Ages 7-12 meet Sat 11:15-12:15pm. West campus location, convenient to Westgate. Children do not have to speak English. For info and registration call Pamela, x3-5758.

Yoga*—ongoing classes in traditional Hatha and Iyengar style. Beginners-7:20pm, Intermediates-5:45pm,Thursdays; all levels, 12:05pm. For information call Ei Turchinetz, 862-2613.

MIT Dance workshop regular meetings*—Beth Soll, director. Beginning Technique: MW,3-5, T Club Lounge in Dupont; Composition/Improvisation: Th 3-5, T Club Lounge in Dupont; Intermediate Technique: TTh 5:30-7, Walker 201.

Exhibits

COMMITTEE ON THE VISUAL ARTS

Hayden Gallery and Hayden Corridor Gallery: The Aesthetics of Progress*—The idea and definition of Progress in the US using design as means of charting the course, supported in part by the National Endowment for the Arts, through June 24.

THE MIT MUSEUM

Earthsong: Valerie Jayne, works in mixed media, through August. **Flowers As Images: Abstractions Through a Macrolens by Vernon M. Ingram.** Macrophotographs in color by Prof. Ingram, MIT, through August. **Etched in Sunlight: Samuel V. Chamberlain '18,** Lithographs, etchings and photographs, through September. **Images of Change,** color photographs by Clinton Andrews present subjective view of issues and technologies bringing change to northern areas of India and Pakistan, through June 30.

Compton Gallery

RING THE BANJAR! The Banjo in America from Folklore to Factory. Robert Webb, curator. The musical, social and technological history will be shown by more than 50 instruments. Through September 29, 1984, Weekdays 9-5pm, Saturdays 10-4pm.

Hart Nautical Gallery

Hart Nautical Galleries*—Fredonia: A Suitable Schooner. The America. Color lithographs of schooner yacht America, Winner of the 100 Guinea Cup later known as the America's Cup. Daily 9am-10pm, Rm 5-126. Free.

The Engineering Wizard of Bristol: Nathaniel G. Herreshoff*—Plans, half-models, equipment and photographs documenting the renowned yacht designer's application of engineering skills to ship design.

Ongoing exhibits: **MIT Seagrant—**A review of MIT ocean research; **Collection of Ship Models—**Half-models and drawings. Historical view of the design and construction of ships.

Edgerton's Strobe Alley*—Exhibits of high speed photography. Main corridor, 4th floor.

Corridor Exhibits

Corridor Exhibits: Building 1 & 5, 2nd floor: **John Ripley Freeman** Lobby, Building 4: **Rogers Building, Norbert Wiener, Karl Taylor Compton. Community Service Fund, Ellen Swallow Richards. Women at MIT.** An overview of the admission of women at MIT. Five photographic panels with text documenting the circumstances that increased the number of women in the classroom since Ellen Swallow Richards. Building 6: **Laboratory for Physical Chemistry.** Building 8: **Solar Energy, Society of the Sigma XI.** For info call MIT Museum, x3-4444.

OTHER EXHIBITS

Jerome B. Wiesner Student Art Gallery: Student Art Association Year End Exhibition, Student Center Rm W20-287.

Institute Archives and Special Collections—Planning the New Technology. Part One: John Ripley Freeman. The first of a three-part series about the relocation of "Technology" (MIT) from Copley Square to Cambridge highlights the plans of Freeman whose ideas on interconnected buildings were rejected as "too wide a departure from accepted methods." Hall exhibit case across from Rm 14N-118.

Rotch Visual Collections—Recent Photographs of MIT by Ken Flowers. 8 b&w photographs displayed in Rotch Visual Collections, Rm 7-304, through mid-August.

MIT Faculty Club Exhibit*—Erika Hartwieg and Phil McAlary present their artworks, through June 29.

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

Send notices for Wednesday, July 11 through Sunday July 29 to Calendar Editor Rm 5-113, before noon, Friday, July 6.

A check for $55,000 to support the second year of the PC Familiarization Project at the Laboratory for Computer Science is presented by Richard A. MacKinnon, manager of IBM's Cambridge Scientific Center, second from left, to Professor Michael L. Dertouzos, director of the LCS. Others in photo are David N. Saul, project manager at the IBM center in Cambridge, and Dr. Irene Greif, principal research scientist at the LCS, who is coordinating the PC project at the LCS. *—Photo by Calvin Campbell*

PC project wins IBM support

Research leaders at MIT's Laboratory for Computer Science, who work with some of the world's largest and most powerful mainframe machines, are finding that the increasingly ubiquitous personal computer is an important tool too.

Personal computers are playing a role in the lives of laboratory researchers through the PC Familiarization Project, now in its second year. IBM is supporting the project through a gift of 40 machines in the first year and grants of $55,000 in each of the two years of the project's life.

Professor Michael L. Dertouzos, director of the laboratory, said a casual incident one-and-a-half years ago was the trigger for the project.

"I asked a colleague if he would work with a personal computer provided I got it for him free of charge," Professor Dertouzos said. "At that time, our faculty here at the lab were quite familiar with large, powerful machines, but had not been exposed in a thorough way to the small personal computer wave. Quite clearly, the small personal machine will have an important effect on the future of computer design and use and it is important that a large number of our faculty at the laboratory gain hands-on familiarity with the new way of doing things."

Professor Dertouzos brought a proposal for the PC Familiarization Project to IBM, which has long supported a joint research program at the laboratory—now at a level of $500,000 annually.

IBM provided 40 personal computers, 24 of which have been installed at the homes of various LCS researchers. Most of the others remained in the laboratory and a few were distributed to the MIT administration, including the office of the president, the Provost, and the dean of the School of Engineering.

Dr. Irene Greif, principal research associate at the LCS who coordinates the PC Familiarization Project, said that the personal computers have been very well received at LCS.

"They provide increased familiarity with commercial software products for the home and office, as well as a much needed increment to our laboratory's personal computing resources. Most appreciated is independence from time-sharing systems—the 'load' is the same day or night, the system is always up, drafts of documents can easily be printed locally."

Professor Dertouzos said the increased familiarity with personal computers "should contribute positively to research ideas and approaches since these machines are characterized by structural differences such as higher processor-to-screen bandwidth and new ways of use such as emphasis on the user interface. Our faculty's increased familiarity with IBM machines is helpful also because it expands their current knowledge of significant computer products and manufacturers."

Dr. Greif said that virtually all the personal computers at the homes of researchers have been used as terminals to reach mainframes at MIT. "The highest priority PC application for most lab members is the local editing of files brought down from the mainframes."

LCS researchers have written versions of programs for terminal emulation, uploading and downloading files, file transfer, network communication and local editing, Dr. Greif said.

"Inside the laboratory," she said, "we have interconnected PCs and mainframes via Ethernets. Our Computer Systems and Communications Group has developed the PC/IP (PC Internet Protoco) software for this project."

The choice of software available for the personal computers is exciting, but overwhelming, Dr. Greif said. The proliferation of software packages and the presence of the IBM machines has provided a research opportunity for undergraduates. Through the Undergraduate Research Opportunities Program, four undergraduates are evaluating software for the PC Familiarization Project. Working with Dr. Greif on this project are Andrew Braunstein, Michael Chin, Scott Morrison, Chris Vulpe.

Professor Dertouzos said the PC project is another one of several strong ties between IBM and MIT, which include the company's participation in Project Athena and IBM's support of Professor Arvind's multiprocessor research at LCS.

LCS to phase out time-sharing

(continued from page 1)

—but without dependence on large remote mainframes," Professor Dertouzos said.

A key goal in planning the Nu Machine was to make it possible "to ride the wave of microprocessor development," Professor Dertouzos said. The 32-bit bus is an example of the design emphasis placed on avoiding obsolescence—an effort which was pioneered by Dr. Stephen A. Ward, associate professor of computer science and engineering, who heads the laboratory's Real Time Systems Group.

Nearly half of the 350 researchers at the Laboratory for Computer Science are already doing research on distributed systems, Professor Dertouzos said.

"Our overall approach to distributed systems," he said, "can be viewed as a search for equilibrium between opposing forces of cohesiveness and local autonomy—cohesiveness because applications such as sharing a common database require a single coordinated approach, and local autonomy because of people's inherent need to control and use their own resources for their own purposes. Our approach toward increased decentralization is expected to lead to large numbers of intercommunicating computational resources and is intended to make possible acceptable operation of the aggregate system in spite of local failures. Our research in distributed systems is motivated by the view of a future information 'marketplace' based on intra- and inter-organizational and eventually interpersonal computer communications. We expect that this marketplace will be used on a free enterprise basis for the progressive automation of services and for the conduct of work by geographically distributed information workers who perform their work over computer screens."

The MIT Laboratory for Computer Science was founded in 1963 as Project MAC (Multiple Access Computer and Machine Aided Cognition). A major early success was the development of the Compatible Time Sharing System (CTSS), one of the first time-shared systems in the world. In the late 1960s, the laboratory developed Multics, an improved time-shared system that introduced such new concepts as virtual memory, operating system security and the writing of operating systems in a high-level language. These developments stimulated the application of on-line computing to engineering, architecture, mathematics, biology, medicine, library science and management.

Developments in the decade of the 1970s included Macsyma, a 2-megabyte program with knowledge in symbolic mathematics, the dataflow concept important for harnessing thousands of processors to work on a common task, the use of computers in clinical decision making and public cryptography algorithms aimed at ensuring privacy in distributed and networked computer systems.

Professor Ward views the Nu Machine network as part of a planned evolution from centralized to distributed computational resources whose specific design goals include versatility, cost effectiveness, catholicity and longevity. It is versatile, he said, because individual stations can satisfy requirements ranging from sophisticated graphics to substantial computing resources. The system's cost effectiveness is seen in the fact that it is designed to exploit and evolve with mass-produced very large scale integrated circuit technology. It is catholic in that it is not tied to any specialized single programming methodology or application and it is capable of working with a variety of languages for a host of purposes. Its longevity stems from the ability of its architecture to survive several generations of technical innovation—for example, improved processors, denser memories, new languages—and still provide hardware and software continuity and compatibility.

Retirees honored at dinner

More than 230 members of the community gathered June 5 in Walker Memorial's Morss Hall for a dinner honoring more than 160 employees who have retired since last July or plan to close their working careers this month.

Master of ceremonies was Senior Vice President William R. Dickson, who introduced the speaker President Paul E. Gray. Dr. Gray noted in this remarks that the average length of service of the retirement "class" was nearly 25 years and that, as a group they had amassed more the 4,000 years at MIT. Provost Francis E. Low read the roster of those retiring as certificates of appreciation were presented.

Also attending the ceremony as special guests were Chairman of the Corporation David Saxon and Mrs. Saxon.

Those retiring are:

Jean R. Adams of Sudbury, Treasurer's Office, 23 years.

Salvatore J. Albano of Arlington, Mechanical Engineering, 14 years.

Agnes Alexander of Revere, Food Services, 19 years.

Rita M. Amoroso of Everett, Lincoln Laboratory Director's Office, 22 years.

Herbert J. Arbo of Malden, Lincoln Laboratory Group 72, 30 years.

Al Armenti of Concord, Lincoln Laboratory Group 34, 24 years.

Alfred G. Audette of Somerville, Research Laboratory of Electronics, 26 years.

Clarence Babine of Peabody, Physical Plant, 12 years.

Floyd L. Bailey of Dedham, Physical Plant, 11 years.

Louise Balzarini of Bridgewater, Mathematics, 27 years.

Professor W. Carlisle Barber of Lexington, Physics, 16 years.

Anthony R. Basile of Watertown, Graphic Arts, 17 years.

Adjunct Professor Richard Beckhard of New York City, Sloan School of Management, 21 years.

Helen Beers of Burlington, Biology, 12 years.

Karl H. Benner of Hampstead, N.H., Mechanical Engineering, 38 years.

John K. Bergerson of Osterville, Comptroller's Accounting Office, 34 years.

Robert R. Billups of Stow, Lincoln Laboratory Group 53, 27 years.

Alfred E. Bishop of Dedham, Lincoln Laboratory Group 18, 21 years.

Robert Bliss of George's Mills, N.H., Leadership Gifts, nine years.

Irene Bobricki of Winthrop, Biology, 20 years.

Edward J. Borgess of North Dartmouth, Lincoln Laboratory Group 14, 30 years.

Professor Edward Bowman of Gladwynne, Pa., Sloan School of Management, 32 years.

Joseph Brown of Woburn, Physical Plant, 15 years.

Weston J. Burner of South Hamilton, Information Processing Services, 15 years.

Professor Horacio Caminos of Newton, Architecture, 22 years.

Howard F. Canning of Acton, Lincoln Laboratory Group 18, 21 years.

Doris G. Carberg of Cambridge, Telecommunications, 24 years.

Carmen R. Cardenas of Brighton, Libraries, 14 years.

Arthur F. Carreiro Jr. of Cambridge, Physical Plant, 25 years.

Lincoln Cartledge of Framingham, Lincoln Laboratory Group 36, 15 years.

Joseph Castro Jr. of Hyde Park, Lincoln Laboratory Group 72, 32 years.

Dorothy M. Chapman of Reading, Center for Materials Science and Engineering, 16 years.

William J. Clancy of Chelmsford, Lincoln Laboratory Group 11, 25 years.

Donald L. Clark of Acton, Lincoln Laboratory Group 31, 31 years.

Alfred R. Clarke of Cambridge, Physical Plant, 20 years.

Francis G. Cook of Weymouth, Graphic Arts, 20 years.

John E. Cook of Georgetown, Humanities, 19 years.

Margaret M. Cooke of Somerville, Center for Cancer Research, 15 years.

Katherine E. Darby of Somerville, Comptroller's Accounting Office, 16 years.

Peter L. Darvirris of Waltham, Lincoln Laboratory Group 39, 36 years.

John A. Dean of Chelmsford, Lincoln Laboratory Group 72, 20 years.

Edward I. Deibert of Tyngsboro, Lincoln Laboratory Group 12, 31 years.

Florence E. Dingle of Watertown, Medical Department, 20 years.

Professor Evsey D. Domar of Concord, Economics, 26 years.

Francis H. Doyle of Quincy, Lincoln Laboratory Group 12, eight years.

Roger S. Drake of Ipswich, Lincoln Laboratory Group 11, 11 years.

John D. Eisenhaure of Stoneham, Lincoln Laboratory Group 4FF, 35 years.

Keith B. Epps of Malden, Physical Plant, 26 years.

Marion Evans of Roxbury, Medical Department, 22 years.

Professor Robert M. Fano of Concord, Electrical Engineering and Computer Science, 42 years.

Lucienne C. Faubert of Cambridge, Nutrition and Food Science, 10 years.

Richard E. Ferri of Revere, Lincoln Laboratory Group 12, 28 years.

Professor Morton Finston of Lexington, Aeronautics and Astronautics, 36 years.

Henry W. Fitzpatrick of Winchester, Lincoln Laboratory Director's Office, 31 years.

Mary C. Flaherty of Woburn, Lincoln Laboratory Group 87, nine years.

Francis O. Fleming of Methuen, Lincoln Laboratory Group 72, 32 years.

Concetta Foti of Cambridge, Physical Plant, 27 years.

Stanley R. Fraser of Burlington, Physical Plant, 17 years.

Charles N. Gibbs of Clearwater, Fla., President's Office, 21 years.

Katherine Gibbs of Bridgewater, Medical Department, 10 years.

Leo Paul R. Giguere of Dedham, Comptroller's Accounting Office, 37 years.

Mary A. Granese of Wakefield, Lincoln Laboratory Group 17, 32 years.

Joseph Greene of Cambridge, Housing, 37 years.

Victor Guethlen of Sudbury, Lincoln Laboratory Group 95, 27 years.

Professor Robert L. Halfman of Lexington, Aeronautics and Astronautics, 37 years.

Andrew Hamilton of Somerville, Office of Laboratory Supplies, 33 years.

Professor Francis B. Hildebrand of Wellesley, Mathematics, 46 years.

Paul F. Hill of Cambridge, Housing, 14 years.

Jean Holden of Amherst, Lincoln Laboratory Group 13, 32 years.

Professor J. Herbert Hollomon of Brookline, School of Engineering, 13 years.

Professor Louis N. Howard of Tallahassee, Fla., Mathematics, 29 years.

Edward Hunt of Northboro, Lincoln Laboratory Group 12, 18 years.

Marie Jeon of Brooklyn, N.Y., Medical Department, 21 years.

Edwin H. Johnson of Groton, Lincoln Laboratory Group 12, 16 years.

Frederick R. Johnson of Everett, Mechanical Engineering 33 years.

Irma Y. Johnson of Cambridge, Libraries, 37 years.

John F. Keenan of Cambridge, Athletic Department, 29 years.

Grace H. Kelly of Melrose, Mechanical Engineering, 23 years.

Arthur V. Kesselhuth of Nashua, N.H., Lincoln Laboratory Group 66, 33 years.

Isabelle Kole of Boston, Earth, Atmospheric and Planetary Sciences, 36 years.

Peter S. Kosidlo of Dracut, Lincoln Group 12, 10 years.

Leon G. Kraft of Danvers, Lincoln Laboratory Group 48, 37 years.

Professor Robert L. Kyhl of Jamaica Plain, Electrical Engineering and Computer Science, 43 years.

William G. Langton of Lincoln, Plasma Fusion Center, 7 years.

Margaret Lania of Belmont, Center for Space Research, 24 years.

Joseph E. Leahy of Quincy, Medical Department, 19 years.

Henry J. Leonard of Malden, Physical Plant, 30 years.

Ionia D. Lewis of Roxbury, Research Laboratory of Electronics, 27 years.

Augustino R. Liguri of Tewksbury, Physical Plant, 17 years.

Lloyd W. Locke of Reading, Physical Plant, 10 years.

Buchanan Loesch of APO San Francisco, Lincoln Laboratory Group 3KM, 38 years.

Kenneth Lovejoy of Gardner, Lincoln Laboratory Group 12, 27 years.

Robert T. Lund of Weston, Center for Policy Alternatives, 11 years.

Douglas MacDonald of Melrose, Lincoln Laboratory Group 12, 31 years.

Donald MacLean of Watertown, Physical Plant, 18 years.

Francis B. Magurn of Concord, Lincoln Laboratory Group 15, 43 years.

Professor Thomas H.D. Mahoney of Cambridge, Humanities, 39 years.

Joseph L. Marksteiner of Dorchester, Aeronautics and Astronautics, 33 years.

Catherine Martino of Watertown, Lincoln Laboratory Group 18, 17 years.

Arthur A. Mathiasen of Socorro, N.M., Lincoln Laboratory Group 94, 32 years.

John C. Mavroides of Lexington, Lincoln Laboratory Group 83, 32 years.

Joseph F. McCluskey of Stoneham, Campus Police, five years.

James E. McGuinness of Charlestown, Physical Plant, 16 years.

M. Littleton Meeks of Lincoln, Lincoln Laboratory Group 48, 23 years.

Professor Erik L. Mollo-Christensen of Lexington, Earth, Atmospheric and Planetary Sciences, 36 years.

Evelyn L. Moore of Cambridge, Nutrition and Food Science, 12 years.

Francis J. Murphy of Jamaica Plain, Housing, 22 years.

Charles G. Newbold of Framingham, Physical Plant, 15 years.

Edward E. Newman of Barrington, R.I., Civil Engineering, 25 years.

William J. O'Donnell of Dracut, Haystack, 31 years.

Professor Robert E. Ogilvie of Lexington, Materials Science and Engineering, 29 years.

Gordon W. Oro of Stoughton, Artificial Intelligence Laboratory, 36 years.

At Commencement: Margaret, Catherine and Robert W. Mann.

A family affair

The number of MIT degrees held by Professor Robert W. Mann and his children rose to six on commencement day when his daughter, Catherine L. Mann, received the PhD in economics. She received her bachelor's degree from Harvard in 1977.

Dr. Mann's son, Robert W. Mann, Jr., received two engineering degrees from MIT, the SB in 1975 and the SM in 1977, both in aeronautics and astronautics.

Professor Mann's three degrees in mechanical engineering are all from MIT—the SB in 1950, the SM in 1951 and the ScD in 1957.

And Mrs. Mann? As Margaret I. Florencourt, her AB degree in physics from Radcliffe College is Class of 1946. Having completed degree requirements in 1945 she joined the then nascent Whirlwind Computer Project at MIT as research engineer and took graduate subjects in electrical engineering here, thereby becoming an MIT alumna, Class of 1946. Subsequently she earned an advanced degree from Harvard Divinity School. This year and next she serves as chairman of the MIT Women's League.

Dr. Mann is Whitaker Professor of Biomedical Engineering in the Department of Mechanical Engineering. He also is director of the Newman Laboratory for Biomechanics and Human Rehabilitation at MIT. He was the recipient of the 1983-84 James R. Killian, Jr. Faculty Achievement Award, and he is completing a term as president of the MIT Alumni Association.

Qurino P. Paglierani of Watertown, Lincoln Laboratory Group 12, 38 years.

Armando E. Paladino of Hudson, Lincoln Laboratory Group 85, 28 years.

Barbara J. Palm of Lexington, Lincoln Laboratory Group 83, 17 years.

Constantine A. Pappas of Dedham, Lincoln Laboratory Group 72, 27 years.

Edward D. Parrish of Bedford, Lincoln Laboratory Group 11, 22 years.

Joseph J. Peredna of Lexington, Lincoln Laboratory Group 12, 21 years.

Sue Peredna of Lexington, Lincoln Laboratory Group 18, 22 years.

Anthony J. Perella of Hyde Park, Nutrition and Food Science, 20 years.

Kenneth E. Perry of Wayland, Lincoln Laboratory Group 69, 21 years.

Felix A. Pesanelli of Malden, Lincoln Laboratory Group 13, 33 years.

Robert S. Pickett of Watertown, Francis Bitter National Magnet Laboratory, 35 years.

Leida V. Pietron of Acton, Graphic Arts, 30 years.

Dr. John V. Pikula of Boston, Medical Department, 26 years.

Professor William H. Pinson of Jamaica Plain, Earth, Atmospheric and Planetary Sciences, 33 years.

Joseph A. Principi of Jamaica Plain, Food Services, 33 years.

Thomas P. Raftis of Winchester, Lincoln Laboratory Group 16, 20 years.

K. Nagaraja Rao of Wellesley, Center for Policy Alternatives, 10 years.

Vincent Raulinitis of Readville, Laboratory for Nuclear Science, 24 years.

Richard J. Reyenger of Westwood, Lincoln Laboratory Group 12, 32 years.

Peter H. Richardson of Weston, Admissions Office, 20 years.

Aubrey R. Rigby of Burlington, Mechanical Engineering, 32 years.

Ernest A. Ritchie of Cambridge, Physical Plant, 16 years.

Joseph W. Robichard of Reading, Lincoln Laboratory Group 71, 26 years.

Fred Rodel of Dorchester, Lincoln Laboratory Group 71, 28 years.

Theresa Rodrigues of Waltham, Comptroller's Accounting Office, 18 years.

Elvira Rodriguez of Brookline, Faculty Club, 10 years.

Institute Professor Walter A. Rosenblith of Brookline, 33 years.

Grace W. Rowe of Stoneham, Laboratory for Nuclear Science, 40 years.

Anne K. Ryan of Chestnut Hill, Information Processing Services, 12 years.

Professor Frederick Sanders of Marblehead, Earth, Atmospheric and Planetary Sciences, 34 years.

Manuel Savoy of Cambridge, Physical Plant, 10 years.

Dominic J. Scalcione of Cambridge, Physical Plant, 13 years.

Danti J. Scarponi of Cambridge, Purchasing and Stores, 39 years.

James N. Sciola of Cambridge, Physical Plant, 15 years.

Mabelle B. Scofield of Melrose, Civil Engineering, 20 years.

Professor Robert C. Seamans of Cambridge, Provost's Office, 22 years.

Lisa E. Sgrosso of Lexington, Lincoln Laboratory Group 18, 27 years.

Professor Eli Shapiro of Boston, Sloan School of Management, 31 years.

George Sharib of Brookline, Research Laboratory of Electronics, 29 years.

Elliot Silverman of Lexington, Lincoln Laboratory Group 33, 27 years.

Theodore Simmington Jr. of Needham, Lincoln Laboratory Group 33, 30 years.

Andrew S. Smith of Medford, Lincoln Laboratory Group 15, nine years.

Natalie Speckman of Watertown, Mechanical Engineering, 45 years.

Dr. Samuel W. Stein of Lexington, Medical Department, 22 years.

Joseph R. Steinberg of Rockland, Information Processing Services, 27 years.

Professor Kenneth R. Wadleigh of Belmont, Mechanical Engineering, 38 years.

Virginia T. Wood of Lynn, Credit Union, 24 years.

Helen T. Woods of Arlington, Credit Union, 17 years.

Joseph A. Woods of Bedford, Draper, 37 years.

Anthony Zona of East Boston, Materials Science and Engineering, 25 years.

Henry C. Zufelt of Weymouth, Laboratory for Nuclear Science, 37 years.

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Deadline is noon Friday before publication.

For Sale

Ethan Allen BR set, dk pine, 4-pstr dbl bed, lng bureau w/mirror, 5-drwr chst, gd cond. Call Mike, x2233 Linc.

Upr piano w/stool, nds refnshng & tuning, $100. Call Dan, x3947 Linc.

Airline tckt, NW RT-coach, anywhr NW goes in US exc AL & HI, $250. Call John, 569-5059 eves.

Cnvrstn pit modlr sofa, exc cond, med gray wool, 7 sctns, 32x32x26h ea, $3,400 nw, asking $900. Call Peter, x8-1188 or 787-0613.

Lwnmwr, 22" Mastercut w/Tecumseh eng, nds wrk, $50 or best; moving bxes, 2 lrg wrdrbs, $7; stereo trntbl, varbl spd BIC mdl 780, $75 or best. Call Robert, 938-8565.

Br nw Fridgidaire fridge, 21 cu ft, 2-dr, top & bttm, smkd tmprd glass shlvs, huge frzr, hrvst gls/antiq gld, txtrd drs, wrrnty & 2nd yr maint cntrct, bght for $769, asking $600. Call Tina, x3-5240 or 628-5320 after 6pm.

Car stereo tape dck, Pioneer KP-707G & amp, spkrs, Pioneer TS-X9; Jensen 6x9" triaxial spkrs, Jensen R402 AM/FM stereo rcvr, fader & balnc; bckpck w/ext alum frm; bedspr & foam rbbr mttrss, dbl-bed sz. Call Lloyd, 354-4551.

AM/FM radio, $13; b&w tv, 17" in wrking cond but nds repr, $15; various sz suitcases, $10-25; Bundy clarinet, used vry lttl, $250 value, $150 or best; wndw fan, $8; cstm-md tbl, 36x36x30"h, $50; red sofa, $10; stereo bnch, car spkrs, sm applncs, $5-15. Call Ragnhild, x3-6085.

Zenith stereo w/cass, 8-trk, AM/FM radio, 2 spkrs, $200 firm; sgl bed w/wd hdbrd, exc cond, $200 firm. Call J. Blair, x8-2843 Draper.

Q-sz bed, Italn prvncl w/mtchng nght tbl, $400; dr mirror, 18x60, $20. Call Dan, x8-1276 Draper or 272-7585 7-10pm.

Lwn mwr, elec Sunbeam, 1-yr old, used on sm lwn 5 times, selling due to move, $75. Call Mark Anderson, x3-4214.

35mm SLR Canon TX camera w/50mm f/1.8 lens, full apertr mtring, microprsm fcsng scrn & blt-in exp mtr, inc prtctv lthr case, exc cond, $100 or best. Call Lou, x3-7779 or 646-5285.

Whirlpool 12,000 BTU a/c, exc cond, $225; 4,000 BTU a/c, $45; lrg attic fan, $50; Swing Design wden swng set, nds some wrk, $140; Swingomatic baby swng & crdl, nw cond, $25. Call Cliff, x7241 Linc.

13'6" Sears hvy-duty alum boat, 63" beam, 24" freebrd, 24hp max, catlg price $1,000, asking $550, will deliver; water skis, $25; Jimmy Connors C-1 tennis rckt, v gd cond, nds restrnging, $20. Call Matti, x3-4152 or 472-0769.

Lrg wden drssr, various szd tbls, dr mirror, ea itm $15/less. Call 876-0950.

Mtchng chr & couch, $59; carpet 8x12', $40; off-white drapes, $60. Call Bruce, x3-7944 or 232-8523.

IBM Fortran compilr, fll dcmntn, $150; Visicalc sprdsht prgrm, fll dcmntn, $70; IBM parallel prntr intrfc crd, $90. Call Jean Kwo, 262-7420.

Btchrblck slab, hrdwd 3x9'x1¼", no holes, gd cond, $150. Call Penn, x8-2872 Draper.

DEC VT-180 cmptr sys w/CRT, 4 dsc drvs, 132 col smart prntr, sftwr, select wrd prcssr, Multiplan, M-Basic, games, $1,750. Call Dick, 1-668-1205.

Oscilloscope, Dumont 304-A DC cpld X & axis calibrtd gradicule blt-in calbrtr, wrks vry well, $150. Call Rocky, x3-4834.

Mving sale: frm full-sz bed, mttrss, bx spr & cbnt, gd cond, $100; 15 cu ft fridge, exc cond, $75. Call Karen, x3-7406.

Sears Kenmore hvy dty wshr, $50. Call L. Williams, x4563 Linc.

Mving, mst sell: sleep-sofa, $80; couch, $50; 2 end tbls, coffee tbl, tv crt, b&w tv, 2 drsrs, 2 flr lmps, 2 tbl lmps, 5,600 BTU & 4,000 BTU GE a/c undr wrrnty, dintte set w/4 chrs, hnd-prntd Afrcn batiks, othr itms, lo prices. Call Salim, x3-6275 or 232-0702.

19" Quasar colr tv, 3 yrs old, $130. Call Henning, x3-8406 or 721-2794.

Texas Instrmnts TI 99/4A cmptr, cst $60; cass rcrdr, game crtrdgs. Call Mark, 247-9364.

1 set 14" rims for dodge Charger or Plymouth cars, best offer. Call Dan, x2051 Linc.

Remington elec office typwrtr, uses crbn rbbn, $75 firm; Zenith stereo w/cass, 8-trk, AM/FM, 2 spkrs, exc cond, $200 firm; 8-trk car stereo, $10; sgl bed w/wd hdbrd, exc cond, bx spr & mtrss free, $200; pr Colt indr/outdr rllr skts, M sz 7, exc cond, $10; VW Beetle rfrck, $20 firm. Call J. May, x8-2843 Draper, 8-5pm.

W 3-spd Raleigh bike, 26" whl, 19" frm, exc cond, $85; W 10-spd bike, 19" frm, gd cond, $55. Call Joel Freilich, 494-2192 (2-4pm) or 731-9031 (6-9pm).

Carrier a/c, 7,000 BTU. Call Tony, x7275 Linc.

IBM-PC w/2 340K DS00 dsk drvs, 320K RAM, multi-fnctn card w/parallel port, clock clndr, RS232 colr grphcs card, 2 mntrs (std & hi resolutn, EPSON MX200 prntr, easy wrtr, Pascal complr, etc, $3,900 or best. Call Ed, x8-1811 Draper.

19" Zenith b&w tv, $10; 12" GE b&w tv, $5; tv stnd, $5; 6x3' studio couch, $50; 12x8' oval rug, $10. Call Jeff, x3-6591 or x3-6586.

Champion juicr, lk nw, sldm used, orig $200, sale $150. Call L. Suter x3-3811.

2 twn mttrsses, 2 yrs old, exc cond, nw $60 ea, asking $30. Call 864-4468 after 6pm.

Smith-Corona Coronett XL typwrtr w/accssrs, $175. Call Tom, x3-3248.

Full-sz bed, $50; 2 armchrs, $10 ea; 2 nice lmps, $15 ea; iron, $10; briefcase, $10. Call Moshe, x3-2151 or 277-7753.

Prtbl Smith Corona typwrtr; piano bnch w/storg for music; pole lmp w/4 lghts; assrtd Revereware pots & pans; assrtd sm elec applncs; set-in-tile coffee tbl, 5'l. Call Elliot, x3872 Linc or 861-7969.

Alto sax, 1952 Conn 6-M, $200. Call 666-9530 eves.

Kohler & Campbell spinet piano, v gd sound & touch, $800; boy's 10-spd 24" bike, gd cond, $30; air pmp for bike, $4; boy's ice hcky shoes, sz 1½, $25; girl's fig skts, almst nw, sz 10, $30. Call Kazuko, x3-8068 before 2:30pm or 489-0176.

Slkscrn, 33x27" frm, 27x21 int area, $10; 10" squeegee, $5; 18" squeegee, $8. Call Morissa, 491-8604.

M's 10-spd bike, Sears carrier on ea side, $50; Remington mnl typwrtr, v gd cond, $20; crib, mttrss & bmprs, $25. Call George, 643-4283.

Exercycle, $50; free for pick-up: wden wndw shttrs, 8 15"x40", 6 15"x51", 2 15"x65"; sldng clost drs; full-sz dr; curtn rods. Call 965-5452 eves.

Sharp AM/FM/cass stereo, trntbl & spkrs, 8 mo old, $90; vacuum clnr w/attchmnts, 8 mo old, $45. Lving cntry, mst sell, will cnsdr bst offr. Call Gerhard, x3-8451 or 923-9109.

4 145SR13 stl all-seasn rad trs, spin-balncd on Fiat rims, $65 or best. Call Lucky, x3-7707.

Beige tweed q-sz sleep sofa w/innrsprng mttrss, mod, nice lking, on mtl cstrs, $100 or best. Call 566-5873.

English-md 3-spd Raleigh bike, gd trs, exc cond, $95. Call David, 323-3725 not later than 9pm.

Schwinn W 10-spd bike, gd cond, nw trs, $60; grn crpt w/pad, about 10x10', sevrl sm stains, $20 or best. Call Ruth, x3-6947.

Norge a/c, 5000BTU, $150 or best. Call Ivan, x3-7324.

Prtbl typwrtr; typng tbl; Spalding tennis rckt, nvr used; hndwvn Pakistan dbl bedsprd; Samsonite lugg; oval beige rug, 9x6, all cheap. Call Laura, x3-3124 or 628-2061 eves.

Used Frigidaire slf-clning wall ovn & mtching 4 elmnt rng unit, hrvst gld, exc cond, $125/ovn, $50/rngtop, $150/both. Call Penn, x8-2872 Draper.

Vehicles

'64 Volvo 544, amiable, well-seasoned car nds nw hm, orig ownr, eng gd, bdy nds some wrk, $500 or best. Call Beth, x3-4680 or 666-0858.

'69 VW sunrf bug, frm FL, no rst, stereo cass, reblt eng, nw brks & int, rns well, inspctd, mving mst sell, $1,775. Call Jim, x3-2232 or 1-934-5226.

'69 Valiant, 142K, rns but nds wrk, $500 or best. Call Richie, x3-2014 or 1-475-4062.

'70 Pontiac Catalina, 84K, rns well, bdy rsty, $300 or best. Call Janet, x3-2566.

'70 Chevy Nova, 6 cyl, grt Boston car, nw batt, hi mi, running cond but nds exh sys, $175 or best. Call Ingrid, x3-6404 or 926-3052.

'70 VW Beetle, nw eng, brks, cltch, muff, trs & paint, no rst, $1,475. Call Whitney, 661-5655.

'72 VW Bus, rblt eng, 20K, nw cltch, stl rads, lks & rns grt, $1,600 or best. Call Gary, x2572 Linc or 256-0190.

'72 Volvo, rns well, nw exh, lving cntry, mst sell, $1,200. Call Enrico, x3-3517.

'73 Olds Cutlass Supreme, 75K, tnd-up rcntly, passed 1984-85 safety tst, exc cond, $1,200 or best. Call Dr. Chaudhury, x3-5101 or 735-9297.

'73 VW Superbeetle, gd rnning cond, reblt eng, snw trs, nw exh & elec systm, undrbdy rst, bst for prts, $400 or best. Call John, 494-1512.

'74 Dodge Dart "Sports", old rlbl fun car, nds some wrk, grt gen, $450 or best. Call George, x3-5730 or 494-1710; mssg at x3-2961.

'74 Dodge Dart, 79K, eng rns well, some rst, nds radtr, $800 or best. Call Dave, x8-1629 Draper.

'74 Toyota Corona, auto, mny nw prts, hi mi, drvn daily, mch rst, $400 as is. Call Marilyn, x3-1679.

'74 Plymouth Duster, extrmly rlbl, econmc, 4 rads, nw batt, muff & exh, othr prts nw, bdy not perf, $700. Call Ann, x3-6199.

'74 Datsun B210, gd cond, gd for mny more miles, $1,475. Call Darryl, x4289 Linc or 256-5285 eves.

'74 Pinto wgn, 4 gd trs, nw batt, muff & wtr pmp, lts of rst, eng smooth, gd basc trans. Call Tony, x8-4454 Draper.

'75 Pinto w/'79 eng, 86K, nw brks, gd rnning cond, some rst, v gd mpg, $850. Call Bob, x8-1789 Draper.

'75 Ford LTD, 67K, 4-drs, a/c, pb, ps, rns vry well, exc cond, asking $750. Call Chris, x3-2632 or 364-9014.

'75 Datsun 710 sta wgn, orange, rns well, grt city car, nw trs, frt brks, some rst, 90K, $775. Call Vito, x3-6451.

'75 Duster slnt 6, auto, ps, 95K, $900. Call Aryeh, x3-2469 or 494-0047.

'75 Plymouth sdn, 85K, a/c, v gd cond, $1,300. Call 964-5111.

'75 Plymouth Variant, V6, auto, 4-dr, 67K, gd cond, orig ownr, $1,100; '76 Ford Grn Torino wgn, V8, 5-dr, 73K, gd cond, $1,000. Call Ming, x2880 Linc or 861-0486.

'76 Chevy Malibu wgn, 8 cyl, a/c, gd bdy, $1,300 or best. Call Jim, 935-3067.

'76 Pontiac Sunbird, 62K, $1,150. Call Stacey, x3-4791 or 643-1284 after 6pm.

'76 Chevy Vega htchbck, auto, $600. Call Bill, x8-3289 Draper.

'76 Dodge Dart, 4-dr auto, ps, a/c, orig ownr, comp maint rcrds, exc cln, 4 nw trs. Call Stan, x3-3627.

'77 Volare 4-dr sdn slnt 5, 3-spd, std w/ovrdrv, grt mpg, gd dpndbl trnsprtn, gd cond. Call Ray, x3-7235.

'77 Dodge Monaco, 4-dr, 8 cyl, 61K, ps, pb, a/c, AM/FM radio, rear def, exc cond, $1,200. Call John, x3-2739 or 494-8835.

'77 Granada, only 16K, V-8, 2-dr, auto, a/c, wh & grn, $3,400. Call Harvey, x3-5265.

'78 Honda Civic, lo mi, well-maint, 4-spd, no rst, Jensen spkrs, $2,400. Call Janet, x3-6744 or 484-5742.

'78 Chevy 3/4 ton pck-up, 4x4 w/plow, AM/FM stereo, rns exc, asking $4,900. Call Tom, x3-4978 or 749-6645.

'78 Dodge Challenger, 45K, mny xtras, $3,000. Call Michelle, x7476 Linc.

'78 Datsun 280Z, blue, stck shft, immac cond, 64K, 4 Mich trs, 2 studded snws, sunrf, a/c, tape dck, ski rck, $5,900. Call Basil, x3-2206.

'79 Subaru DL 4-dr wgn, 5-spd, AM/FM stereo, wear wpr, qrtz clck, reg gas, 30mpg, exc cond, 71K, $3,000 or best. Call R. Strong, x8-1418 Draper or 862-5955.

'79 Renault LeCar, 2-dr, 4-spd, 45K, nw frnt trs & rear brks, nw steering rck, exc cond, $2,600. Call Michel, x3-2256 or 492-2974 eves.

'79 Mustang 2-dr htchbck, 6 cyl, lo mi, chstnt colr, nw trs, exh, batt, brks, auto, ps, pb, rstprfd, AM/FM stereo, exc cond, $4,100. Call Vern, x8-4027 Draper or Hilda 923-9774 after 3pm.

'79 Chevy Monza wgn, 2-dr, stndrd, exc cond, orig ownr, 48K, $2,500. Call Charlotte, x3-3529.

'79 Pontiac Sunbird, 6 cyl, a/c, mny nw prts, exc cond, $2,700. Call 876-4521.

'80 Suzuki GS850L, cstm styld, lo-rdr, shft drv, case-grds, lo mi, mst be seen, shwrm cond, mst sell, $1,900 nego. Call Rick, x3766 Linc or 484-6937.

'80 BMW 320i, perf cond, lux pckg, a/c, sunrf, mtl paint, alloy whls, foglts, radio cass, 40K. Call Ricardo, 536-4982.

'81 Renault LeCar, 41K, sunrf, beige, Mich trs, v gd cond, $2,800. Call Gisela, x3-2208 or 366-2788 eves.

'82 Chevy Chevette, 2-dr, tan, 4-spd mnl, bght br nw, extrmly low 12K, rstprfng, exc cond, avlbl 8/1. Call Sada, x3-6637 or 734-2334.

'83 Honda Civic, 4-dr sdn, auto, rear defog, rstprf, 16K, slvr gray, $6,800 or best. Call Sharon, x8-3956 Draper or 497-9065 after 5pm.

'83 BMW 320IA, grpht w/blck clth, Alpine Am/FM/cass stereo, a/c, sunrf, deflctr, 20K, exc cond, $15,000 or best. Call 458-7211 til 4pm, 453-2363 after 5pm.

Housing

2BR, 1-1/3 bath triplx, gd prt of S End, restrd w/orig detls, w/d, dw, sm yrd, $800/mo w/ht, avlbl 8/1. Call Kay, x3-5030 or 437-7322 eves.

Inman Sq Cambridge, 1,200 sq ft condo, bowfrnt, frml DR, 22' LR, 2BR, renvtd 2½ yrs ago, ktchn/brkfst nook/den w/exposd brck wall, quarry tile flr & grnhs wndws, wdstv, secrty alrm, mstr antenna, lndry hook-up, grdn, $119,000. Call Dave, x3539 Linc 4-5pm or 661-3223 eves.

FL, lakesd villa nr Tampa, sleeps 6, own pool, golf, fshng & tennis avlbl, $400/wk. Call Chris, x3-7935.

ME vactn house on quiet lake betw White Mtns & coast, 2BR, A-frm w/lrg dck on 1/2 acre, gd fshng, tennis nrby, $300/wk. Call Catherine, 354-3978 eves.

Summr rntl, N Eastham, btfl yr-rnd, 3BR, fully eqppd rnch, nr Bay Beaches, 8/25-9/1, $400. Call Roy, x8-4200 Draper.

Nantucket, lux twnhouse condo, nr Jarid Coffin House, 1BR, 1½ baths, sleeps 4, July 6-13. Call Paul, 924-6719.

Lexington, 7 rm rnch, 1½ baths, finshd bsmnt, garg, scrnd prch, approx 17,000 sf, btfl yrd, Estabrook schl, nice nghbrhd, well maint, exc cond, $175,000. Call 862-1264 eves.

Well-furbshd house nr Harv Sq w/grdn & dck, avlbl 7/9-8/31, $600/mo but only $900 for full period. Call Earle Loman, x3-4877 or 876-7821.

Cape Cod vactn house rntl, 4BR, dck, quiet st, mins frm beach, rsnbl rates. Call Connie, x3-1316.

Glencoe, Nova Scotia 2BR vactn retrt, vry priv 12-acre site ovrlking E River Valley, 1/2 loft, swim nrby rvr, wtrfall pools, brd wtching, hiking, rck hnting, $245/wk. Call Alex, x3678 Linc or 369-3973.

For rnt, W Gay Head on Martha's Vineyard, A-frm w/glass-wall LR ovrlking Vineyard Sound, access to tennis court, beaches, avlbl July, 2 wks or 4. Call 645-9245.

Newton, furn Colnl house, 3BR, 2 bath, fmly rm w/grnd piano, screend prch, fncd-in yrd, nr Mass Pike & Rt 128, 1 mi frm T, avlbl 8/1/84-7/31/85, $1,200/mo + utils. Call Nancy, x3-3405 or 244-2890.

For rnt, Lincoln, mod solar extnsn, sauna, jacuzzi in rdwd sunspace to shr ($600+) or fully rnt ($1,200+), prof sgl or cpl pref. Call x3-2308.

For sale, 1/4 acre wded lot nr NH Lakes regn & ski areas, on sprng-fed lake, 1½ hrs drv frm Boston, ideal for cool summr cmping. Call Lucy, x3-2774.

Mashpee, Cape Cod, 3BR rnch w/enclsd prch, lrg yrd, wded lot, wlk to nghbrhd beach on John's Pond, 7/7-21, 8/11-9/1, $325/wk. Call Barbara, x3-5259 frm 6/25 or 477-2934.

Animals

Free, 2-mo-old adorbl gr & wh kitten sks gd hm. Call Maria, x3-1316.

Wanted

Poor but hungry folk sk 5+ cu ft fridge to store sncks & drnks. Call Lynn or China, x3-2701.

Dog barrier for sm (Escort) station wgn, rsnbl. Call Chris Kirchberg, x3-4765.

Vistng prof sks to rnt 3BR furn/partly furn house in Lexington off Rt 128, or in Wellesley off Mass pike, 9/84 thru 6/85. Call Anita, x3-2747 or 862-2747.

Inexp couch for college dorm rm. Call Greg, x8-2027 Draper.

Vistng fclty w/spouse & 2 chldrn sks sublet or rnt, Sept-Dec '84. Call Prof. Siembieda collect, 505-897-0862.

A/C for Eastgate apt, mst not exceed 27¾wx17"h. Call Jon, x3-6802 or 494-1534.

1BR apt/sm house, pref furn, for 1 yr beg approx Aug 25. Call Prof. Barry S. Seidel, U of Del, 302-451-2960 or 302-451-2421 (sec) or 302-368-2960 (hm).

Mature, quiet non-smkng F grad stdnt sks studio/1BR Cambridge apt, $300-450. Call Christine, 494-0148.

Vannevar Bush Fellows arriving in Sept sk furn/unfurn apts or houses to rent. Call x3-2336 or x3-3442.

Ride to/from Bucksport/Blue Hill area of ME, from 7/20-Labor Day, will pay for all gas. Call Jim, x3-3751 or 625-9431.

Early am ride frm Seneca Rd-Lexington St area, W Woburn to MIT. Call Josephine, x3-3727 or 246-1069.

Prof Newton fmly nds housekpr/chld care prsn immdtly, gd pay, car & refs ncssry, mthr w/pre-schler welcm. Call 965-4110 after 5:30pm.

Roommates

Non-smkng prof/stdnt F to shr lrg W Somerville apt, safe & cln, 1 min to 3 bus lines, suprmrkt acrss st, avlbl 8/1, $275 inc ht, gas & elec. Call 776-7697 after 7:30pm.

M/F to shr Brookline apt w/1M, 1 mi fr MIT, 3 blcks to Cool Cor, $200. Call Pete, x3-1745 or 738-8567.

Summr sublet, 6/26-8/31, huge rm in Inman Sq house w/2F & 1M, $190/mo nego. Call Jim, x3-2551 or 576-1960.

F to sublet own BR in 4BR apt w/3F, Inman Sq, wlkng dist to Cent & Harv Sqs, flly furn rm, sunny, hrdwd flrs, wshr, frnt & bck prchs, garg, off-st prkng, $150/mo + utils, avlbl 6/16-9/16. Call Leslie, 492-6108.

Cent Sq Cambridge, rmmate for coop household, 2M & 3F, shr fd & cooking, no pets, $175/mo inc ht, MIT affiliates only. Call Henry, x3-8571 or 547-9784 eves.

2 rmmates nded 7/1 for 3BR Watertown duplx, prkng, nr T & malls, $227 + utils. Call Pam, x3-6837 or Karen 926-4098.

F to shr rnt-cntrlld 2BR apt nr Inman Sq w/othr F, no smkrs/pets, avlbl 8/1, $220/mo inc ht. Call Sue, x3-8027 or 492-4551.

Lost and Found

Found: pr of contact lenses in case, June 4, Bldg 20. Call Amy, x3-7983.

Miscellaneous

Rlbl babysttr, nr Harv Sq, avlbl p-t/f-t, eves & wkends. Call Sunanda, x3-3438 or 492-5162.

Surplus Property

OFMS has the following excess MIT equipment for transfer within MIT. Unless noted, items are at the Equipment Exchange, 224 Albany St., open Mon, Wed & Fri 10am-1pm. After 30 days, items are sold to individuals. Where noted, bids and offers go to Tom Donnelly, property administrator, E19-451, x3-2779, with envelope so marked. Always reference case number.

Case T-213: IBM Mag Card II typewriter, mdl #24-0514545, fair cond.

Case 1247: Centronics data line printer, mdl #101, fair cond; Teletype terminal, mdl #ASR38, hard copy, poor cond.

Case 1249 — To inspect call Al Shaw, x3-4924: 2 Delta double drill presses, gd cond; Smith & Mills shaper, gd cond; South Bend lathe, 13" swing, mdl #186D, gd cond; Greenerd Arbor press, mdl #3B, gd cond; sheet metal brake, gd cond; Monarch wood jointer, mdl #16", gd cond; Boise Crain 10" tbl saw, gd cond.

Case 1251: 21 Steelcase file cabinets, 4-drwr letter, some with keys, gd to fair cond.

Case 1254: Calumet rocking photo print washer, like new cond; Lenz rotary photo print washer, gd cond; Leedal rotary photo print washer, model #C8257, gd cond.

POSITIONS AVAILABLE

It is Institute policy not to discriminate against individuals on the basis of race, color, sex, sexual orientation, religion, handicap, age, or national or ethnic origin in the administration of its programs and activities.

This list includes all nonacademic 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 Assistants (10-215, 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.

Pat Williams	3-1594
Dick Higham	3-4278
Appointments:	
Karen Nakos	3-4270
Virginia Bishop	3-1591
Ken Hewitt	3-4267
Appointments:	
Darlene McNeil	3-4268
Sally Hansen	3-4275
Kenneth W. Chin	3-4269
Muriel Birchette	3-4277
Appointments:	
Therese McConnell	3-4274
Susan Gaskell	3-4266
Appointments:	
Nancy McSweeney	3-4076

Administrative and Academic Staff

Personnel Administrator, Department of Mathematics, to be responsible for the management of personnel matters including: preparing promotion, appointment and tenure cases; preparing Affirmative Action Plan, related documents and statistical summaries; assisting department head in the preparation of School's five-year plan, and President's report; coordinating visas for foreign faculty and visitors; assisting new faculty, instructors and visitors upon arrival; acting as liaison between the department head and faculty, and between the department and Institute offices; interpreting department and Institute policies; hiring and supervising 13 to 15 support staff; distributing work load, conducting performance evaluations, and making salary recommendations; planning and coordinating several major social functions a year. Assist department head in special projects as required. A Bachelor's degree or equivalent combination plus three to five years of related experience (at least two of these years in a supervisory role) are required. Excellent interpersonal skills, good writing skills, and the ability to set priorities amid conflicting demands are also required. MIT experience preferred. A84-405

Assistant Director, MIT Alumni Fund, Alumni Association, to provide support for the major reunion gift program, under the direction of the Associate Director. The intent of the position is two-fold: to increase the amount of information and support provided to alumni volunteer solicitors working on 50th, 40th, and 25th reunion campaigns; and to provide the staffing capacity to increase the number of gift committees soliciting for the 25th and 40th reunions. Requires Bachelor's degree and at least three years experience in public affairs, human services, education or equivalent; ability to manage complex procedures, record systems, and volume mailings; strong interpersonal skills, ability to work in a team setting; and solid writing and proofreading skills. Experience with some forms of fund-raising, especially with the solicitation of personal gifts will be helpful, but not prerequisites for this position. Career interest in personal giving desirable. A84-404

Auditor I, Audit Division, to perform assigned audit tasks in reviewing and appraising soundness, adequacy and application of accounting, financial and operating controls. Assist in the review of the extent to which Institute assets are accounted for and safeguarded against losses of all kinds. Maintain a high degree of professionalism and objectivity in the audit tasks assigned. Prepare reports as necessary. Participate in review of systems and procedures and make recommendations on improvements in systems design and computer applications. Supervise clerical support staff. Requires Bachelor's degree in Business Administration with major in Accounting or equivalent. One to three years experience with a certified public accounting firm or internal auditing experience necessary. Reasonable knowledge of systems analysis and computer capabilities desirable. A84-403

Direct Mail Manager, MIT Press, to conceive, write, and produce mail-order catalogs and brochures advertising MIT Press books. Involves drawing up seasonal plans and budgets; selection of books and mailing lists for each campaign; preparation of lift letters and copy for brochures and catalogues; scheduling and direction of design, composition, printing, and lettershop services; analysis of mailing results. Responsible for maintenance and rental of the MIT Press' own book-buyer's mailing list. Requires college degree and two to five years of direct mail experience, preferably in book publishing. Excellent organization and ability to handle details under deadline are essential. A84-402

Technical Writer, Administrative Information Systems, to compile, organize, and write user documentation and manuals for new and revised database systems. Format, publish and distribute documentation. Write and edit installation procedures. Maintain moderate expertise on word processing and IPS supported operating systems. Possibly teach and consult on word/text processing (CMS, XEDIT, and SCRIPT). Requires bachelor's degree, technical writing and data processing experience. Background in accounting and system analysis highly desirable. Familiarity with one or more of the following useful: CMS, SCRIPT/VS, ADABAS, and NATURAL. A84-401

Systems Analyst, Administrative Information Systems, to design, implement, maintain, and tune ADABAS databases. Participate in developing and documenting database procedures and tools. Must be knowledgeable or expert in database software techniques and approaches. Must be capable of applying this knowledge to administrative information systems being developed, converted or maintained. Familiarity with concepts related to operating systems, tp monitors, computer languages, etc. Excellent written and oral communication skills. Experience with ADABAS, NATURAL, IBM's VM/CMS, OS/VS1, PL/I, & COBOL. A84-400

Facilities Officer, Electrical Engineering and Computer Science, to manage the department's space, telecommunications, special purchasing, and office equipment. Duties involve managing all departmental physical plant matters such as space changes, allocations, and usage reports; renovations and repair of facilities and environment; authorizing all telecommunications services and monitoring expenditures; supervising copying facilities; arranging purchases of office and special equipment; maintaining property records; and acting as department's safety and security coordinator. Associate's degree preferred. Knowledge of MIT procedures helpful. Minimum 2 years related experience required. C84-115

Systems Librarian, Libraries, under direction of Asst. Director for Administration, will coordinate the utilization of new technologies to enhance library operations and services with the long-range goal of an integrated online library system linked with national and regional networks. Manage operation of existing automated systems and plan and participate in the selection of new systems including acquisitions, serials control, online catalogue, etc. Prepare documentation for recommendations, specifications for vendor-based systems, and coordinate task forces involved in systems projects. Supervise staff assigned to systems operations. Act as resource and liaison with library administration and other Institute offices. Maintain current awareness of developments in field. Requires MLS and minimum 5 years professional library experience including 2 in automated systems in public or technical services of a research library. Interpersonal and analytical skills required as well as knowledge of MARC format. C84-114

Applications Programmer, Electrical Engineering and Computer Science, to write graphic and computational programs for use in teaching two major department undergraduate field theory subjects: "Electromagnetic Fields and Energy," and "Electrodynamics." Will maintain the system of programs, write documentation and provide consulting assistance to students and faculty. This work is part of MIT's Project Athena and will be conducted on a VAX 11-750 system running UNIX. Experience in as many of the following areas as possible required: computer graphic systems; symbolic manipulation systems (e.g., MACSYMA); Berkeley UNIX; and skill at numerical field computations. C84-113

Sponsored Research Staff

Administrative Officer, Sloan School, Center for Computational Research in Economics and Management Science. Involves management of four areas of the Center's operations: TROLL licensing, general administrative, financial and personnel. Will negotiate, administer and monitor licensing agreements and TROLL accounts. Manage physical plant activities of area including space allocation, maintenance and repair of facilities and equipment acquisition. Oversee payroll records, support staff performance evaluations, development of search plans, and personnel appointments. Develop and monitor budgets, prepare reports and forecasts, coordinate research proposals and contracts, etc. Candidates must have good judgment, managerial skills, ability to handle conflicting pressures and demands, good writing and communication skills. Knowledge and experience with the use of computers for financial applications preferred. BA in business administration or equivalent education/experience required. R84-420

Technical Assistant, Nutrition and Food Science, to perform routine tissue culture and techniques from the fields of virology, biochemistry, immunology and genetic engineering as they relate to cellular transport and tumor promotion. Responsible for keeping laboratory operational with regard to equipment and supplies, preparation of media for tissue culture, and other solutions and buffers. Requires BS in biology, biochemistry, or chemistry. Will train. R84-419

Technical Assistant, Center for Cancer Research, to conduct research on project involving recombinant DNA analysis and DNA sequencing. Includes some protein analysis and tissue culture. Initiative and willingness to take responsibility necessary. Some training provided. Requires BS in biochemistry, chemistry, biology and previous lab experience. Experience with nucleic acids desirable but not essential. R84-416

Assistant Fiscal Officer, Plasma Fusion Center, to handle fiscal responsibilities for approx. $9 million in annual research contracts including the programming and use of Supercomp 20 and Datatrieve to monitor about 90 accounts. Prepare yearly proposals, monthly financial reports, and other financial analyses and reports as needed. Report to Fiscal Officer on major issues and direction when needed. Partially responsible for supervision of Fiscal Office support staff in supervisor's absence. Involves frequent interaction with Principle Investigators, their accounts and various research groups, as well as other MIT

offices (OSP, Purchasing, etc.) relating to salary, changes and account information. Some college and/or accounting background preferred. Three to five years experience necessary. MIT experience desired. R84-411

Technical Assistant, Chemistry, to conduct tests and interpret data on molecular structure of research sample utilizing a computer operated mass spectrometer. Responsible for purchasing expendables for the instruments, preparation of monthly billing statements and other related duties. Will report to the Operations Manager and eventually perform duties without direct supervision. Candidate should have BS in Chemistry or related science, or equivalent relevant experience. Good interpersonal skills important. R84-410

Research Scientist-Experimental, Plasma Fusion Center, to conduct research in lower hybrid and current drive studies on the Alcator C tokamak as an experimental plasma physicist. Must have PhD in experimental plasma physics, experience in microwave and/or radiofrequency technology and related experimental techniques. Knowledge of computer interfacing techniques highly desirable. R84-409

Research Scientist-Experimental, Plasma Fusion Center, to conduct research in ion cyclotron heating studies on the Alcator C tokamak. Must have PhD in experimental plasma physics, experience in microwave and/or radiofrequency technology and related experimental techniques. Knowledge of computer interfacing highly desirable. R84-408

Electronics Engineer, Plasma Fusion Center, to participate in the installation, debugging and operation of a six-source, six MW neutral beam system. Entails design modification, testing and operation of 2 MW high voltage power supplies, 40 kW arc supplies, 40 kW filament supplies, and control electronics. Must understand neutral beam systems including electronics, ion sources and vacuum systems. After system installation, will participate in operation and maintenance with opportunity to expand into new areas of electronics and diagnostic instrumentation. BS in EE or Physics required, with several years' experience in electronics design and construction desirable. Should be motivated self-starter with desire to work on state-of-the-art fusion systems in demanding, fast-paced environment. R84-362, R84-418

Library Support Staff

Library Assistant V, Rotch Library, under direction of Associate Librarian, heads the Technical Processing Section of Rotch Library. Manage and determine priorities for daily activities of acquiring and processing library materials including monographs, serials, microforms, and theses. Supervise and train technical processing assistants and student staff. Review orders, maintain files, assist Collections Manager and subject specialists with maintenance of library materials. Direct the processing of pamphlet collections in urban planning, architecture and art. Perform general library duties including reference, information, circulation (GEAC system), catalogue, and liaison with other areas. Requires minimum 4.5 years direct/related experience. Post high school education can count toward experience. Supervisory experience desirable. Good judgment, interpersonal skills, analytical ability helpful. Attention to detail with large flow of materials important. L84-991

Library Assistant IV, Humanities Library, to be responsible for technical processing, searching and information service in the monograph section. Process catalogue and reference materials, maintain files. Investigate claims for monographs. Prepare reclassifications as needed. Participate in and coordinate student work in bibliographic searching and shelf list filing. Type book orders, prepare forms. Share responsibility of answering phones and inquiries one to two hours/day. Requires high school graduation or equivalent and minimum 2.5 years direct/related experience. Reading knowledge of one or more foreign languages desirable. Accurate typing, organizational ability and accuracy with detail necessary. NON-SMOKING OFFICE L84-992

Library Assistant IV, Catalogue Department, under direction of Head, Processing Section, responsible for problem resolution of transactions identified as errors in the circulation process, from the online circulation/editing system, archival tapes, and duplicate record transactions. Train staff on MRMS and coordinate MRMS function. Participate in Union shelf list corrections and MRMS editing. Requires high school graduation or equivalent. Some college preferred. Minimum 2.5 years direct/related experience. Knowledge of OCLC Cataloguing Subsystem necessary. Accurate typing and attention to detail important. L84-963

Library Assistant III (part time), Science Library, to be responsible for bindery preparation. Maintain records for journals, serials and monographs sent for binding and process material returned when complete. Update journal records including shelf list. Assist with special projects as assigned. High school graduate or equivalent necessary. Minimum of one year direct/related experience required. Post high school education can count toward experience. Interpersonal skills, organizational ability and attention to detail essential. Accurate typing required, speed not essential. (28 hrs/wk) L84-001

Secretary/Staff Assistant

Administrative Secretary, Economics, to provide secretarial and administrative support to 3 faculty members. Includes preparing technical manuscripts using word processor; answering phones; handling correspondence, coursework, mail, etc. Will assist one faculty member in role as journal editor requiring typing, telephone referrals, interaction with authors, some invoicing, working with a filing deadline system and supervising a student typist. In addition, will monitor accounts, reconcile statements and prepare periodic financial summaries. Applicants must have technical typing and word processing experience and a willingness to work in a team effort. Minimum 4.5 years direct/related exprience. B84-985, B84-982

Administrative Secretary, Industrial Liaison Program, to type correspondence and reports; schedule appointments and meetings; maintain calendar and files; answer phones; and perform special projects as needed in the Office of the Director. Will assist staff member with visit and travel agendas, company activity summaries, briefings, etc. Requires excellent transcription, office and organizational skills as well as ability to work independently. Shorthand helpful. Will train on computer system. B84-975

Administrative Secretary, Economics, to type manuscripts, handle correspondence, coursework, mail, telephone, etc., for 3 faculty members. Responsible for fiscal monitoring and budgeting of accounts, preparing financial projections and summaries. Involves technical typing primarily on a Lanier word processor. Experience with technical typing and word processing essential. Willingness to work with other secretaries in team effort also essential. Minimum 4.5 years direct/related experience required. B84-969

Sr. Secretary, Office of the Dean for Student Affairs, to provide secretarial support within the Student Assistance Services section. Will assist in the admission and orientation of new international students; type revised edition of form letters and arrange for printing and mailing of letters to students. Answer telephone inquiries, type government documents, file, arrange travel, and provide secretarial support to the Foreign Scholarship Committee. Knowledge of a foreign language and MIT experience helpful but not essential. Minimum 2.5 years direct/related experience required. B84-003

Sr. Staff Assistant, for the Executive Education Programs Office in the Sloan School of Management. Answer phones and routine inquiries; receive visitors; type correspondence and other materials; maintain files; process applications for the program and provide information upon request; prepare requisitions; and order supplies. Flexibility and strong interpersonal skills essential. Accurate typing, proofreading skills and attention to detail required. Experience or willingness to learn word processing essential. Minimum 2.5 years secretarial experience or equivalent combination of education and experience required. Familiarity with MIT procedures helpful. NON-SMOKING OFFICE B84-002

Sr. Secretary (part-time), Architecture, to share secretarial duties with another secretary 2.5 days a week. Perform secretarial and administrative tasks required to organize annual international design conference and interim board of directors meeting, publish annual USA issue of international journal and prepare materials for classes. Requires discretion, good telephone and communication skills, typing, and ability to work independently and to handle several projects simultaneously. Prefer applicant with interest or background in design. Knowledge of MIT procedures helpful. Minimum 2.5 years direct/related experience. Occasional travel possible. (17.5 hrs/wk) B84-996

Sr. Secretary, Physical Plant, to perform variety of secretarial duties for several staff members. Review incoming mail; screen visitors and phone calls; coordinate and schedule meetings for busy calendar. Requires excellent secretarial and organizational skills. Experience with word processing, excellent typing and shorthand skills necessary. Minimum 2.5 years direct/related experience or equivalent required. B84-995

Sr. Secretary, Electrical Engineering & Computer Science, to provide secretarial support to Executive Officer and Administrative Staff. Responsibilities include: maintain records and generate reports using department's interactive computer system; keep records regarding faculty searches, teaching assistant appointments, visa requests, etc.; prepare tenure and promotion cases via word processor; maintain faculty and staff appointment renewal and termination file. Process correspondence and interact with faculty, students, and other Institute offices. Organizational ability and careful record keeping essential. Knowledge of MIT procedures desirable. Minimum 2.5 years direct/related experience required. Knowledge or willingness to learn online interactive computer system necessary. B84-989

Sr. Secretary (part-time), Provost's Office, to assist in the organization of the Technology and Culture Seminar. Format usually involves MIT community lectures on technology and social issues. Responsibilities include: correspondence, publicity, logistics, and managing financial accounts. In addition, will provide administrative support for Episcopal Ministry at MIT. Requires good secretarial skills, typing, sense of detail, organizational ability and good communication skills. (17.5 hrs/wk) B84-987

Sr. Secretary, Purchasing and Stores, to provide secretarial support to Subcontract Administrator within the General Purchasing Office. Type subcontracts, purchase orders and correspondence. Set up and maintain filing systems. Schedule meetings and appointments. Assist with analyses, recording and reporting of business. Maintain subcontract invoice, delivery and closeout records and logs. Requires excellent clerical, communication judgment, and organizational skills. Excellent typing essential. Experience with DECmate word processor desirable. B84-967

Sr. Secretary (part-time), Earth, Atmospheric, and Planetary Sciences, to provide secretarial support to a group of astronomers under the supervision of Administrative Assistant. Type correspondence, class materials, manuscripts and proposals; answer and screen phone calls; arrange travel; xerox; maintain office supplies; and other related duties. Requires excellent typing and word processing skills (AB Dick) or willingness to learn. Reliable and good interpersonal skills important. Must be able to work under pressure on variety of tasks in very busy office. NON-SMOKING OFFICE (17.5 hrs/wk) B84-965

Sr. Secretary, School of Humanities & Social Sciences, to perform secretarial duties for 15 faculty members in History. Type correspondence, exams and manuscripts; answer phones; maintain files; xerox; monitor student xerox expenses and records; order course books; maintain office supplies; compile information for Institute reports; assist with History Faculty Lecture Series. Must have excellent typing skills, attention to detail, *strong* interpersonal skills, ability to relate well to students and faculty, set priorities, and handle multiple projects simultaneously. B84-964

Sr. Secretary, Sloan School, to perform secretarial duties for 3 faculty members in the Behavioral and Policy Sciences area. Will type correspondence, class materials and manuscripts; answer phones and routine inquiries; prepare requisitions and vouchers; schedule appointments; arrange travel; and maintain files and records. Should be willing to assume responsibility, take initiative and handle several projects simultaneously. Requires good typing skills, dictaphone experience, knowledge of Wang word processing, excellent command of the English language, and good organizational ability. Knowledge of personal computers, speedwriting, and Institute procedures helpful. Interpersonal skills and experience in office procedures important. B84-953

Sr. Secretary, Research Laboratory of Electronics, to provide secretarial services to the Auditory Perception Group. Will answer phones; maintain files; process mail; order supplies; direct visitors; conduct literature searches and reproduce documents. Arrange appointments, meetings and travel; type correspondence, technical manuscripts, proposals and course materials using word processor. Requires 2-3 years of education/experience including excellent technical typing. Should be able to set priorities and work effectively under minimal supervision. Flexibility and good interpersonal skills needed. (non-smoker preferred). B84-944

Sr. Secretary, Sloan School of Management, to provide secretarial support to three faculty members in the Applied Economics and Finance area. Will use word processor or type manuscripts, class notes, and correspondence from handwritten drafts or from dictaphone. Includes technical typing (mathematical equations). Provide support to PhD program and faculty research activities. Includes answering student inquiries and phones; scheduling appointments and travel; xeroxing; maintaining files; and monitoring monthly research accounts. Excellent typing, willingness to learn word processing highly desirable. Good organizational skills, professional phone manner, attention to detail and ability to work independently important. Minimum 2.5 years' direct/related experience required. Some college preferred. B84-899

Sr. Secretary, Whitaker College, to provide secretarial support for two faculty members and their lab groups, totalling 20-25 people. Will type, file, photocopy, answer phones, assist in general office management, maintain log of laboratory expenditures, and assist in ordering lab supplies. Act as liaison for each lab group and their administrative headquarters (Center for Cancer Research or Whitaker College). Position involves extensive word processing and dictaphone use. Applicants must have 2.5 years of related experience or an equivalent combination of education and experience. Good typing, word processing, dictaphone and general office skills required. Medical terminology preferred but not required. B84-798

Secretary (part-time), Whitaker College, to provide secretarial support to faculty member of Biomedical Engineering. Duties include: typing, word processing, filing, ordering supplies, keeping track of requisitions, answering phones and reception. Minimum one year of direct/related office experience required. Typing 55 wpm. DEC word processing and technical typing (Greek symbol) experience strongly preferred. (17.5 hrs/wk) B84-004

Technical Support Staff

Technical Assistant (part-time), Biology, to prepare standard cell culture media involving some cell care for specialized lines and cells grown for electron microscopy; prepare chemical solutions for lab use; coordinate research group's purchasing of chemicals and other materials; and assist in general experimental work. Chemistry or pharmacy background very useful and preferred. High school graduate with 1-2 years college preferred but not required. Should be good in basic mathematics. (20 hrs/wk) T84-998

Technical Artist, Graphic Arts Service, to prepare isometric and perspective illustrations of components and assemblies using composition and drafting practices. Must have complete knowledge of leroy lettering. Requires graduation from a 2 year day course at an accredited art school plus one to two years experience in the field. (40 hrs/wk) T84-994

Word Processing Coordinator, Center for Advanced Engineering Study, to coordinate the data and word processing area of a 7-person operation which manages 20 continuing education programs per year using Digital PC's in the Seminar and Conference Program. Majority of time spent with marketing efforts; inputs, programming, manipulation of large volume personalized mail lists. Input reports from draft to final completion. Applicants must have excellent typing (60wpm), at least 2.5 years experience in data and word processing, and ability to work independently and cooperatively with staff members. Familiarity with custom and commercial software preferred. Position demands a highly organized and motivated individual capable of handling numerous projects at one time under minimal supervision, maximizing use of time and equipment. (40 hrs/wk) T84-993

Account Representative, Administrative Information Services, under general supervision, ensure the quality and timeliness of production commitments within the operations facility. Prepare input and jobs for processing and for reviewing outputs to meet clients' orders. Interact with clients, establish priorities, manage workload schedules, take corrective action when necessary. Requires high school graduation or equivalent and at least 2.5 years direct/related experience in data processing, with 6 months at MIT preferred, including some scheduling and operating data processing equipment. T84-984

Word Processing Operator, MIT Press Computergraphics, to use an online keyboard terminal to enter edited manuscripts containing the following kinds of information: frontmatter; chapter and part titles, text, extracts, heads, tables, captions, notes and some mathematical expressions. May include some system maintenance tasks, processing galleys of repro paper, enveloping jobs, photocopying, and other daily machine duties. Requires good, accurate typing skills (53-60 wpm). Aptitude for detail and willingness to be trained on keyboard, or word processing experience essential. Flexibility, and good interpersonal skills important. Minimum 1 year related experience. NON-SMOKING OFFICE T84-978

Data Librarian, Adminstrative Information Systems, under direct supervision from Sr. Data Librarian, issue data files and perform established functions within standard library procedures. Provide correct data files for computer processing according to schedule or need. Maintain library operating system such as: transferring back-up files to and from alternate storage sites. May perform tasks of computer operator when necessary. High school graduation or equivalent necessary and at least one year related experience in data processing operations essential. T84-977

Office Assistant

Accounting Assistant, Comptroller's Accounting Office, to perform internal cost audits of research contracts and grants; coordinate accounting, audit and cash flow functions with the Office of Sponsored Programs, MIT departments and schools. Requires general business education with 3 to 5 years of accounting experience or BA in accounting or equivalent combination of formal education and experience. Must be able to communicate well with Institute personnel and outside sponsor representatives. S84-988

Administrative Assistant, Resource Development, to compose management reports and gift range tables. Analyze records, compile data and produce final reports on word processor. Create and update project status reports on key Institute fundraising priorities. Process the Director's incoming and outgoing mail, including drafting memos and letters. Proofread documents. Interact with Resource Development staff, the Treasurer's Office, Industrial Liaison Program, Alumni Association staff and other administrative and academic offices. Requires experience or willingness to learn word and data processing systems, ability to work independently, organize projects to meet deadlines, handle details in both written and financial reports, interpersonal skills, discretion and tact, and proofreading skills. S84-974

Administrative Assistant, Biology, to provide administrative and secretarial support to the Biology Finance Office and serve as coordinator of proposal submissions including budget development, review for correct preparation, liaison with other Institute offices and maintain sponsor information files. Prepare payroll reports and correspondence for documentation. Assist with grant administration including statement reconciliation and monthly account forecasts, purchases, and payments. Maintain information systems concerning departmental and research activities. Perform special projects as needed. Share office support tasks such as typing, telephones, and mail. Should be willing to assume responsibility, take initiative and handle several projects simultaneously. Accuracy with detail, some financial experience, and willingness to learn to use IBM Personal Computer essential. Interpersonal skills, good judgment and strong organizational ability required. Minimum 4.5 years direct/related experience required. S84-970

Sr. Office Assistant, Earth, Atmospheric, and Planetary Sciences, to manage daily accounting and problem solving related to department general, fund, and facility accounts in headquarters. Perform monthly reconciliation of accounting statements; assist in account budgeting; oversee student payroll; handle department property records and telephone transactions; assist with other projects under supervision of Administrative Officer. Good organizational skills, interpersonal skills, initiative, attention to detail, and facility with figures important. Willingness to learn IBM PC essential. Minimum 2.5 years office experience. Knowledge of MIT procedures helpful. Opportunity for developing administrative skills. NON-SMOKING OFFICE S84-999

Sr. Office Assistant, MIT Press, to act as circulation assistant in the Journals department. Duties include: coding and order input of subscriptions in computerized fulfillment system; some invoicing; customer correspondence and claims; telephone orders and claims; mail opening and filing. May involve other duties as new publications are added. Requires high school graduation. Some college or advanced training preferred. Typing skills (40 wpm minimum); online computer experience or fulfillment background with journals, magazines, or books required. Second language helpful. Should have basic knowledge of business machines, good telephone and writing skills. S84-997

Office Assistant, Bursar's Office, to assist the Account Representatives in servicing student financial requirements. Provide assistance for students, answer questions related to student accounts, provide forms, answer phones, type correspondence, participate in the review of accounts and statements, maintain files. Process check requests and maintain check vouchers. Update financial work sheet, distribute Guaranteed Student Loan checks. Receive and receipt fee payments. Perform other duties as needed. Good written and verbal communication skills important. Flexibility, good typing, and facility with figures essential. Ability to work well under pressure in busy office helpful. Service and/or student-oriented experience desirable. S84-986

Office Assistant, Purchasing and Stores, to type purchase orders using electric typewriter; sort, distribute and mail purchase orders and change orders, maintain files, provide other general clerical support as required. Prior experience in purchasing or related field preferred. S84-983

Office Assistant, Office of the Dean for Student Affairs, to provide secretarial support for the Campus Activities Advisor. Assist with the following: post room reservation requests; answer routine scheduling inquiries; obtain entertainment and liquor licenses. Will type, answer phones, keep calendars, make appointments, handle special projects, and interact frequently with students. Must have excellent interpersonal skills, accurate typing and clerical skills, ability to assume responsibility and take initiative, be flexible. Previous computer experience a plus. NON-SMOKING OFFICE S84-972

Office Assistant (part-time), Medical, to work in the Record Services area and be responsible for: pulling and filing medical records from telephone requests and written order slips; filing medical information material into records; dispatching/retrieving records and record boxes to and from the proper stations; maintaining the patient index file; and performing simple maintenance of the Telelift System. May be assigned special record projects and may be required to work morning and evening shifts as directed. Individual must have good communication skills and ability to work in a team. Accuracy with details and under pressure essential. Considerable physical strength is required to lift boxes and push heavy carts. Must be able to stand on feet all day. NON-SMOKING OFFICE (30 hrs/wk) S84-971

Cashier (part-time), Faculty Club, to be responsible for ringing customer orders on an electronic cash register as volume dictates for luncheons. Tally customer counts and entree mix for all regular luncheon and banquet business. Separate and tally different classes of payment. Total cash from register as shift ends. Perform other related duties as required. Applicants must be able to speak and write English fluently as position involves extensive customer contact. Ability to work accurately with figures and prior electronic cash register experience preferred. (M-F, 12-4, some eves.) S84-968

Receptionist, Center for Real Estate Development, to greet visitors, answer phones and escort visitors. Provide information about services of the Center, cover office during lunch hour and provide support in typing, copying and job-related errands. Requires good interpersonal and communication skills. S84-961

Service Staff

Laboratory Aide, Center for Cancer Research, to collect, wash, rinse, and sterilize laboratory glassware for use in cancer research experiments. Use related equipment and machines, and store clean glassware. Keep lab areas clean and orderly. May work independently setting work priorities. Maintain supplies, prepare media and may give direction to others. Perform related lab duties as assigned. Washing of lab glassware by hand or machine may occasionally involve use of chromic acid cleaning solutions. Glassware and lab utensils in this operation are required to be chemically as well as visibly clean. Some experience in scientific glass washing desirable. Must be conscientious and have ability to follow directions. Work under general directions and as experience is acquired will work without direct supervision for extended periods. High school graduate or equivalent required. H84-971

Stock Clerk, Office of Laboratory Supplies, to unpack incoming goods, inspect goods for quality and quantity; repack goods; pack goods away in storage rooms and keep work areas clean. Deliver goods over the counter on requisitions; check requisitions for proper description of items and keep stock in good condition. Experience and knowledge of stock required. H84-970

Mechanic A, Nuclear Reactor Laboratory, to maintain mechanical components (hydraulic, pneumatic, compressed gas and vacuum) and systems of reactor control, associated experiments, heat and waste disposal systems, and the containment building. Maintains spare parts, changes filters and works with the Radiation Protection Office in maintaining and cleaning areas within the reactor. Minimum five years applicable experience required. Must be able to plan and organize scheduled work. Will be required to work in Radioactive Areas to handle Radioactive Materials under close supervision. Prior nuclear experience desirable. H84-964

Waiter/Waitress (part-time), Faculty Club, to perform such duties as may be necessary to the effective operation of the dining facilities, including, but not limited to, setting up tables, taking orders, serving customers, clearing tables, carrying food and dishes to and from the dining room and kitchen, setting up and clearing buffets, cleaning and filling serving dishes such as sugar bowls, coffee pots, water pitchers, etc., stocking sideboards with place mats, napkins and condiments and keeping sideboards, pantries, closets and furniture clean and in good order. Requires ability to read and speak English. Experience in service-oriented environment preferred. (20 hrs/wk) H84-972

Technology Children's Center

Day Care Team Teacher, Technology Children's Center, to work in creative multicultural setting on MIT campus with 3 and 4 year olds starting September. 35 hours per week. Requires degree in Early Childhood Education or related field and at least 1 year experience. Commitment to team teaching and quality care essential. Please contact TCC, 60 Wadsworth Street, Cambridge, MA 02142. Tel: 253-5907

Teacher Aide, Technology Children's Center, to assist Day Care Teacher in classroom 8:45-11:45 Mon-Fri starting in September. Applicant must have high school diploma and interest in children. Please contact TCC, 60 Wadsworth Street, Cambridge, MA 02142. Tel: 253-5907

The following positions were still available at **Tech Talk** deadline. Complete descriptions of all available positions are posted in the Personnel Office (E19-239), and at locations listed at the beginning of Positions Available section.

ADMINISTRATIVE AND ACADEMIC STAFF:
A84-397, Sr. Graphic Designer, MIT Press
A84-395, Associate Director, Housing and Food Service
A84-394, Applications Programmer, Administrative Information Systems
A84-392, Campus Activities Advisor, Dean for Student Affairs
A84-391, Advisor to Fraternities and Independent Living Groups, Dean for Student Affairs
A84-390, Assistant Director, Patent, Copyright and Licensing Office
A84-387, Assistant to the Bursar: Loan Collection, Bursar's Office
C84-112, Assistant Science Librarian, Libraries
C84-111, Assistant Science Librarian, Libraries
A84-376, Applications Programmer, Administrative Information Systems
A84-360, Systems Analyst, Information Processing Services
A84-337, Systems Programmer, Project Athena
A84-336, Systems Programmer: Operations, Project Athena
A84-385, Manager of Systems Operations, Project Athena
A84-382, Applications Programmers, Administrative Information Systems
C84-110, Manuscript Processor, Libraries
A84-381, Systems Programmer, Information Processing Services
C84-108, Music Librarian, Humanities Library
C84-107, Dental Hygienist, Medical
C84-105, Assistant Engineering Librarian, Barker Library
C84-104, Head, Science Library
A84-369, Editor, MIT Press
A84-365, Industrial Liaison Officer, Industrial Liaison Program
A83-337, Systems Programmer, Project Athena
A84-361, Program Manager, Physical Plant
A84-356, Major Gift Officer, Resource Development
A83-336, Systems Programmer, Project Athena
A84-352, District Directors, Resource Development
A83-333, Marketing & Publications Manager, Center for Advanced Engineering Studies
A83-332, Assistant Manager for Building Maintenance, Physical Plant
C83-083, Applications Programmer, Electrical Engineering & Computer Science

SPONSORED RESEARCH STAFF:
R84-406, Registered Nurse, Clinical Research Center
R84-405, Technical Assistant, Biology
R84-404, Technical Assistant, Center for Cancer Research
R84-402, Research Associate, Research Laboratory of Electronics
R84-400, Technical Assistant, Biology
R84-399, Research Scientist, Laboratory for Nuclear Science
R84-394, Technical Assistant, Psychology
R84-393, Technical Associate, Biology
R84-392, Research Scientist-Exp., Plasma Fusion Center
R84-391, Research Specialist, Cell Culture Center
R84-374, Research Scientist, Research Laboratory of Electronics
R84-356, Research Staff Engineer, Haystack Observatory
R84-310, Computer Facilities Programmer/Manager
R84-389, Technical Assistant, Nutrition & Food Science
R84-387, Chief of Telescope Operations, Haystack Observatory
R84-386, Fiscal Officer, Artificial Intelligence Laboratory
R84-385, Statistical Programmer, Psychology
R84-381, R84-383, R84-384, SRS Postdoctoral Positions, Spectroscopy Lab
R84-378, Research Specialist, Aeronautics & Astronautics
R84-373, Research Engineer, Aeronautics & Astronautics
R84-372, Research Associate, Aeronautics & Astronautics
R84-370, Research Scientist, Artificial Intelligence Laboratory
R84-362, Electronics Engineer, Plasma Fusion Center
R84-361, Research Scientist, Earth, Atmospheric & Planetary Sciences
R84-358, Principal Research Scientist, Lab for Nuclear Science
R84-354, Technical Assistant, Chemistry

Reunion gifts top $8.2 million

(continued from page 1)

reunion, announced a gift of $1,030,500. Edgar P. Eaton, Jr., chairman of the 40th Reunion Gift Committee, also noted that the class had raised $430,000 to endow a scholarship fund as part of its gift. Sixty-four per cent of the class participated in the 40th reunion gift.

The Class of 1959 presented a 25th reunion gift of $758,000. Robert Muh, speaking as chairman of the 25th Reunion Gift Committee, noted that the class also had raised $273,000 to endow a scholarship fund as part of the gift. Sixty-seven per cent of the class participated in the reunion effort, a record level for a 25th reunion class.

Robert W. Mann '50, president of the MIT Alumni Association, also announced that the Class of 1924 had presented MIT with more than $4.1 million in celebration of its 60th reunion, the Class of 1974, $35,500 to date for its 10th reunion, and the Class of 1979, $27,500 to date for its fifth reunion.

It was the first time that the 10th year class had made a formal gift, which includes a student aid fund. The effort was led by David A. Shiang, gift chairman, and Sandra G. Yulke, class president.

The Class of 1979 gift, which includes matching funds from the Class of 1929 in celebration of its 55th reunion, will go toward the endowment of a student aid fund. The gift chairman was Brenda L. Hambleton.

The Class of 1984 senior class gift was announced by the class president Diane M. Peterson of Elkhart, Ind. She said the class, in recognition of the part played by athletics in their education, had raised $8,839 for the purchase of rental skates that will be availble at the MIT rink to all members of the community. She said the sum included $3,697 contributed by class members and a matching gift by the 50th reunion class of 1934.

In addition, she said, class members had pledged $13,370 to the Alumni Fund over the next next four years, about half of which will be for an endowed scholarship fund.

Dr. Mann, the Alumni Association president, announced that the Alumni Fund stood at $8.3 million and was expected to reach $9.4 million by the end of the fiscal year, which would be a record amount.

Dr. Gray, in his acceptance of the reunion and class gifts, told the alumni that the gifts "give us all an enormous boost" and that "your tangible support...is the lifeblood of MIT."

Noting that some of the gifts had set aside funds for scholarships and student aid, he described this support as particularly welcome because it addresses one of the "core needs" of the Institute. Other such needs, he said, were endowment, support for the faculty and unrestricted funds.

Alumni representing 75 reunion classes attended the luncheon. The most senior alumnus present was Franklin T. Towle, 96, of West Roxbury, Mass., a member of the Class of 1908. Nine alumni came from countries beyond North America, including the alumnus who traveled the furthest, Adul Pinsuvana '59 of Jakarta, Indonesia.

At the start of the luncheon program, the assembled alumni welcomed for the first time the sixth chairman of the MIT Corporation, David S. Saxon '41, who took office last July 1.

Three MIT staff members were made honorary members of the MIT Alumni Association: Dorothy L. Bowe, associate director of student financial aid; Loretta H. Mannix, administrative assistant to President Emeritus Julius Stratton, and Elizabeth A. Pigott, administrative assistant to former President and Chairman James R. Killian, Jr.

At the conclusion of the program, Dr. Mann, who was the first faculty member to serve as Alumni Association president since 1934, turned over his gavel to the first woman to serve as president, Mary Frances Wagley '47 of Baltimore, Md.

The Technology Day activities began with a continental breakfast for alumni at the Sala de Puerto Rico. Later, more than 1,000 alumni and spouses heard four MIT graduates examine entrepreneurship and venture capitalism from the perspective of their own successes and setbacks. The participants in the panel discussion were Samuel W. Bodman (CH) '65, president and chief operating officer of the Fidelity Management & Research Corporation; Daniel J. Holland '58, president of the Morgan and Holland Ventures Corporation; John W. Poduska '59, chairman and chief executive officer of the Apollo Computer Corporation, and Raymond S. Stata '57, president of Analog Devices.

A memorial service at the MIT Chapel preceded the luncheon, and the day was concluded with a reception at McCormick Hall Courtyard.

The Technology Day chairman was Bruce D. Sunstein '65. The chairman for next year's program will be Karen Mathiasen (GM) '71.

TR wins Sibley Award

Technology Review, the national magazine of technology and policy published by the MIT Alumni Association, has been judged the best collegiate magazine in the US and Canada for 1984 by the Council for the Advancement and Support of Education.

CASE judges selected Technology Review from among several hundred entries to receive the Council's annual Robert Sibley Award during the annual CASE meeting in Chicago in July.

This year will mark the third time Technology Review has received the Sibley Award and the second time for present editor John I. Mattill. The MIT magazine won first in 1944 when Frederick G. Fassett, Jr., was editor and again in 1979 when Mr. Mattill was editor.

The award is named in memory of the late editor of the University of California at Berkeley magazine who is credited with modernizing college alumni publications. Judges are magazine professionals enlisted by CASE. The 1984 competition was sponsored for CASE by Newsweek magazine.

R.A. Brown is honored

The American Association for Crystal Growth's Young Author Award has been won by Dr. Robert A. Brown, associate professor in the Department of Chemical Engineering, for his "contributions to the field of theoretical and numerical analysis of crystal growth processes and phenomena." The award includes a $1,000 honorarium.

Honorary members of the Alumni Association: (From left) Dorothy L. Bowe, Loretta H. Mannix and Elizabeth A. Pigott. *—Photo by Calvin Campbell*

E.K. Miller of Corporation, dies

A service was held Monday, June 18, at St. David's Church, Baltimore, for E. Kirkbride Miller, retired chairman of the board of T. Rowe Price Associates, Inc., the investment firm, and a member of the MIT Corporation. Mr. Miller died suddenly in London on June 12 at the age of 66.

Dr. David S. Saxon, chairman of the MIT Corporation and Mr. Miller's Classmate in the MIT Class of 1941, paid tribute to his friend. "In his passing," Dr. Saxon said, "the nation has lost a distinguished leader of the investment banking industry, and we at MIT have lost a devoted alumnus who participated in extraordinary measure in the affairs of the Corporation and the Alumni Association."

Mr. Miller was elected to a five-year term as a member of the MIT Corporation in 1982. He was a member of the Investment Committee and the Visiting Committees for Economics and Civil Engineering. Earlier, he served the Alumni Association in many ways, participates in the Institute's major fund drives and was a founding life member of the MIT Sustaining Fellows. He received the Corporate Leadership Award from the Corporation in 1976 and the Bronze Beaver in 1981, the highest award of the Alumni Association.

Mr. Miller was born in Baltimore and graduated from the Baltimore Polytechnic Institute. He received the SB from MIT in what was then the Department of Business and Engineering Administration.

In World War II, he entered the Navy in the Midshipman-Officers Program and was assigned to the Harvard Business School in 1943. After a year there, he served on several ships as a supply officer, seeing action in Okinawa before his discharge as a lieutenant in 1946.

After two years as treasurer of a small company, and six months of travel in Europe, he returned to Harvard Business School to complete his MBA degree in 1950. He then worked two years for Western Maryland Railway.

He joined T. Price Rowe Associates, Inc., as an investment counselor in 1952 and played a key role in the early years of the T. Rowe Price Growth Stock Fund, which had started two years earlier. When he became its president in 1974, it was the largest no-load mutual fund in the world.

Mr. Miller joined the board of directors of the parent organization in 1965. He served as vice chairman of the company in 1973-1976 and chairman in 1976-82, while also serving as chairman of the Growth Stock Fund. When he stepped down as chairman, T. Rowe Price Associates, Inc., managed more than $15 billion in funds for individuals, foundations and corporations.

Mr. Miller believed strongly in physical fitness, enjoying tennis and cross-country skiing, and he was an avid flower and vegetable gardener. The arts also held a fascination for him. He was a past president of The Baltimore Museum of Art, and he was on the board of directors of both the Baltimore Symphony Orchestra and Pro Musica Rara, a baroque music group. He also served on the board of overseers of the Baltimore School of Arts Foundation.

Mr. Miller had homes in Baltimore and in Aspen, Col. His survivors include his wife, the former Ann Renshaw Hoffman; a daughter, Mrs. Pamela K. Loya of Baltimore; and a son, Daniel F. Miller of Billings, Mont. Both children are practicing attorneys.

MIT representatives attending the service in Baltimore included Glenn P. Strehle, treasurer of the Corporation, Vincent A. Fulmer, secretary of the Corporation, and William J. Hecht, executive vice president of the Alumni Association.

Mason Haire, formerly of Sloan, dies at 68

Dr. Mason Haire, formerly a professor at the Sloan School of Management and a pioneer in the application of psychology to the problems of management, has died at the age of 68 in Walnut Creek, Calif., where he lived in retirement with his wife, Vivian.

Dr. Haire became the Sloan Professor of Management in 1970, six years before he retired. He had come to the Institute first as an assistant professor of industrial relations from 1946 to 1949, when he left to become a professor of psychology at the University of California at Berkeley. He returned to MIT in 1966 as a visiting professor in the Sloan School and a year later joined the faculty as professor of organizational psychology and management.

He served as leader of the Organization Studies Group at Sloan, contributing substantially to the development of the curriculum and research program in that area.

Dean Abraham J. Siegel said that Professor Haire's approach "effectively combined the insights of behavioral science with those in fields as apparently disparate as computer science, economics and the mathematics of model building. He always had innovative methods for looking at the way people relate to organizations and organizations to the world. His work and his leadership were crucial to the development of a vital area of the school's activity."

Professor Haire, a native of Fort Dodge, Iowa, received his AB degree in psychology from Swarthmore College in 1937, and both his MA and PhD, in 1940 and 1942, from Harvard University.

He was a consultant to many industrial and governmental organizations, and he lectured widely in Europe.

He was the co-author of *Management Thinking: An International Study*, an analysis of management attitudes and styles; the author of *Psychology in Management;* and the editor of *Modern Organization Theory* and *Organization Theory in Industrial Practice.*

John Paine

A funeral Mass was held June 2 at St. Mary's Church Cambridge for John D. Paine, 59, a stock clerk at Lincoln Laboratory, who died May 30 following a long illness. Mr. Paine had worked at Lincoln since 1968.

He is survived by two brothers, William R. and Frederick I. Paine, who also works at MIT, and 11 nieces and nephews.

Sue M. Peredna

Sue MacKay Peredna, a preparations supervisor in publications at Lincoln Laboratory since 1962, died June 14, following a long illness. She was 65.

Mrs. Peredna is survived by her husband, Joseph J. of Lexington, also a Lincoln staff member; two sons, William F. MacKay of Winchester and Guy MacKay of Lexington; a daughter, Mary B. Genova of Westford, three sisters, a brother and eight grandchildren. Memorial contributions may be made to the Diabetes Association or the Heart Fund.

Anthony L. Tedesco

A funeral Mass was said Tuesday, June 19, for Anthony L. Tedesco, 53, of Winchester, who died June 15 following a long illness. Mr. Tedesco had been a resident engineer on the Physical Plant staff since 1955. He is survived by his mother, Marguerita Tedesco, also of Winchester.

Ernest E. Wortman

Word has been received of the June 9 death of Ernest E. Wortman, 88, formerly of Lexington. Mr. Wortman was a mechanic in the Department of Metallurgy from 1949 until his retirement in 1961. He is survived by a son, Ernest, of Yucaipa, Calif., with whom he made his home.

R84-353, Radiochemist, Nuclear Reactor Lab
R84-347, Deputy Director, Center for Transportation Studies
R84-340, Research Scientist, A.I. Lab.
R84-335, Technical Assistant, Center for Cancer Research
R84-334, Manager, Tagged-Token Dataflow Project, Laboratory for Computer Science
R84-333, R84-332, R84-331, Research Staff and Principal Research Staff, Electrical Engineering and Computer Science
R84-327, Research Associate, Nutrition and Food Science
R84-319, Research Associate, Materials Science and Engineering
R84-298, Research Specialist (6 mos.), Energy Lab.
R83-289, Magnet Design Engineer, Plasma Fusion Center
R83-133, Research Engineer/Scientist, Energy Laboratory
R83-132, Research Engineer, Energy Laboratory
R83-285, Research Associate, Nutrition & Food Science
R83-272, Prin. Research Scientist, Earth, Atmospheric, and Planetary Sciences
R83-256, Research Scientist-Experimental, Plasma Fusion Center
R83-210, Research Specialist, Artificial Intelligence Laboratory
R83-194, Systems Programmer, Lab for Computer Science
R83-185, Systems Programmer, Laboratory for Computer Science
R83-183, Research Associate, Technology Adaptation Program
R83-179, Research Scientist, Artificial Intelligence Laboratory
R83-175, Sponsored Research Staff, Center for Materials Science & Engineering
R83-172, NMR Spectroscopist, National Magnet Laboratory
R83-140, Research Associate, Materials Science & Engineering
R83-135, Research Scientist, Earth, Atmospheric & Planetary Sciences
R83-124, R83-126, Sponsored Research Staff, Laboratory for Nuclear Science
R83-125, Sponsored Research Staff, Laboratory for Nuclear Science
R83-084, R83-086, Research Scientist—Experimental, Plasma Fusion Center
R83-080, Materials Scientist, Materials Processing Center
R83-988, Experimental Physicist, Center for Space Research
R83-986, Postdoctoral, Center for Space Research

LIBRARY SUPPORT STAFF
L84-947, Library Assistant IV, Science Library
L84-902, Data Librarian, Haystack Observatory
L84-913, Data Librarian, Administrative Information Systems

SECRETARY/STAFF ASSISTANT
B84-959, Administrative Secretary, Center for Advanced Visual Studies
B84-957, Sr. Secretary, Psychology
B84-956, Sr. Secretary, Electrical Engineering and Computer Science
B84-953, Sr. Secretary, Sloan School
B84-952, Sr. Secretary-Med., Medical Department
B84-944, Sr. Secretary, Research Laboratory of Electronics
B84-866, Sr. Secretary-Editorial, MIT Press
B84-848, Sr. Staff Assistant (pt/temp), Sloan School
B83-704, Sr. Secretary-Technical, Chemistry
B84-927, Sr. Staff Assistant, Nuclear Engineering
B84-926, Sr. Secretary, Electrical Engineering & Computer Science
B84-915, Sr. Secretary, Provost's Office
B84-912, Admin. Secretary, Biology
B84-907, Sr. Secretary, Sloan
B84-902, Sr. Secretary, Civil Engineering
B84-899, Sr. Secretary, Sloan
B83-695, Sr. Secretary, Materials Science & Engineering
B84-893, Sr. Secretary, Chemistry
B84-610, Sr. Secretary, Center for Advanced Engineering Study
B84-843, Secretary, Center for Advanced Engineering Study
B84-867, Secretary, Laboratory for Computer Science
B84-866, Secretary-Editorial, MIT Press
B84-860, Sr. Secretary (part-time), Chemistry
B84-859, Sr. Secretary, Energy Lab.
B84-847, Sr. Secretary, Physics
B83-709, Sr. Staff Assistant, Sloan School
B83-677, Sr. Staff Assistant, Center for Advanced Engineering Study
B83-257, Sr. Secretary, Mechanical Engineering
B84-843, Secretary, Center for Advanced Engineering Study
B84-836, Sr. Secretary, Mathematics
B84-826, Sr. Secretary (part-time), Energy Lab
B84-818, Sr. Staff Assistant, Program in Science, Technology & Society
B84-810, Sr. Secretary, Humanities
B84-801, Sr. Secretary (part-time), Ocean Engineering
B84-798, Sr. Secretary, Whitaker College
B83-748, Sr. Secretary/Receptionist, Physics
B84-753, Sr. Secretary, Biology
B84-747, Sr. Secretary, Physics
B84-744, Sr. Secretary, Physics
B83-690, Sr. Secretary, Mechanical Engineering

TECHNICAL SUPPORT STAFF
T84-960, Sr. Word Processing Operator, Center for Real Estate Development
T84-942, Diet Aide, Clinical Research Center
T84-938, Data Entry Operator (pt), Center for Advanced Engineering Study
T84-922, Computer Operator, Administrative Information Systems

OFFICE ASSISTANT
S84-961, Receptionist (pt), Center for Real Estate Development
S84-936, Administrative Assistant, Committee on the Visual Arts
S84-935, Administrative Assistant, Telecommunications Systems
S84-934, Office Assistant, Purchasing & Stores
S84-931, Office Assistant, Medical
S84-920, Sr. Office Assistant/Data Entry Operator, Libraries
S84-911, Office Assistant, Chemistry
S84-884, Sr. Office Assistant (part-time), Biology
S84-894, Office Assistant, Bursar's Office

SERVICE STAFF
H84-965, Technician B (E-M), Plasma Fusion Center
H84-923, Technician A (electronic), Telecommunications Systems
H84-960, Laboratory Assistant, Materials Processing Center
H84-959, Technician A (elec.), Electrical Engineering & Computer Science
H84-956, Technician A (E-M), Haystack Observatory
H84-951, Sr. Technician (E-M), Laboratory for Manufacturing & Productivity
H84-923, Technician A (electronic), Telecommunications Systems
H83-899, Technician A (E—M), Haystack Observatory

WHITEHEAD INSTITUTE
Receptionist, Whitehead Institute
Library Assistant IV, Whitehead Institute
Sr. Secretary, Whitehead Institute
Research Technicians, Whitehead Institute
Cleaning Supervisor, Whitehead Institute
HVAC/Gen. Maint. Mech., Whitehead Institute