MIT TECH TALK

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WEDNESDAY ▪ MAY 25, 1994

FRIDAY COMMENCEMENT

All We Need is the Sun

Think blue skies...

With preparations completed for MIT's 128th commencement on Friday (May 27), some 8,000 relatives and friends of the graduates are already gathering in Cambridge for the festive ceremonies.

They will begin at 9:45 with the traditional academic procession from the 77 Massachusetts Avenue entrance to Killian Court. The graduation program, which begins at 10am, includes a speech by His Highness the Aga Khan, and the annual charge to the graduates by President Charles M. Vest. Dr. Paul E. Gray, chairman of the Corporation, will preside.

Some 1,750 seniors and graduate students will receive degrees individually as their names are read to the commencement audience. Those receiving doctoral degrees on Friday will be hooded the previous day (Thursday, May 27), in a special ceremony in Rockwell Cage.

Following the commencement program, President Vest will hold a reception for the graduates and their guests—and for the 50th and 25th reunion classes of 1944 and 1969—at several locations in or near McDermott Court.

Only severe weather—heavy, steady rain—could cause a change in plans. Any decision to cancel the outdoor exercises will be made early in the morning on commencement day. Information will be available through radio announcements or by calling either 253-SNOW for a recorded message or the Information Center at x3-4795.

In such an event a backup program would be held in Rockwell Cage. This would be open to graduating students, faculty and participants in the program, but not to relatives and guests, because of limited space.

Awards Convocation coverage —See page 5.

Families and friends would view the ceremony over closed-circuit television at several locations. Following the ceremony, bachelor of science degrees would be awarded by President Vest in the Johnson Athletics Center, while advance degrees would be distributed by School deans at five different locations.

At 4:30pm on commencement day,

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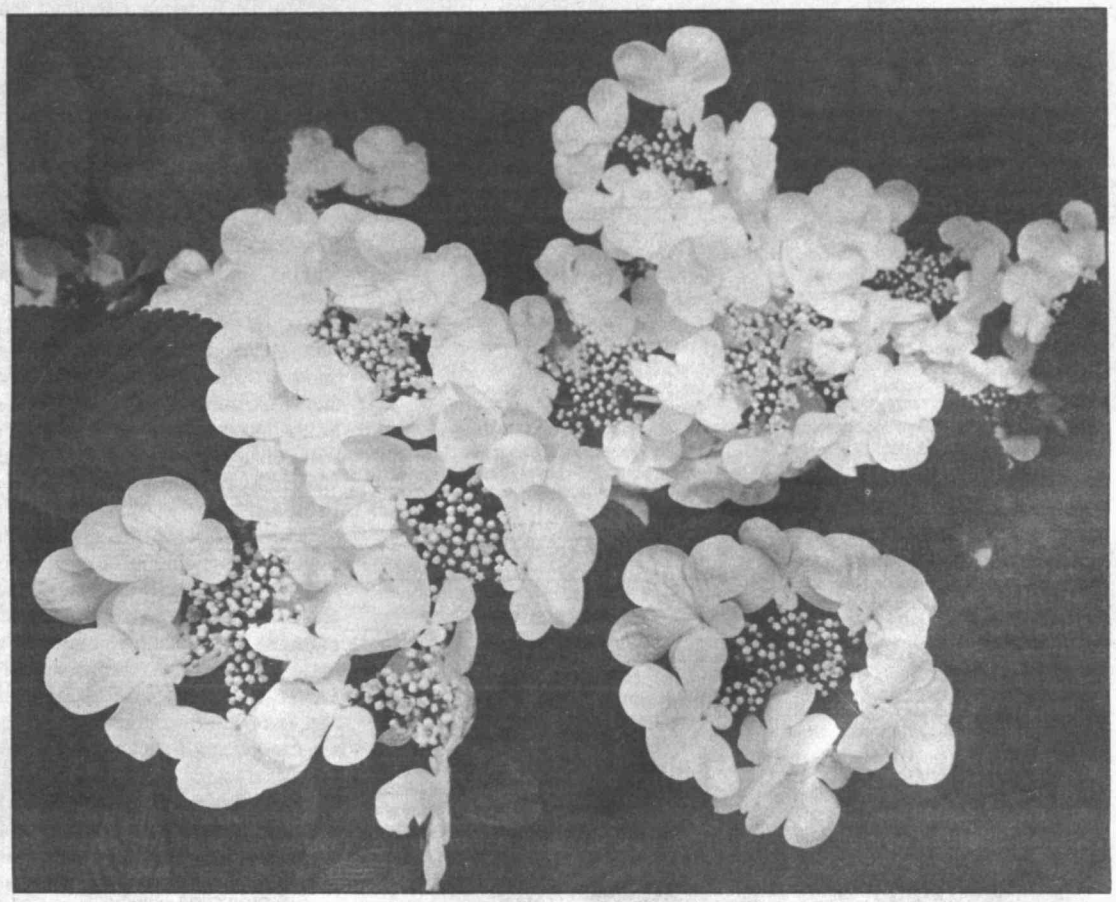

SPRING BLOSSOMS—Viburnam is in flower near Whitaker College and elsewhere on the campus that seniors will be departing after this week's ceremony. **Photo by Donna Coveney**

COMMENCEMENT NOTES

Hospitality—A welcome area for parents and guests of the Class of 1994 will be open Wednesday, May 25, 1-4pm and Thursday, May 26, 10am-4pm in Lobby 7. Faculty members are invited to visit to talk with the parents of students they have been teaching.

Videotapes of the 2.70 design competition, the Edgerton Tribute and MIT: The Motion Picture (an Admissions Office film) will be shown. Refreshments will be served.

Parking—West Garage will be closed to regular users on Friday, May 27, Commencement Day, and again on Friday, June 3, Technology Day. The Campus Police recommend that those with access to the T consider using public transportation on those days.

Regular West Garage parkers are asked to use the West Lot on Vassar Street or the Cambridge Redevelopment Authority lot on Ames Street on May 28 and June 4. The West Garage attendant will give information on other locations where limited accommodations may be available.

Publications—Campus publications, apart from the Commencement program, will not be available in Killian Court. Publications will be available at their usual distribution points in the corridors.

Flowers—Flowers used to decorate the Commencement stage will be available to the community beginning at 2pm Friday in Killian Court. Impatiens, lantanas and geraniums will be available at bargain prices. The flowers are donated by the Commencement Committee and proceeds of the sale benefit the MIT Community Service Fund.

APPOINTMENTS

Tech Day to Celebrate Arts

MIT's Technology Day, a popular reunion event, annually attracts nearly 3,000 MIT alumni and guests from around the world for discussions and demonstrations on a particular aspect of MIT's teaching and research.

This year, Technology Day celebrates the Institute's thriving programs and activities in the creative arts, the MIT Alumni/ae Association has announced. Technology Day '94 will be held on Friday, June 3, at Kresge Auditorium as part of Alumni/ae Week activities taking place from Thursday, June 2 to Sunday, June 5.

Titled "For the Wonder of It All: The Arts at MIT," Technology Day '94 will feature discussions, demonstrations, performances, and gallery tours which showcase the latest accomplishments of MIT students and

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CHEMICAL ENGINEERING

Senior Caps MIT Career With Conference Report

■ **By Elizabeth A. Thomson**
News Office

Nicole Pellegrini, who will be graduating this week, has capped her undergraduate career with biotechnology research of such quality that she will be presenting the work to the American Chemical Society next month.

At the ACS conference in Vermont, the chemical engineering senior will report promising results for a more efficient way to monitor microorganisms during fermentation, whereby yeast, animal cells or bacteria are grown to produce useful products such as drugs. Working alone at first as a UROP student and later with other undergraduates in a chemical engineering course, Ms. Pellegrini modified an existing analytical tool for improved automation.

During fermentation, High Performance Liquid Chromatography (HPLC) is used to determine the concentration of sugars, metabolic products (like organic acids) and other compounds associated with the growth of microorganisms. This information is critical to monitoring—and regulating—the fermentation process.

Yet standard HPLC systems require that samples be collected manually from the bioreactor where the organisms are grown, then centrifuged, filtered and often diluted before they can be sent through the HPLC unit without damag-

(continued on page 12)

FOUR YEARS LATER

Students Look Back and Ahead

Nearly four years ago, during orientation week in September of 1990, Tech Talk randomly selected 12 freshmen for brief interviews as a way of "giving form and substance to the Class of 1994."

We printed their pictures, and we asked them two questions: what they expected their major to be and what they thought they would be doing 10 years later.

Eleven of the 12 are still at MIT. We contacted them and received responses from ten. This time, we asked them six questions:

1) What is your major? Has it changed from when you were a freshman?

2) Do you expect to receive your degree this year?

3) What are your plans after graduation?

4) What do you think you will be doing 10 years from now? Has this changed from four years ago? Why?

5) What advice about MIT would you give to the Class of 1998?

6) Any other thoughts or observations after four years at MIT?

Here are their e-mail, telephone and written responses, sometimes slightly edited, and their photos from 1990 and now. The boldface paragraph at the beginning of each response is the original 1990 entry.

Mary Beth Rhodes, 19, Santa Barbara, CA; chemical engineering. "I'll be perpetually in school... I'll be learning."

Rhodes (1990)

1 and 2. I *am* graduating this year as a chemistry and music joint major.

3. I am going to medical school in California next year and I think my statement about "perpetually learning" has definitely proved to be true, yet the learning certainly isn't as confined to academia as I might have thought it was as a freshman.

4. I have been involved with music since the age of 7, when I began studying the violin. I left the New England Conservatory to come to MIT with the intent of getting as far away from music as possible, yet I clearly had underestimated the vitality of the arts at MIT. Through the MIT Chamber Music Society and an advanced music performance scholarship, I have been afforded the opportunity of being coached by some of Boston's greatest musicians each semester and have been able to study under two great violinists in the Boston area. John Harbison, one of the world's preeminent composers and recent winner of the Killian Award, is an amazing musical presence at MIT, and I've been fortunate to both be coached by him and to study composition with him. As far as my majors complementing each other, they only do so in that I've been able to see art in science and science in art. To not see how one complements the other can be very limiting, both professionally and on a larger scale.

Rhodes (May 1994)

(continued on page 6)

Update on Reengineering

The Reengineering Core Team submitted its Phase I report to the Steering Committee last Thursday, May 19. The Steering Committee is now considering the report as well as further data and additional views before making their recommendation on the next step in the Institute's reengineering efforts.

President Charles M. Vest commented, "We are very grateful to the Core Team for its extremely hard work over the past ten weeks. Their work provides a strong foundation for us to move forward on the critical task of improving service to faculty and students."

Student Notices

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

■ ANNOUNCEMENTS

A Safe Ride**—Call 253-2997 for a free ride within MIT boundaries. Service operates Sun-Wed 6pm-3am; Thurs-Sat 6pm-4am. Guide to shuttle stops available.

Free Museum of Science Admission for MIT Students—With MIT student ID, provided by Mass Beta chapter of Tau Beta Pi, the National Engineering Honor Society. Reduced admission to special exhibits.

Language Conversation Exchange**—Internationals and Americans are invited to participate in this program which matches persons interested in practicing a language and getting to know someone from another country. Presently, there is a need for English partners to fill continued requests of internationals wanting to practice and improve their English. Persons speaking the following languages waiting for partners include: Japanese, Chinese, Korean, and Russian. There is also a need for more English speakers wanting to practice these languages. Sponsored by the Wives' Group, call x3-1614 for more information.

Arts Hotline—Recorded information on all art events at MIT may be obtained by dialing x3-ARTS. Material is updated every Monday morning.

■ RELIGIOUS ACTIVITIES

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

Baptist Student Fellowship*—Meets every Tuesday, 5:15pm supper in Bldg W2A; 6pm large group in MIT Chapel. Sponsored by the MIT Baptist Chaplaincy (Baptist Campus Ministry). More info: x3-2328.

Tech Catholic Community**—Regular weekday mass Tues & Thurs 5:05pm, Friday 12:05pm, Saturday 5pm, Sunday 10am & 5pm. Call x3-2981.

Graduate Christian Fellowship**—We invite you to join us. Open to believers and seekers, GCF is a group of graduate students, faculty, and staff who desire to know God better and reflect the love and presence of Jesus Christ. Weekly meetings in Student Center, DR 1&2, Thursdays at 6pm. We also have Bible studies and a Faith & Technology Roundtable. Info: Andrew Parris x3-2319.

Christian Science Organization**—Meetings are Thursdays at 7:30-11pm in the Chapel. We'll share thoughts about God, hear testimonies of Christian healing and read from the Bible. All are welcome! Call x3-8797 or <lnorford@eagle.mit.edu> for further information.

Friends Worship Group*—Under the care of Friends Meeting at Cambridge, meets Wednesdays during the academic year in Rm 3-137C. Gather at 5pm for unprogrammed ("silent") worship, 5:15-5:45pm.

MIT Hillel*—More info: x3-2982.

MIT Korean Baptist Student Koinonia (KBSK)**—Friday Night Bible Study and Fellowship 7-8:30pm, Private Dining Room #3, 3rd floor of Student Center. Everyone is welcome, refreshments provided. For more information contact Chris Pak x3-9342 or 876-8594.

Lutheran-Episcopal Ministry at MIT*—Wednesday worship, 5:10pm, MIT Chapel, followed by supper and conversation across the street at 312 Memorial Drive. Contact Rev. Susan P. Thomas x3-2325 or Rev. Scott Paradise x3-2983.

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

MIT Muslim Students Association*—*5 daily prayers* in the prayer room, Ashdown House (Bldg W-1) west bsmt. *Friday congregation:* 1:10-1:45pm in Ashdown House (Bldg W-1) west bsmt. Info: x8-9755.

MIT Orthodox Christian Fellowship**—Meets every Wednesday at 5:30pm in Private Dining Rm #1 in the Student Ctr for dinner/fellowship/discussion followed by Vespers (evening prayer) in the MIT Chapel. Open to Eastern Orthodox Christians and those interested in learning about traditional Christian Faith. Info: Mike Decerbo, Dorm x5-7569.

■ INTERNATIONAL

MIT Language Conversation Exchange**—This service assists members of the MIT community to practice a language with a native speaker and get to know someone from another country. Call x3-1614 for more information.

MIT-Japan Program. A unique opportunity for MIT science, technology and management students to spend a year in Japan working at a major Japanese company or laboratory. Training, placement, travel and living expenses are covered by the Program. Call Patricia Gercik x3-3142, Rm E38-754.

■ STUDENT JOBS

There are more job listings available at the Student Employment Office, Rm 5-119. The Student Employment Office has many "one time only" jobs. Many students find these jobs a good way to earn money fast.

On Campus, Non-Technical. A library/research position is available for any student willing to work a few hours a week, very flexible. Bioelectric background preferred, but not absolutely necessary. Work consists of looking up and copying scientific papers. Flexible schedule. Contact: James C. Weaver, x3-4194 or Terry Parekh, x8-6439, Rm 20A-128 and Rm 20A-129.

Off Campus, Non-Technical. Person needed to deliver booklets created on Fridays early Saturday mornings in Boston, Brookline, Newton area. Own car needed. 7am start on Saturdays, $1/stop, 30-50 stops available. Contact: Chuck, 497-1000, 55 Haywood St., Cambridge, MA 02140.

Off Campus, Technical. Develop software for electro-physiological study of human perception and selective attention in California. Experiments involve digitizing and analyzing human brain electrical activity (EEG and evoked potentials) in NIH-funded research studies. English fluency, familiarity with digital signal processing, C programming language, the UNIX operating system, and IBM PC computers are required. A BS in EE, CS or a BA w/extensive programming experience is required. Please send letter of intent and resume to: Dr. David L. Woods, Neurology Service (127), N. CA System of Clinics, 150 Muir Rd., Martinez, CA 94553, or fax to 510-228-4897.

Off Campus, Technical, Summer. Small company seeks 2 students in research. 1 student must have computer systems focus and the other must have EE. Students must be capable of working in an informal atmosphere. Once provided project objective and resources students must work independently for the most part & as a 2 person team when required. The scope of project concerns the emerging industry of global positioning, geographic mapping and their integration with vehicle location and tracking systems. Contact: Catherine Pinnock, The St. James Group, 161 Highland Ave., Needham, MA 02194, 449-5506 (fax).

■ VOLUNTEERS

The MIT Public Service Center has compiled the following volunteer opportunies.

Computer Skills Tutor Needed. A resident of a group home for disabled adults is looking for someone to teach him some basic computer skills which will enhance his prospects of getting a better paying job. Contact Czeslaw Jankowski at 258.5430 or Tom Morris at 288-5438 (or pager number: 329-2886).

Charles River Museum of Industry. There are two opportunities available: Museum Guides conduct tours for individuals and/or group (days, weekends); Restoration Volunteers help restore machinery and artifacts as well as help build exhibits (days). Call K. Leblanc in Waltham, 617-893-5410.

Boston Center for International Visitors. Office volunteers needed during business hours to arrange professional site visits for visiting international dignitaries. Strong phone and word processing skills useful. Knowledge of Boston a plus! Call (617) 542-8995.

The Children's Museum. The Museum welcomes students who are searching for an educational field placement and offers supervision, training and support. Volunteers participate behind the scenes or with our visitors in a variety of positions in the Collections Department. For more information, please call Volunteer Services at 426-6500, x371.

■ CABLE

May 27: *Channel 8:* 10am—Live coverage of MIT Commencement Exercises.

Crimewatch

The following incidents were reported to the MIT Campus Police Department between May 13 -22:

May 13: *Burton House,* bike stolen $350; *Bldg 13,* bike stolen $300; *Student Ctr*, 1) cash stolen $25; 2) shoulder bag stolen $100; two individuals were acting suspiciously when approached by CPs. The officer observed a bike seat under the shirt of one, the seat matched the description of one just reported stolen. Owner of property did not wish to prosecute.

May 14: *Student Ctr,* suspicious activty, CPs observed a person carrying a bike with a lock still attached, upon verifying the MIT sticker, let person proceed; *DuPont* watch stolen from men's lockerrrom $65; *Westgate,* suitcase stolen from storage area $450.

May 15: *Bldg 26,* attempted larceny of bike; *Bexley,* three males arrested for larceny of a bike; *Bldg 54,* wallet stolen $30.

May 16: *Student Ctr,* while a student was sleeping, she reported being indecently touched by a stranger; 2) bike stolen $377; 3) wallet stolen $4; *Bldg 56,* 1) vandalism to a door; 2) suspicious activity; 3) larceny of a powerbook $4,000; 4) larceny of a camera $900; *Bldg 54,* 1) wallet stolen $20; 2) bicycle $200.

May 18: *Bldg 39,* cash stolen $20; *Bldg E18,* computer and radio stolen $2,100; *Bldg E25,* cash sotlen $260; *DuPont men's lockerroom,* 1) wallet stolen $20; 2) wallet stolen $10.

IN ATHLETICS

15 Hailed for Accomplishments

■ **By Roger F. Crosley**
Sports Information Office

ALUMNA HONOR—Athletic director Dr. Richard Hill presents the Betsy Schumacker Award for excellence in athletics to Kamilah Alexander. **Photo by Donna Coveney**

Tennis players **Valerie P. Tan** '94 and **Jay A. Muelhoefer** '94 were the "center court" attraction at the recently held eighth annual Celebration of Athletic Excellence banquet sponsored by the Department of Athletics and the Varsity Club. Muelhoefer of Cambridge and Tan of Cardiff-by-the-Sea, CA, were named the winners of the Malcom Kispert Awards as the outstanding senior scholar/athletes of the year.

Tan is a biology major who also found time to play No. 1 or No. 2 singles and No. 1 doubles on the women's team. Over the course of her career she compiled a 55-39 record in singles and a 27-17 record in doubles. She has been nominated by the Institute for Academic All-America and an NCAA postgraduate scholarship. Tan will pursue her master's degree at the University of California at San Diego in the fall.

Muelhoefer has the unusual distinction of winning three consecutive New England Small College doubles championships, each with a different partner. A mechanical engineering major, Muelhoefer has been nominated for Academic All-America and, like Tan, is a two-time Intercollegiate Tennis Association Scholar-Athlete winner. Muelhoefer is the No. 1 singles player on this year's team and will be competing in the NCAA Division III singles championship at the University of Redlands, CA. He and doubles partner Nick Tsai '95 will also compete in the doubles.

Record-setting pole vaulter **Matthew H. Robinson** '94 of Windermere, FL, was honored as winner of the Howard W. Johnson Award as the outstanding male senior athlete of the year. Robinson, who is a four-year letter winner in both indoor and outdoor track and field, also was a starting linebacker on the football team for four years. He holds Institute pole vault records indoors (16' 3 1/2") and outdoors (16' 4 1/4"), and has been New England Division III champion six times in the event.

Kamilah Alexander '96 of Grand Banc, MI, was selected winner of the Betsy Schumacker Award given for excellence in athletic competition by a female undergraduate. Alexander is a volleyball player who has won more honors than any other MIT women's volleyball athlete at a comparable stage in her career. Alexander's 1993-94 honors included being named New England Women's 8 Player of the Year, most valuable player in the Eastern College Athletic Conference Division III North Championship Tournament, and earning first-team All-New England status.

The all-time leading point scorer in MIT women's basketball history was named the winner of the Pewter Bowl Award, given to a female senior who has shown the highest qualities of inspiration and leadership in contributing to women's athletics. **Marion A. Casserberg** '94 scored 1,198 points over her four-year career which saw her earn four most valuable player awards and be elected captain three times. Casserberg of Knife River, MN, also was an officer of both the Varsity Club and the MITAA during her career.

The Admiral Edward L. Cochrane Award went to hockey player **Nicholas J. Pearce** '94 of Orono, ME. The Cochrane Award is given to the senior male who has shown the highest qualities of humility, inspiration and leadership in intercollegiate athletics. Pearce is a two-time team most valuable player has been an officer of the Varsity Club and the MITAA. He was twice elected team captain by his teammates.

Two record-breaking athletes won the Varsity Club Awards given to the outstanding male and female freshmen athletes of the year. **Sheila C. Rocchio** '97 of Sherborn and **Jose L. DeLeon** '97 of Elsa, TX, starred in gymnastics and football respectively.

Rocchio set Institute records in both the floor exercise (9.45/10.0) and balance beam (9.3/10.). She earned All-America honors by finishing fifth in Division III nationally in the all-around and sixth on the uneven bars. Rocchio was a team co-most valuable player, and was the Eastern College Athletic Conference Division III Champion on the balance beam.

DeLeon earned first-team Eastern Collegiate Football Conference honors at running back, and was a second-team All-New England selection. He rushed for an Institute record 987 yards and was named the Eastern College Athletic Conference Division III New England Rookie of the Week four times during the season. DeLeon is only the second MIT player to win the coveted New England Football Writers Gold Helmet Award given to the college division player of the week.

Three students won Department of Athletics Gold Awards. **Jesse L. Darley** '95 of St. Paul, MN, and **Craig A. Andera** '94 of North St. Paul, MN, won the awards for their leadership and contributions to the intramural program. Andera was also the winner of the Harold Pettegrove Award as the student contributing most to intramural athletics at MIT.

Dionne E. Chapman '94 of Miami, FL, won the third Gold Award. A four-year soccer and softball player, Chapman worked in the Sports Information Office for two years. She is a first team Academic All-district selection in softball and her name is currently on the national Academic All-America ballot.

The Straight "T" award is the highest award given for athletic performance at MIT. Criteria for the award varies by individual sport, and this year 11 athletes have earned the Straight "T". The winners:

Kamilah Alexander, volleyball; **Irfan U. Chaudhary** G, of Lahore, Pakistan, squash; **Carlo Chiarenza** '97, of Henrietta, NY, gymnastics; Jesse L. Darley, cross country; Jay A. Muelhoefer, tennis; **Javier A. Nazario** '95, of San Juan, PR, water polo; **Calvin G. Newman** '96, of Los Angeles, football; Matthew H. Robinson, indoor track and field; Sheila C. Rocchio, gymnastics; Nicholas L. Tsai, tennis; and **John L. Wallberg** '96, of Thief River Falls, MN, indoor track and field.

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REVIEW REPORT

CMRAE Process Flawed, Faculty Committee Finds

■ **By Robert C. Di Iorio**
News Office

An ad hoc review committee of faculty members has found that "in some important aspects" the processes that led to the decision to close the Center for Materials Research in Archaeology and Ethnology (CMRAE) were "seriously flawed."

The committee, headed by Peter A. Diamond, the Paul A. Samuelson Professor in the Department of Economics, filed its report at the May 18 faculty meeting. It said that though there were flaws in the review process, "the provost was fully aware of the views of the [review] committee when he arrived at his decision."

Provost Mark S. Wrighton, who made the decision to end support of the CMRAE with central Institute funds, acknowledged that there were shortcomings in handling the process reviewed by the Diamond committee. He praised the review committee members for "their thoroughness, their sensitivity and their commitment to clarify the process leading to the decisions I recommended to the president regarding the future of CMRAE."

President Charles M. Vest, who said he had fully concurred with the provost's CMRAE decision, one of several driven by the Institute's current climate of budgetary constraints, also praised the work of the Diamond review committee.

Dr. Vest, however, said it was too early to comment on whether the CMRAE decision would in any way be reversed.

The Diamond committee concluded that communications received by the provost from the members of the CMRAE review committee "adequately conveyed the diversity of views within the committee." The committee said the provost "was aware of the opportunity for an outstanding graduate program and of estimates of the resources needed to start such a program. The provost was aware that 'grow or shrink' represented the view of some of the [review] committee members."

CMRAE is part of a consortium involving other Boston area universities and Professor Wrighton said he intends to discuss with the consortium members "how best to proceed." He said that President Vest has received a letter from the consortium asking about ways "to pursue the scholarly and educational interests of those involved in CMRAE, and proper consideration will be given to such new initiatives."

The provost said the word "closing" as applied to CMRAE was unfortunate because MIT's activities were part of a larger effort. He said that even with the initially scheduled June 30 termination of general Institute funds for use by the CMRAE, space for the scholarly interests of its director, Professor Heather Lechtman, would remain available "and equipment used in the research remains for her use and others here at MIT and for her collaborators."

The termination of general funds means that the center would no longer be an administrative entity and official reports, five-year plans and other typical activities of MIT labs and centers would conclude, he said. "However, as with all faculty, Professor Lechtman's opportunities to engage in collaborative efforts with faculty here and at other institutions remain. She will continue to have the opportunity to apply for research grants and contracts and will receive the support of the MIT administration in these efforts."

Earlier in the term, Professor Lechtman protested the provost's decision to close the center and published a 28-page booklet titled "An Institute in Ruins" which set out her criticism. At the March 16 faculty meeting, 39 faculty members expressed concern about the situation and the faculty voted that the decision to close the CMRAE should be set aside until a review committee reported to the faculty.

Professor Wrighton said he realizes "that there has been a communications gap between myself and Professor Lechtman" and that it had contributed "to the exacerbation of an already difficult situation." He said he will seek "to directly interact with her as soon as practical concerning this situation."

The Diamond committee, in its report, noted that closing the CMRAE for financial reasons had been proposed in 1984 and again in 1985 by previous provosts. Each time, the action was put off at the request of then President Paul E. Gray. The report also noted that the CMRAE was administratively transferred to the provost's office in 1992 from the School of Humanities and Social Sciences. This shift, the report said, "marked the end of a bitter dispute between the director of CMRAE and some of the senior faculty in the Anthropology/Archaeology Program." Part of the resolution of this dispute was an agreement that the CMRAE would be reviewed.

The provost appointed Professor Peter Perdue, head of the history section, to chair the review committee.

The Diamond committee, noting that Professor Perdue was the junior member of the CMRAE review committee, said his selection to chair the group was inappropriate.

In accepting the comments of the Diamond committee, Professor Wrighton acknowledged that he "did not inform and engage Professor Perdue to the appropriate extent as to his role in the review process, thereby subjecting him to unfair criticism." He praised Professor Perdue's teaching and scholarship and said he regretted that he "has suffered inappropriately due to my actions."

Professor Wrighton said the advice and guidance provided by the Diamond committee members "will be used in future decision-making processes... I am grateful for their efforts to provide constructive assistance in this era of the reallocation of resources and the setting of new priorities for the Institute. I believe the committee's efforts bring distinction to the Institute and signal a strong, cooperative and collegial relationship among the faculty and those drawn from it to serve the Institute in its administrative functions."

Besides Professor Diamond, members of the review committee were Institute Professor Jerome I. Friedman, Professor Jacqueline N. Hewitt, Professor Pauline R. Maier and Professor Earll M. Murman.

BUILDING FOR THE FUTURE—The $9.6 million Jack C. Tang Center for Management Education now under construction at Building E51 will include meeting rooms, social spaces, placement and recruiting areas, a center for entrepreneurial activity, a 298-seat lecture hall, and four discussion-method classes with 76-129 seats apiece. The building, which will be connected to Building E40 by an overhead walkway (seen at right in this architect's model), will include 44,000 square feet of new space and 8,000 square feet of renovated area. It is slated for completion in 1995.
Photo by Donna Coveney

POLITICAL ECONOMIST

Amsden Named Richards Professor

The appointment of Alice H. Amsden to the faculty of the Department of Urban Studies and Planning and to the Ellen Swallow Richards Professorship has been announced by Professor Phillip L. Clay, head of the department, and by Provost Mark S. Wrighton.

Dr. Amsden, an economist, is noted for her ability to combine outstanding technical analysis with institutional and political insight. Her current major area of interest is the theoretical and institutional process of "late" industrialization and the role in this process of the state, diversified business groups and professional managers.

Amsden

She will hold the chair established 21 years ago to honor the first woman to graduate from MIT and to teach here. Ellen Swallow Richards received a degree from MIT in 1873 and taught here until her death many years later. She is recognized as the founder of the ecology movement.

"I am pleased to announce the appointment of Dr. Amsden as the Ellen Swallow Richards Professor," Professor Wrighton said. "She brings an interesting and broad-based world view to the Institute."

Professor Clay said Professor Amsden will join the Developing-Areas faculty cluster in the department.

"Professor Amsden's analysis of the changing political economy in the emerging world and the relation of global economic developments to those in our own country will make a major contribution to development studies," he said. "She is one of the rare specialists who combines outstanding technical analysis with institutional and political insight. She is a real star."

Dr. Amsden will teach courses on economic development theories and applications and on industrial development. Her industrial development course will examine the theoretical and historical reasons behind differences in the degree of state promotion of industry in the 18th, 19th and 20th centuries. Industrial development policy in developing countries—the "late industrializers"—will be analyzed from the perspective of the strategies of different countries toward economic transformation in an attempt to understand problems of implementation. The question of why industrial development policies have been more successful in some countries than in others will also be covered.

Dr. Amsden has written extensively on problems of industrial transformation in East Africa, East Asia and East Europe. Her most recent book, *The Market Meets its Match: Restructuring the Economies of Eastern Europe,* is co-authored with Jacek Kochanowicz and Lance Taylor and will be published this fall by Harvard University Press. Her previous book, *Asia's Next Giant: South Korea and Late Industrialization* (Oxford 1989), received best-book-in-political-economy honors for 1992 from the American Political Science Association.

Dr. Amsden received the BS from Cornell University and the masters and PhD degrees at the London School of Economics. Since 1989 she has been the Leo Model Professor of Economics and professor of political science on the graduate faculty of the New School for Social Research. She is leaving that post to come to MIT. In addition, since 1988 she has been a research associate at MIT's Center for International Studies.

From 1971 to 1973 she was an economist with the Organization for Economic Cooperation and Development. She was a lecturer at the University of California, Los Angeles, from 1974 to 1977; assistant professor at Barnard College from 1977 to 1983; and lecturer in production and operations management at the Harvard Business School from 1983 to 1988.

OUTSTANDING TEACHERS

Four Professors Are Named to Faculty Chairs

The appointments of four faculty members to chairs have been announced by Provost Mark S. Wrighton.

Harold Abelson of the Department of Electrical Engineering and Computer Science has been named the first holder of a new Class of 1922 Professorship.

Isabelle de Courtivron, head of the Foreign Languages and Literatures section of the Department of Humanities, has been appointed the next Class of 1960 Fellow.

de Courtivron

Cynthia Barnhart of the Department of Civil and Environmental Engineering has been selected to be a Mitsui Career Development Professor.

Henry Jenkins III of the Literature Section of the Department of Humanities has been selected to be the next Class of 1942 Career Development Professor.

Professor Abelson, a MacVicar Teaching Fellow, is considered one of the Institute's premier teachers whose innovations have had an impact on many campuses. Regarded as a pioneer in computer science education, he is co-author, with his Course VI colleague Gerald J. Sussman, Matsushita Professor of Electrical Engineering, of *Structure and Interpretation of Computer Programs.* The book has been adopted by more than 150 colleges and universities. The subject, 6.001, which Abelson and Sussman have shaped, has been widely emulated. He also oversees for MIT the university's connection with the Research Science Institute, founded by the Center for Educational Excellence, which brings about 70 top high school science students to MIT each year to work as research interns. He joined MIT in 1973, the year he received his PhD from the Institute. His AB (1969) is from Princeton University.

Barnhart

Professor de Courtivron is known for her studies of French feminist writers. She is the author of books on Violette Leduc (1985) and Clara Malraux (1992). A native of Paris, she holds the BA (1969) from Colby College and the MA (1970) and the PhD (1973) from Brown University. She came to MIT in 1977 and devised a new, integrated curriculum in French literature and language. Over the years the number of students concentrating in the language has grown significantly at the Institute.

Jenkins

In 1983, when she received the Harold Edgerton Award for outstanding teaching achievement, the selection committee said that she is viewed "by colleagues and students alike as an electrifying teacher. In her classes, learning a foreign language is not merely acquiring an additional skill, it is gaining access to another way of thinking, another mode of communicating, another perspective on the world."

Abelson

Assistant Professor Barnhart is interested in transportation, logistics, mathematical programming and large-scale network optimization. She holds the BS (1981) from the University of Vermont and from that year until 1984 was a planning and scheduling engineer with Bechtel, Inc. She also received the SM (1985) and the PhD (1988) from MIT. She joined the MIT faculty in 1992 after four years on the faculty of

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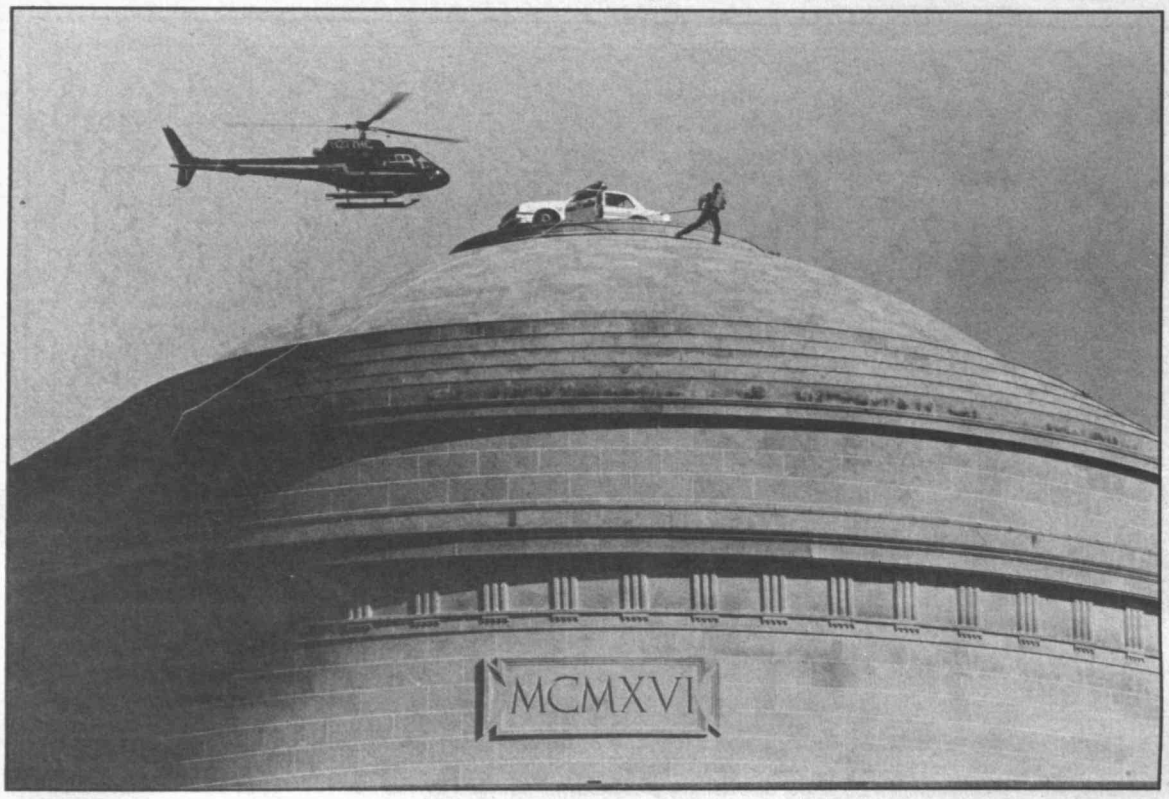

HEAVENLY INSPIRATION?—The cruiser placed at MIT's pinnacle reminded a woman of her recently deceased son's sense of humor.
Photo by Donna Coveney

Hack Inspires Appreciative Letter

The widely publicized hack that placed an MIT Campus Police "cruiser," with coffee and doughnuts inside, on the dome of the Maclaurin Building earlier this month had a bittersweet resonance for a woman from Park Forest, IL.

It coincided with the death of her son, a police officer, and prompted this letter to MIT:

"To whom it may concern:

"This may seem an unusual letter but I feel compelled to write it.

"Monday evening, on a television news program, I saw the 'prank' that had taken place at your institution. Being originally from Boston, I would have enjoyed it anyway, but this was unusual timing.

"My son, Jack Mosier, a 20-year veteran of the Country Club Hills Police Dept., was laid to rest that very afternoon. He succumbed to a rare, quickly spreading form of cancer.

"He had a wonderful sense of humor which we shall all miss but memories of that humor shall keep us going.

"When we saw the police car, complete with lights (there were 57 like that in his cortege) and donuts, we all agreed he was there inspiring the 'culprits.'

"To the unknown 'perpetrators'—Bless you—you raised our spirits on what was a sad day."

The letter was signed: Mrs. Bonnie Mosier (Officer Jack's Mom).

NON-COMMERCIAL USE

MIT Issues Software Codes To Promote Internet Privacy

MIT today issued—for non-commercial use—a free public software package that will allow people to send private coded messages on electronic networks in the United States.

The release provides non-commercial US users of the Internet with the ability to obtain secure communication and data protection. Commercial versions have been licensed to more than four million users.

The software, known as PGP Version 2.6 (for "pretty good privacy") uses the RSAREF™ Cryptographic Toolkit, supplied by RSA Data Security, Inc. of Redwood City, CA. It is being released by MIT with the agreement of the company.

Unlike prior versions, PGP 2.6 is fully licensed, for US non-commercial users, to use public-key technology that has been licensed by MIT and Stanford University to RSA Data Security and Public Key Partners.

Public-key technology gives users of electronic mail the ability to sign messages in an unforgeable way, as well as the ability to send confidential messages that can be read only by the intended recipients, without any prior need to exchange secret keys.

"This agreement solves the problem of software which infringes the intellectual property of MIT and the licensee, RSA, of being distributed on the Internet," said Professor James D. Bruce, vice president for information systems.

Although prior versions of PGP have been available on the Internet as "underground" programs, the infringement of MIT and Stanford University patents has prevented it from coming into widespread adoption.

Four Faculty Chairs Named

(continued from page 3)

the Georgia Institute of Technology. In 1990, she received a Presidential Young Investigator Award and in 1993 the General Electric Foundation Junior Faculty Career Award.

Associate Professor Jenkins, who joined MIT in 1989, is regarded as a leader and founder of an area of scholarship centered on the relation between the mass-media narrative arts and audiences. He also is a film scholar specializing in movie comedy in the early sound era. He is currently writing a book on postwar American children's culture. He holds the BA in political science and journalism from Georgia State University (1980), the MA in communications studies from the University of Iowa (1985) and the PhD in communications arts from the University of Wisconsin, Madison (1989). He was the recipient of the Harold E. Edgerton Award in 1992 and of a University of Wisconsin Fellowship in 1982.

STERILIZATION IDEA

SterWave Team Wins $10K New Venture Competition

■ **By Joost Bonsen**
Competition Chairman

SterWave, a student team drawn from the MIT Schools of Engineering, Management and Science, produced this year's David and Lindsay Morgenthaler Grand Prize-winning business plan in the fifth annual MIT $10K Entrepreneurial Competition.

In the $10K Competition, co-organized by the MIT Entrepreneurs Club (e-club) and the Sloan New Ventures Association (NVA), a $10,000 cash prize, along with several thousand dollars' worth of in-kind legal and accounting services and a "trillion bucks" worth of free advice, is given to the team which produces the best business plan that proposes the most promising new venture.

The SterWave plan aims to commercialize a proprietary new technology for sterilizing medical, laboratory and industrial supplies. Currently this market (worth hundreds of millions of dollars per year) is served by technologies which are seen as too slow, expensive, dangerous and damaging to the materials sterilized. The SterWave technology addresses each of these problems.

SterWave's record-size $10K team consists of management graduate students Alberto Haddad, Khinlei Myint-U and Suzanne Oakley; Owen Hughes (MIT SB '86), management fellow Robert Lewis; Peter Nuytkens, a graduate student in electrical engineering and computer science; Jason Chen, a senior in materials science and engineering, and Srikar Srinath, a senior in EECS.

Though their decision was difficult, the judges said they had a "most enjoyable" time this year due to the "astonishing" quality of the plans. Each of the finalists not only prepared a plan but also made significant progress on working prototypes and mock-ups of their products. The other five finalists included:

● HyperLearning, producing computer-aided interactive learning guides for math, science, and engineering at both the high school and college levels, by nuclear engineering graduate student John Chun, and Cris Eugster and Dan Wang, both of whom received MIT doctorates in1993.

● New Frontiers Information Corporation, pioneering the emergence of electronic markets with an on-line employment agency for technical professionals, by Jay Coulson, a senior in computer science and engineering; Andrew Heitner, a graduate student in mechanical engineering; Frank Leibly, a graduate student in electrical engineering and computer science, and Robert Ramstad, who received his master's in computer science in 1992.

● Up&Comers Trading Card Company, marketing aspring athletes' action cards that "look and feel" like professional athlete cards, by Jason Farris and Robert Ward (both receiving the SM this year).

● SenFlex, enabling flexible manufacturing and process control through wireless technology, by Roland Ayala, Charles DeWitt, Lance Haag and Michael Rutz, all juniors in management.

● MediaCast Technologies, developing software products to deliver interactive multimedia content and internet access, by Paul Bosco, Charles Compton, Ye Gu and Christopher Lefelhocz, all graduate students in EECS.

The MediaCast team was honored with a $1,000 Sloan Product Development and New Venture Track Prize for their well-done plan and much-needed product. The other finalist teams received copies of books by MIT Professors Ed Roberts (*Entrepreneurship: Lessons from MIT and Beyond*), Glen Urban and John Hauser (*Marketing*), and MIT alumnus Gordon Bell (*High Tech Ventures*), courtesy of the authors and the MIT Entrepreneurs Club.

The semifinalist team of Educational Designs was also awarded The Most Socially Relevant New Venture Prize for bringing MIT's renowned 2.70 design contest to high schools throghout the country and the world. Team members Ross Levinsky, a graduate student in mechanical engineering; Andrzej Skoskiewicz (MIT SM '93); Jeff Reback, a senior in computer science and engineering, and Janice Yoo, a senior in political science, are working closely with 2.70 Professor Harry West and have already supplied kits to high schools outside Massachusetts.

Open to all MIT students, the $10K Competition encourages student entrepreneurship and promotes cross-campus team building. Historically, the strongest teams have included combinations of technical and management student talent. This spring, 33 teams with nearly 70 people submitted executive summaries; by early March, the judges asked nine semifinalist teams to prepare full business plans.

The all-volunteer $10K judging panel consists of Joseph Hadzima, partner in the law firm Sullivan & Worcester's High Technology/New Ventures Group; Christina Jansen, licencing officer at the MIT Technology Licensing Office; Vince Cipollone, Matthew Littlewood, and Mark Verdi of the Price Waterhouse Entrepreneurial Services Center; Matthias Plum, founding partner of the venture capital firm Copley Venture Partners; Russ Olive, senior lecturer on entrepreneurship and the management of technology at the Sloan School of Management, and David Morgenthaler, founder and managing partner of Morgenthaler Ventures, a venture capital firm.

Sponsors of the $10K Competition include the School of Engineering, the Sloan School, the MIT Technology Licensing Office, Price Waterhouse, Copley Venture Partners, the MIT Enterprise Forum, Ronald Trahan Associates, Sullivan & Worcester, Thermo Electron Corporation, Draper Associates and the David and Lindsay Morgenthaler Foundation.

Members of the 1994 organizing committee were Joost Bonsen, Richard Shyduroff and Douglas Ling of the e-club; J.J. Laukaitis, Chris Meyers and Jim Macintosh of the NVA, and Krisztina Holly of Stylus Innovation, the 1991 $10K winner.

Products Emerge From Past $10K Winners

Previous student contestants and winners of the $10K Competition have gone on to build real companies with products destined for market.

Last year's winner, Novus Packaging Corporation of Jamaica Plain, just introduced its PillowPak inflatable packaging product at a Boston biomedical expo. Novus has been heavily involved in assessing market needs, establishing a manufacturing facility, filing additional patents and improving its product. The firm is also developing a partnership with a local packaging company and is seeking investments for further product development. Beta testing of PillowPak is currently being conducted; Novus expects initial orders by later this year, with other packaging systems due out in early 1995.

"The packaging market is brutal," said Novus' president, Nicholas De Luca (MIT SB '93). "You've just got to find a niche and go for it." Novus is targeting the polystyrene thermal protection market, which it estimates at $50 million per year in the United States. "With our primary technology developed in-house, we can shorten product development cycles and design with manufacturing in mind," Mr. DeLuca said.

The 1991 $10K winner, Stylus Innovation (formerly Dial-a-Fish) is now shipping a software product called Visual Voice. It is a custom control for Visual Basic that allows developers to build sophisticated voice-processing applications such as fax on demand, interactive voice response ("touchtone banking," for example), and voicemail.

In the next two months, Stylus plans to introduce two other products. They are porting the Visual Voice product to IBM Mwave-based boards, inexpensive powerful hardware that's rapidly becoming widely available. The second product, Visual Fax, will allow developers to build robust multiline fax applications in Visual Basic with Intel SatisFAXtion boards.

Stylus got to this point after licensing their barcode system to the largest distributors of VeriFone for $8 million. (VeriFone is the box used in stores to confirm the validity of customers' credit cards.) The company retained rights to build software, and its first software package focused exclusively on receiving barcode-to-touchtone input. Along the way, employees realized they could make a useful software tool for general-purpose voice processing (e.g., interactive voice response). They launched Visual Voice last November and have been growing at 40 percent per month, with a current annual revenue rate of $1.5 million.

Recycling Report

A container for recyclable file stock (phone books, paperbacks, magazines, catalogues, manila folders, course catalogues, and file folders without metal hangers) will remain at the Building 56 loading dock through next month for the convenience of those who are moving their offices and labs from Buildings 56 and 16 into the new biology building. Other members of the MIT community may use it as well.

From five containers placed at various campus sites in April, Physical Plant collected 4,840 pounds of material, which will be made into bathroom tissue.

For more information, call Environmental Coordinator Jennifer Combs, x3-7671.

MIT KUDOS

Convocation Honors 50 for Contributions to Community

■ By Alice C. Waugh
News Office

Fifty students, faculty, staff members and organizations were recognized for their accomplishments in 1993-94 at this year's awards convocation. (Major athletic awards presented at the convocation are included in the story on sports awards.)

■ Four students—**David S. Cuthbert**, a graduate student in civil and environmental engineering from Newton, MA; **Kristala L. Jones**, a senior in chemical engineering from Longview, TX, and **Anand Mehta** of Cambridge and **Mark Y.D. Wang** of Norman, OK, both graduate students in physics—received the Karl Taylor Compton Prize, given to recognize outstanding contributions in promoting high standards of achievement and good citizenship within the MIT community. For the first time, an organization, The Tech, also received an award.

Mr. Cuthbert, a two-year member of the Graduate Student Council, did a survey on ways to improve Safe Ride and led an undergraduate class in creating a schedule for the service. He also started the grocery shuttle to LaVerde's supermarket, served as a summer tutor and helped create Safewalk. "Few at MIT have done as much to organize both graduate and undergraduate students in the development of programs for the betterment of the entire Institute community," said Arthur Smith, Dean for Undergraduate Education and Student Affairs.

Ms. Jones' student resume "reads like an R/O pamphlet of MIT activities," Dean Smith commented. She served on the IAP Policy Committee, the Black Student Union Task Force on Racial Enlightenment and the Committee on Academic Performance. She was also a seminar advisor, president of the National Society of Black Engineers, and a coordinator of "It's Intuitively Obvious," the video on black student life. "You remind us all of what MIT education is all about—education not just in the narrow technical sense, but education as it prepares students to become vibrant, active members of the many communities that will engage them," Dean Smith said.

Mr. Mehta was president of the GSC, a volunteer instructor, representative on the Faculty Policy Committee, chair of Student Activities Subcommittee, and a member of the Peer Advocates Against Harassment. "Your commitment to MIT life has been remarkable and your accomplishments deeply appreciated by the community," Dean Smith said. "Your energy, persistence, spirit and hard work have done much to make MIT a more humane and positive living environment."

To Mr. Wang, Dean Smith said that as a graduate resident tutor, "your contribution was particularly outstanding and far exceeded what was listed in the job description." Mr. Wang was the first editor of True Grit, the GRT newsletter; he also helped create Baker Life, a guide that was adapted by other living groups, and he worked in the Medical Department on various health-related programs and publications. "You have continuously reached out to support students in time of need," Dean Smith said.

The Tech was recognized for its efforts in keeping the MIT community informed since the paper was founded in 1881. The Tech's "significant and unique contribution to the MIT community has justly earned it the gratitude of the Institute and this special recognition," Dean Smith said.

■ The Gordon Y Billard Award, which recognizes those who have performed special service of outstanding merit for MIT, went to **Doreen Morris**, assistant provost for administration, and Episcopal chaplain, the Rev. **Scott Paradise**.

"The scope and level of her accomplishments more than match her energy. Doreen's special performance goes far beyond the generous work ethic to the heart of what the Billard award recognizes," President Charles M. Vest said. Her citation recognized her as "dedicated, conscientious and sensitive" in her current work and earlier as special assistant to the senior vice president and as the assistant dean of the School of Science. "Your efforts have contributed enormously to successfully recruiting and retaining the world's most outstanding faculty… Your efforts are conducted with integrity, respect and effectiveness; your contribution goes well beyond any reasonable interpretation of your job description."

President Vest paid tribute to the Rev. Paradise, retiring this year after 15 years at MIT, for his work in heading the Technology and Culture Seminar. "Under his leadership, the seminar has reflected both his insightful identification of issues and his passion for justice … he is an inspiring source of counsel and spiritual support to countless individuals in the MIT community."

Rev. Paradise's citation added, "you have thoughtfully and consistently helped the Institute to consider how technology and ethical concerns meet… When our busy lives threaten to make us forget the important in our need to deal with the urgent, your wise and compassionate counsel have been invaluable."

■ The James N. Murphy Award, presented to employees whose contributions to the Institute family have won a place in the hearts of students, were given to **Gary J. King**, administrative assistant in the Department of Economics; **Frederick D. Wilson**, research specialist in the Department of Materials Science and Engineering, and **Trond H. Kaalstad**, senior administrative officer in the Department of Civil and Environmental Engineering.

Having served under five different department heads, Mr. Kaalstad has been "the constant rock at the heart of the department's operations for several generations," a faculty member wrote. Another said it was "not his prowess as an administrator and slayer of red tape—it is his loyalty, integrity, kindness and selfless giving that clinched the case" for deserving the award.

Of Mr. King, a senior faculty member wrote that he is "an extraordinary employee, unfailingly pleasant, totally knowledgeable about every aspect of the department's work, and much loved by faculty, staff, graduate students and undergraduates."

Mr. Wilson, who has worked in the department for 34 years, is "a devoted member of the MIT community," a senior faculty member wrote. "His popularity is a consequence of Fred's considerable expertise, but it is also strongly coupled to his personality, openness and always-supportive attitude."

■ The William L. Stewart, Jr. Awards for accomplishments in extracurricular activities went to **Club Latino**; **Caryl B. Brown**, a graduate student in management from St. Petersburg, FL; Hillary R. Hudis, a senior in environmental engineering science from Monterey, CA; **Kenneth M. Porter**, a sophomore in mechanical engineering from Brooklyn, NY; and **Susan L. Ipri** of Cambridge, a graduate student in mechanical engineering. "You've worked very hard to create a sense of community, but not just for the Latino/Latina community but for students of color on the MIT campus and MIT as a whole," presenter Susan Allen, assistant dean for undergraduate education and student affairs, told Club Latino members.

Among Ms. Hudis' extracurricular posts this year were treasurer of the African Students Association, member of the Women's Independent Living Group and chair of the MIT chapter of the American Society of Civil Engineers. "You have done much to contribute to the status of women at MIT," Ms. Allen said.

Ms. Ipri and Mr. Porter were recognized for their efforts in starting the Safewalk Program, "an excellent example of the ability of students to work together for the good of their community," Ms. Allen said.

Mr. Brown's activities included serving as president of the Graduate Student Council, in the MIT Concert Band, and on the MIT Corporation Joint Advisory Committee.

■ **Elta Chian**, a senior in chemical engineering from Atlanta, GA, was presented with the Laya Wiesner Award, given to a woman who has enhanced undergraduate life. "She is the epitome of what women should be at MIT… she leads by example, empowering others and always keeping their interests in mind," presenter Rebecca M. Vest said.

■ The Laya and Jerome B. Wiesner Awards went to **Adrian P. Childs**, a senior in mathematics from Cottage Grove, WI, and **Frantz Elizondo Schmelkes**, a senior in mechanical engineering and theater from Queretaro, Mexico. Mr. Childs held membership in three MIT orchestras as well as the Musical Theater Guild and Concert Choir. "It is hard to describe or even believe his versatility," Professor John Harbison wrote.

In addition to his commitment to the Latino community and to outreach in Boston schools, Mr. Schmelkes "demonstrated the collective power of theater as an instrument of social change and empowerment," senior lecturer Michael Ouellette wrote in nominating him for the award.

■ **Barbara M. Nichols**, a senior in materials science and engineering from Philadelphia, and **Alejandro Padilla**, a senior in mechanical engineering from Pacoima, CA, received the Albert G. Hill prize for minority students who have maintained high academic standards and contributed to the improvement of the quality of life for minorities at MIT. Both Mr. Padilla, who has worked with the admissions office to recruit minority students, and Ms. Nichols, who was an ECSEL tutor and member of the Black Students Union, "have given tirelessly to scores of individual students," said Judy Jackson, director of the Office of Minority Education.

■ **Keith V. Bevans**, a junior in electrical science and engineering from Cliffwood Beach, NJ; **Patrice L. Washington**, a junior in materials science and engineering from Chicago, and **Maya A. Trotz**, a senior in chemical engineering from Teaneck, NJ, won Ronald E. McNair Scholarship Awards, established by the Black Alumni/ae of MIT in memory of the Challenger Shuttle astronaut Dr. Ronald McNair (MIT PhD '77) to recognize black undergraduates who make contributions to the minority community.

Ms. Trotz organized a trip to Jamaica by 10 MIT students to meet with native artists, diplomats and students. As vice president of the Alpha Kappa Alpha sorority, Ms. Washington organized programs for Roxbury youth and received the 1993 MIT Community Service Award. Mr. Bevans was president of the MIT chapter of the National Society of Black Engineers and the Teams Project, a science enrichment program for black Cambridge eighth-graders.

■ **Mariquita C. Gilfillan**, a senior in economics from Princeton, NJ, and **Prashant B. Doshi**, a junior in chemical engineering from Edison, NJ, were recipients of the Frederick Gardiner Fassett, Jr. Award, which recognizes male and female members of the Interfraternity Council who demonstrate the qualities of spirit, dedication and service. Ms. Gilfillan was the Panhellenic president and helped revise its constitution. Mr. Doshi completed his second term as IFC president.

■ The James R. Killian, Jr. Community Service Award for the IFC organization with the most outstanding community service program went to the **Phi Delta Theta** fraternity, which made more than 350 wooden toys for distribution to hospitalized needy children and played major roles in City Days, the TCA Blood Drive and the Walk for Hunger.

■ The IFC Alumni Relations Award was presented to the **Pi Lambda Phi** fraternity, which hosted Alumni Week-

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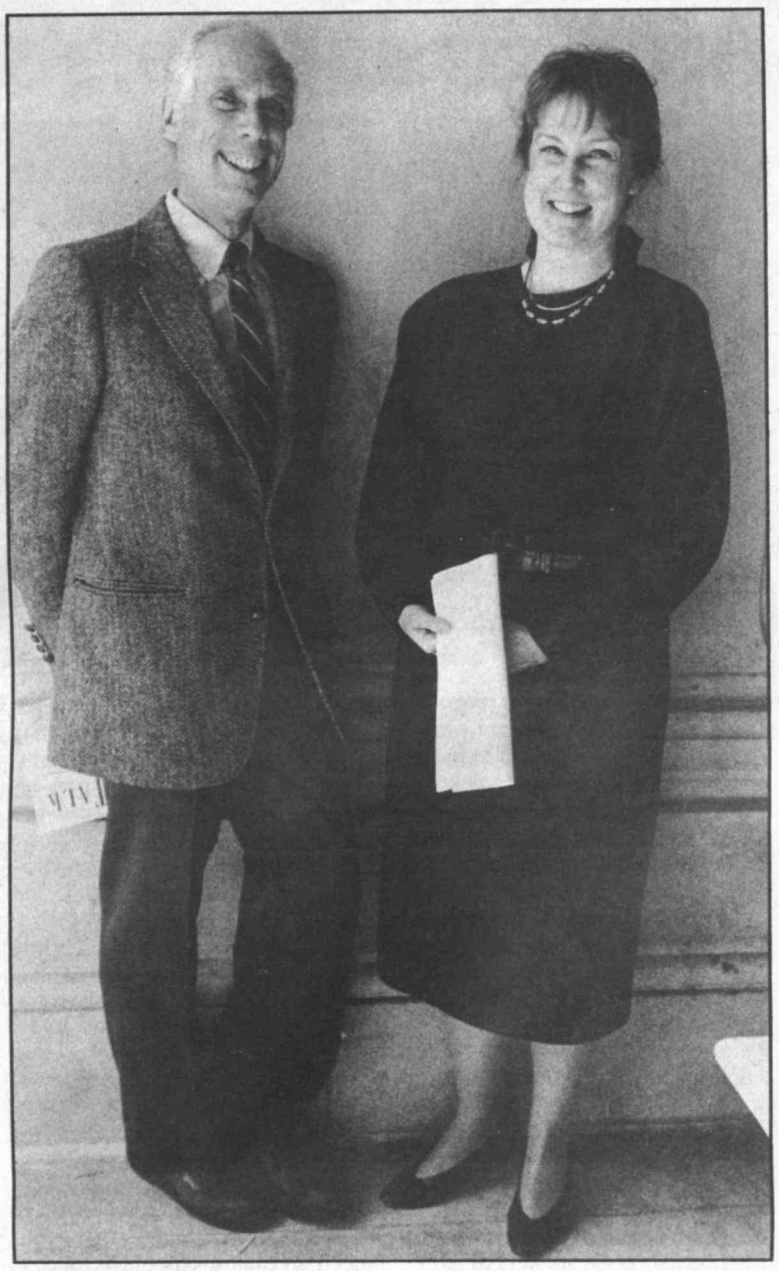


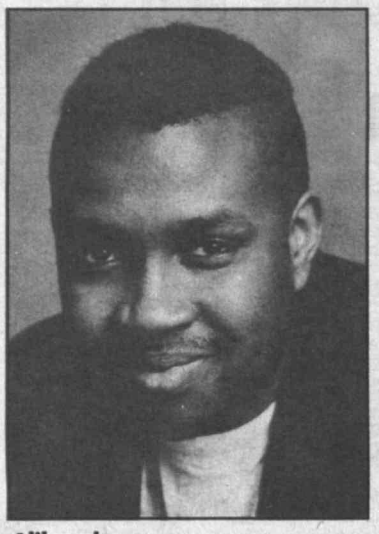
SUPERB CONTRIBUTIONS—The Gordon Y Billard award, presented for special service of outstanding merit performed for the Institute, was given to the Rev. Scott Paradise and Ms. Doreen Morris. **Photos by Donna Coveney**

COMPTON AWARDEES—The Karl Taylor Compton Prizes, presented to students in recognition of outstanding contributions in promoting high standards of achievement and good citizenship within the MIT community, were given to, l-r; Mark Y.D. Wang, G, Anand Mehta, G, Kristala L. Jones, '94, and David S. Cuthbert, G.

After graduation: relaxing, pondering more school


Kaiser


Chung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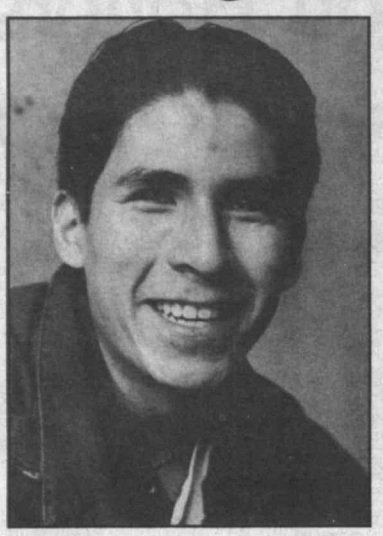

Duran

The Questions of 1994

1) What is your major? Has it changed from when you were a freshman?

2) Do you expect to receive your degree this year?

3) What are your plans after graduation?

4) What do you think you will be doing 10 years from now? Has this changed from four years ago? Why?

5) What advice about MIT would you give to the Class of 1998?

6) Any other thoughts or observations after four years at MIT?

(continued from page 1)

5. I guess the only advice I would give the class of 1998 would be to not get trapped into doing things solely for yourself. Help others and your life here and beyond MIT will have much more meaning.

Coleen M. Kaiser, 18, Barneveld, WI; mechanical engineering. "I don't have a clue... I'd like to wing it, I guess."


Kaiser

1. I majored in mechanical engineering, which was what I intended to do when I was a freshman.

2. I will finish my degree this term.

3. I will be working in Boston for Robertson Stephens, a San Francisco-based investment bank.

4. I'm still not really sure. I'll probably move back to Wisconsin in a few years and go back to school. I still can't plan that far ahead.

5. Get involved in something while you are here, whether it's sports, your living group, a Greek organization or anything, for this is where you will meet your best friends. Because it will be a sad day 20 years from now when you can't remember anything about your college years except that you took a lot of classes.

6. At MIT, you can have the best and the worst thing that has ever happened to you, all within the same day.

Jackie C. Chung, 18, Arcadia, CA; biological sciences. "I want to be a pediatrician... in some clinic, or on my own."

1. Biology.

2. Yes. Graduating on time in 1994!

3. Plans for summer: relax, travel (Taiwan, Hong Kong, maybe China). After summer: go to medical school.


Chung

4. Same as what I said before: I still want to be a pediatrician. Well, for sure I am going to be a doctor, since I am going to medical school next year. I still want to be a pediatrician, since my experiences volunteering in the pediatrics deptartment at Cambridge Hospital confirmed that decision. And I still might work in a hospital, but actually, I most likely would work jointly with a couple of other doctors in a smaller practice unit.

5. Enjoy your four years of college. Budget the time well. Get your priorities straight. Don't slack off, because hard work does pay off. And most importantly: study hard, play hard!

6. My life at MIT has certainly been enriching. I learned a lot, more than I have time for. These four years have been very intense in terms of the work load and amount of studying we have to do. I am glad to graduate from MIT and get out of here. I really don't like the guilty feeling I have every time I go out; I always feel as if I should be studying instead of partying. Also, it seems as if in those four years, I have always been playing catch-up and cramming for my classes. Maybe I should have sacrificed more of my socializing time for studying. But, oh well, it's too late now. But overall, I am glad I came to MIT. Although I am glad to get out of MIT, I sure am going to miss Boston.

Kwatsi L. Alibaruho, 18, Atlanta, GA; cybernetics. "I'll be a guitarist in a heavy metal band... I had a band called Pink Yak... [An MIT degree] is something nice to fall back on if you don't get a record deal."

1. I changed from computer science to avionics my junior year.

2. I will receive my degree in February of next year. I have only one term left. Changing [my major] cost me some time but not as much as it could have.

3. After graduation, I plan to do one of two things: (a) Work for a few months and then go to business school in fall 1995, or (b) Work for a few years, get married, pay off loans, get a life again, and then go to business school. All of this will happen if I don't get accepted to business school for fall 1995.


Alibaruho

4. I suspect that I will have started my own business, or I will be working in an upper-middle management position for an aerospace company. That's my best guess. I don't play guitar anymore. MIT has successfully driven most of my dreams away. All I can do now is try to get some sleep and make sure I have the most successful engineering/management career possible. I've sacrificed a lot to try to attain my MIT degree. If I don't make something out of it, I'll feel like I've wasted my time and what used to be my life. When you're at MIT, you often feel like cosmic forces are conspiring against you. I figure being successful will be my ultimate revenge.

5. What advice about MIT would I give to the class of 1998? The first thing I would tell them is that there is a world of difference between freshman and sophomore year. Don't be deceived by the false sense of security freshman classes and freshman attitudes give you. Starting sophomore year, you're in it up to your neck. Second, think very, very carefully about what you really want to do with your education. MIT gives freshmen a pitifully short amount of time to pick a major, and an improper choice can make classes much more difficult. Knowing where you want to go after MIT makes it much easier to get through MIT. My final word of advice, and I think this is the most important: Don't kid yourself. MIT is hell. As long as you remember that, there won't be any unresolvable problems.

6. After four years at MIT, I think I'm ready to take a break.

Carlos I. Duran, 17, Barrington, RI; biology and biomechanics. "I hope I'll be working at whatever I've studied for the past eight years."


Duran

1. My major is mechanical engineering, Course 2A, which prepares me for medical school, and I have a minor in anthropology. When I was a freshman, I was interested in biomechanics and a professor encouraged me to take the program where I took classes in chemistry, electrical engineering and computer science, and biology. I really enjoyed my humanities classes. I think course 6.022 is the best premed class. I was considering medicine, and my UROP last summer really helped me decide to pursue it.

2. Yes. I just finished my thesis last week. It was a great experience and an extension of my UROP project, which was in a food mechanics lab.

3. This summer I'm going to volunteer at an orthopedics lab in a Rhode Island hospital. Next fall I hope to work in orthopedics at Beth Israel. I'm applying to medical school and it takes a while, so I'm looking for a job for the fall in the medical field where I can use my engineering degree.

4. I hope to be a doctor, maybe with a specialty in orthopedics. After medical school, I'm interested in going to South America to work in the villages for some charitable world organization.

5. I put this in my Senior Survey: if you are prepared to meet the challenge, then this is the place to come to. It may seem that for some people it comes easy, but putting out the effort is what counts. You have to ask yourself if you want to accept the challenge, be disciplined and put in the work. If you always put out your best, you'll never feel unsatisfied.

6. There are too many emotions. I'm relieved and really happy. I've grown a lot. I was always attracted to the opportunities. It's easy here. People are waiting to reach out to you. Opportunities lie here that are unavailable at other places. Sometimes I think there could be more communication between teachers and students, especially in the large classes. I got to know a few professors, but in some classes I never met them. In some ways I have to blame myself for not going to them to talk. I read an article about MIT that said there are two kinds of students at MIT. The first kind sticks to their group, maybe they live in an independent living group and do one sport. The other people, who are the minority, think a social life is important. They get involved in activities. They make the social life at MIT. I appreciate that; I wish I was more involved in activities.

ChemE Ceremony Acknowledges 18

Dr. Robert A. Brown, the Warren K. Lewis Professor and head of the Department of Chemical Engineering, presided at the department's annual awards ceremony earlier this month when the following awards were presented:

The Dunbar L. Shanklin undergraduate scholarships in Chemical Engineering for 1993-94 were given to **Brett W. Bader**, a junior from Albuquerque, NM, and **Sherry H. Hsiung**, a junior from Emmaus, PA.

In conjunction with the Student Financial Aid Office, National Science Foundation undergraduate scholarships were acknowledged for recipients **Jesus R. Jordan**, a sophomore from El Paso, TX, and **Steven T. York**, a sophomore from Chickasha, OK.

Albert S. Lau, a junior from Naperville, IL, was recognized for his receipt of a Barry M. Goldwater Scholarship, given by the Excellence in Education Foundation.

The Dow Chemical Company Outstanding Junior Award recipient was **Brett W. Bader** (see above), for his balanced record of achievement in academics and campus professional and social organizations, as well as work experience.

The American Institute of Chemical Engineers Annual Chapter Scholarship Award was given to **Esther K.K. Chang**, a junior from Richmond Hill, Ontario, a member of the MIT AIChE Student Chapter, for her high scholastic performance throughout her first two years in chemical engineering.

The Robert T. Haslam Cup was awarded to **Kristala L. Jones**, a senior from Longview, TX, for outstanding professional promise in chemical engineering.

The Roger de Friez Hunneman Prize, the oldest prize in the department (begun in 1927), was awarded to **Wai Thong Wong**, a senior from Singapore, in recognition of outstanding scholarship and research.

The Edward W. Merrill Outstanding Teaching Assistant Award was presented to **Eddie Koury**, a graduate student from Trinidad, for excellence in teaching in an undergraduate subject. A second place award went to **Lloyd P.M. Johnston**, a graduate student from Calgary, Alberta.

Chemical Engineering Department Special Service Awards were given to **Joao Paulo Aumond**, a graduate student from Sao Paulo, Brazil; **Nancy J. Zoeller**, a graduate student from Houston, TX; **Matthew M. DiPippo**, a graduate student from Middletown, RI; **Christopher J. Dowd Jr.**, a graduate student from Wilmington, DE, and **Richard C. McKern**, a senior from Needham, for their unselfish contributions to the success of departmental activities.

The Chemical Engineering "ROCK" Award for outstanding athletics, as voted by the graduate students of the department went to **Christopher J. Dowd Jr.** (see above).

The Outstanding Employee Award was presented to **Elaine E. Aufiero-Peters**, an administrative secretary in the department's Student Office, for her exceptional service.

The Outstanding Faculty Award from the graduate students was presented to Professor **William M. Deen**. Undergraduate students in the department presented an Outstanding Faculty Award to Professor **C. Michael Mohr**.

Janet Fischer, ChemE

19 Honored in MechE

The Department of Mechanical Engineering recently selected 19 students to receive awards this year:

Craig B. Zilles, a senior from Los Gatos, CA, received the Department's Award for outstanding service to the department.

Adrian M.T. West, a graduate student from Kendal, England, received the Carl G. Sontheimer Prize for excellence in innovation and creativity.

The Reinhold Rudenberg Memorial Prize for an outstanding undergraduate thesis relating to energy conversion was shared by **Alexander E. Long** of Astoria, NY and **Goro Tamai** of Fresh Meadows, NY. Both are now graduate students in the department.

The first prize in the Luis De Florez Award competition for outstanding ingenuity and creativity in design was awarded to **J. Gregory McCandless**, a senior from Winchester, MA. Second prize went to **Cary Gumbert**, a senior from Austin, TX.

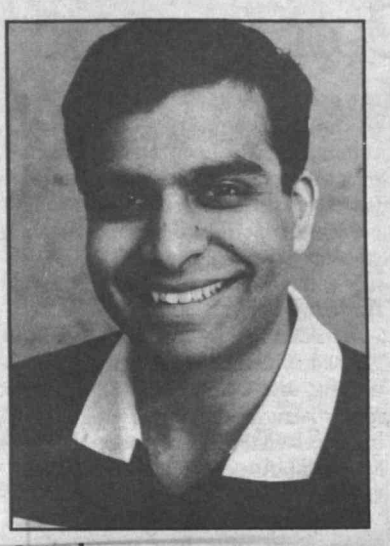
The Robert L. Hallock Awards for outstanding performance in course 2.30: Mechanical Behavior of Materials, were presented to **Daniel Wolfenzon**, a senior from San-Isidoro, Peru, and **Jeffrey Breedlove**, a senior from Sioux City, IA.

The Whitelaw Prize for outstanding design and construction of a device for the contest in 2.70: Introduction to Design was awarded to **Carlos A. Herrera**, a sophomore from Caparra Heights, PR, and to **Michael K. Fang**, a sophomore from Douglasville, GA.

Wunsch Foundation Silent Hoist and Crane Awards for outstanding performance in an undergraduate thesis or project relating to materials handling were presented to the following undergraduate students: **Chad P. Findley**, a senior from Palo Alto, CA; **James E. Gouldstone**, a junior from Ledbury, England; **Jeffrey A. Gourde**, a sophomore from Jackman, ME; **Nayana V. Ghantiwala**, a sophomore from San Jose, CA; **Mark M. Hytros**, a senior from Mt. Prospect, IL; **Matthew Manning**, a senior from Wellesley, MA; **Gloria M. Ro**, a senior from Sunnyvale, CA; **Maia P. Singer**, a senior from Shrewsbury, MA, and **John T. VanHouten**, a senior from Portland, OR.

The award certificates and checks were presented to the students at the annual M.E. Awards Luncheon held at the MIT Faculty Club on May 12.

Advice: Get involved, enjoy each and every day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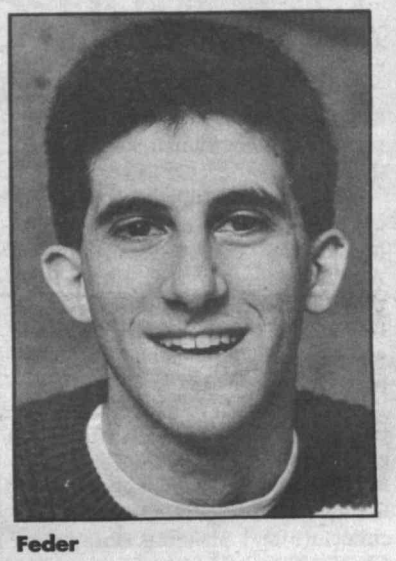
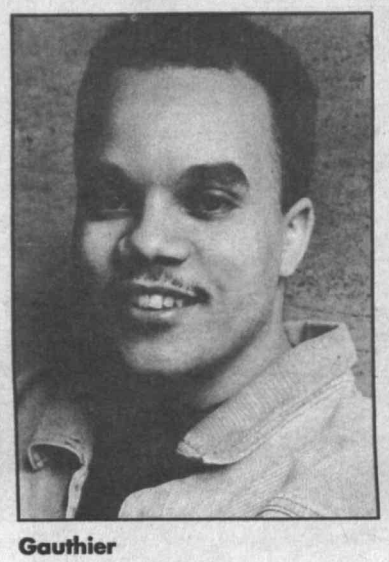
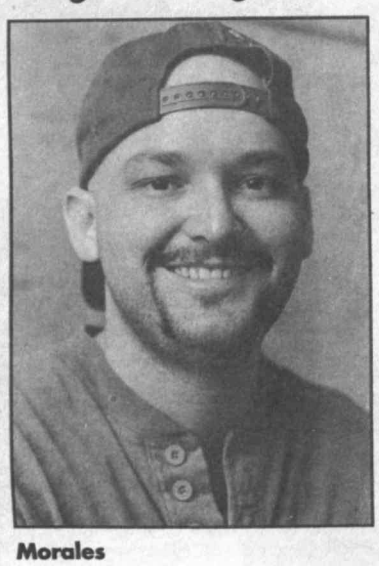

Feder

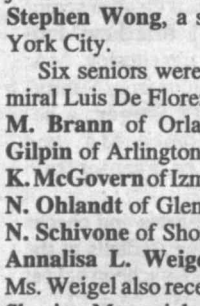

Gauthier


Jasek


Morales

Vikrant V. (call me Vic) Anand, 16, Alexandria, VA; electrical engineering and computer science. "I'd like to start my own company and do entrepreneurial work, probably defense contracting."

1. I am majoring in mechanical engineering. I was originally majoring in electrical engineering, but I switched after the first semester of my junior year.


Anand

2. I will not be graduating with the class of '94. I will graduate one year late, with the class of '95.

3. After graduation, I plan to either get a job or go to graduate school. I will apply to both and then choose the most appealing offer from those I receive.

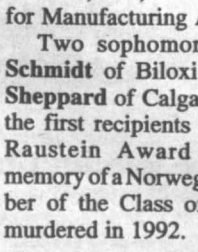
4. I have no clue as to what I will be doing 10 years from now. Defense contracting is definitely *not* something which I am still interested in, especially considering the financial cutbacks being made by the Department of Defense. I would like to own my own company, but I have no idea what that company will do.

5. Advice to the Class of 1998: Enjoy your summer. Life only gets harder from here.

Adam B. Feder, 18, Fort Collins, CO; electrical engineering and computer science. "Hopefully, I'll be running my own company, writing software, doing research, something like that."

1. I was planning on studying computer science and I have. I'm 6A [electrical engineering and computer science intern program] with Hewlett-Packard.

2. No. I'll be working at HP Labs in Bristol, England, this summer and fall, returning here next spring and graduating with my master's in May 1995.


Feder

3. I want to get out of here! I think I will go work in California after I graduate, and I'm still looking forward to starting a software company with my uncle.

4. I have learned that I prefer research to product development, but I would still like to have my own company so that I could direct what we'd be working on.

5. Spend a lot of time in Boston. Go on road trips. Get a UROP and put some effort into it. Don't stress about grades, just be sure to learn and get experience.

6. It's not four years just at MIT. It's also four years in one of *the* cities of the world—take advantage of that.

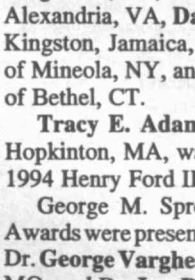
Thane B. Gauthier, 18, Opelousas, LA; computer science or materials science. "I'll be doing research, probably for AT&T, because I have an AT&T scholarship."

1. I'll be graduating with a degree in materials science and engineering. I chose Course 3 because I felt it would give me a good general background, just in case I decided I liked something else better.

2. Yes, I'll be finishing.

3. I'll be attending Stanford University for its MS program in materials science.

4. Yes, this has changed drastically. Ten years from now, I hope to be running a business in collaboration with several friends that I've met while I've been here. I plan to go to business school in the near future. MIT has taught me that research is not what I want to do for the rest of my life. I want to be involved in the fundamental decision-making of a company, hopefully my own. I don't think that I have the personality or desire to do research.


Gauthier

5. Lead a balanced life here. Academics is important and should be your primary emphasis, but there is also a great opportunity to grow as a person. The friendships that I have made here are more important than anything that I've learned in a textbook. Learn to be social, learn to utilize all the resources that are available here… you won't have them forever.

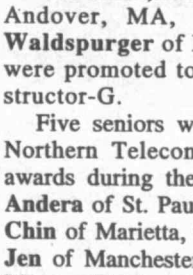
Megan C. Jasek, 18, Hinsdale, IL, computer science. "I'll be working. I hope to be leading something. I'll probably be married."

1. I am a computer science major. I was undecided when I was a freshman, so I have finally made up my mind.

2. I will finish my undergraduate studies this year. I will not get my bachelor's degree until June 1995, for I am in the 6-A [electrical engineering and computer science intern] program. In June 1995 I will receive both my master's and bachelor's degrees in computer science.

3. I will be continuing to study next year. I will be starting my thesis work at my sponsoring company, Delco Electronics in Kokomo, IN. I don't know what I will do after that. I think that I might get my PhD.

4. I will probably… be married… However, I am still unclear about what else I will be doing. I have recently been thinking about getting my PhD and becoming a professor and living in the west. I have further developed my leadership skills through my four-year experience on the MIT crew team and I hope to be using them to advance my career.


Jasek

5. There are two things that one has to learn when she is in college: a) what you like and b) what you are good at. Unfortunately, I have only dipped my toe into both of these pools.

6. This place is intense. I love it here. I would like to stay forever, but people tell me I will eat those words.

Enrique A. Morales, 17, San Juan, PR; aeronautics and astronautics. "I'll be flying a plane… I want to be an airline pilot."

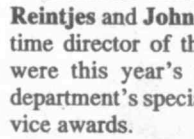
1. My major is still Course 16 [aeronautics and astronautics].

2. Yep! I'm leaving. My whole family and some friends are coming for the commencement ceremony.

3. I'm planning to drive down to Daytona Beach [FL] with some friends and find a house, because I'll be studying at Embry Riddle Aeronautical University. I'll be doing my master's degree in aerodynamics and at the same time getting (or attempting to get) my commercial pilot's license.

4. Most definitely. I think I'll be flying a plane for a major airline, preferably trans-Atlantic or trans-Pacific.

5. You'll have to excuse my lack of originality, but Mark Twain said about a century ago: "Never let university interfere with your education." These words are so true today, and they always will be. My advice would be to follow this faithfully. Have fun, but most of all, organization is the key. Look at every day as if it was the last one, not to depress you but to make you enjoy each and every one of them fully… and don't think how slowly the days are going by; organize yourself and be optimistic, and four years will be a breeze. You will manage good grades while having the experience of a lifetime. Like the T-shirt says, "College is a party with a $100,000 cover charge."


Morales

Compiled by Charles H. Ball and Myles Crowley

Photos by Donna Coveney

Aero & Astro Salutes 19

During the past year, the Department of Aeronautics and Astronautics has made awards to 19 students, several of whom received more than one.

James Means Memorial Awards were given to seniors **Erik M. Kline** of Saratoga, CA, **Sanjay S. Vakil** of Whitby, Ontario, and **Lawrence S. Schwartz** of Pawtucket, RI. Mr. Kline also received the Henry Webb Salisbury Award, and Mr. Schwartz also received an Undergraduate Prize and the John F. McCarthy Jr. Scholarship.

Tony N. Pira, a senior from Peru, IL, was the other recipient of the Henry Webb Salisbury Award.

The other Undergraduate Prizes went to **Christine D. McManus**, a junior from Poulsbo, WA, and **Stephen Wong**, a senior from New York City.

Six seniors were honored by Admiral Luis De Florez Awards: **David M. Brann** of Orlando, FL; **Kevin Gilpin** of Arlington, VA; **Lawrence K. McGovern** of Izmir, Turkey; **Chad N. Ohlandt** of Glen Rock, NJ; **Tara N. Schivone** of Shoreview, MN, and **Annalisa L. Weigel** of Avon, CT. Ms. Weigel also received the David J. Shapiro Memorial Award, and Mr. McGovern also received the General James H. Doolittle Scholarship.

The other David J. Shapiro Memorial Award went to **David M. Spetman**, a junior from Harlan, IA.

Andrew G. Morsa Awards were presented to senior **Kwatsi L. Alibaruho** of Fayetteville, GA, and junior **Keith S. Jackson** of Cambridge.

Amir R. Amir, a graduate student from Klosterneuberg, Austria, received the Unified Engineering Award.

Burton M. Knapp, a junior from Gorham, ME, received the Leaders for Manufacturing Award.

Two sophomores, **Patricia B. Schmidt** of Biloxi, MS, and **Dean Sheppard** of Calgary, Alberta, were the first recipients of the Yngve K. Raustein Award established in memory of a Norwegian student member of the Class of 1994 who was murdered in 1992.

Chemistry Award

Maki Inada, a senior in chemistry from Lexington, MA, has won the Department of Chemistry's Undergraduate Research Award.

EECS Ceremony Acknowledges 35

Professor Paul L. Penfield, head of the Department of Electrical Engineering and Computer Science, presided at the department's annual awards ceremony held in mid-May in the Great Hall at Faneuil Hall Market. Thirty-one students, two alumni and two staff members were honored.

Eric J. Ding, a junior from Cupertino, CA, received the David A. Chanen Writing Prize.

Morris Joseph Levin Memorial Awards were presented to five graduate students: **David L. Harris** of Ridgecrest, CA, **Henry E. Chung** of Alexandria, VA, **Daniel N. Coore** of Kingston, Jamaica, **David A. Lippe** of Mineola, NY, and **Fred M. Basas** of Bethel, CT.

Tracy E. Adams, a senior from Hopkinton, MA, was selected as the 1994 Henry Ford II Scholar.

George M. Sprowls Scholarship Awards were presented to two alumni: Dr. **George Varghese** '93 of St. Louis, MO, and Dr. **Ian D. Horswill** '92 of Cambridge.

Five graduate students received teaching awards named in memory of former faculty members who were known as outstanding teachers. **Kathleen E. Wage** of Hendersonville, TN, received the Harold L. Hazen Award; **Deron K. Jackson** of San Mateo, CA, received the Carlton E. Tucker Award; and **Haralabos C. Papadopoulos** of Thessaloniki, Greece, **Mark G. Duggan** of Lynnfield, MA, and **David R. Shoemaker**, of Killeen, TX, received the Frederick C. Hennie III Awards.

Two others, **Andrew C. Singer** of Andover, MA, and **Carl A. Waldspurger** of Norristown, PA, were promoted to the rank of Instructor-G.

Five seniors were recipients of Northern Telecomm/BNR project awards during the year: **Craig A. Andera** of St. Paul, MN, **Victor E. Chin** of Marietta, GA, **Michelle C. Jen** of Manchester, MO, **Elliott J. Mason III** of Los Angeles and **David S. Warren** of Santa Cruz, CA.

The Ernst A. Guillemin Thesis Prize was presented to David L. Harris (see above). Project Prizes named for Professor Guillemin went to seniors **David S. Lum** of Fayetteville, PA, **Dinhhyuen T. Nguyen** of San Diego and **Jeff B. Reback** of Altamonte Springs, FL.

Seniors **Robert C. Miller** of Merion Station, PA, and **Mika Nystroem** (of physics) of Stockholm, Sweden, received George C. Newton Undergraduate Laboratory Prizes.

Robert M. Fano Undergraduate Research Awards went to seniors **Hee Yun Kim** of Elmhurst, NY, and **Daphne Y. Shih** of Flushing, NY.

Daniel M. Albro, a senior of Cary, NC, received the William A. Martin Memorial Project Prize, and **Jan-Willem Maessen**, a graduate student from Morris Plains, NJ, received the William A. Martin Memorial Thesis Prize.

The David Adler Memorial Thesis Prize was presented to **Gabrielle M. Owen**, a graduate student from Shaker Heights, OH, while seniors **David R. Bacher** of Bloomington, IN, and **Douglas H. Muir** of Chatsworth, CA, received the Charles and Jennifer Johnson Thesis Prize.

Professor Emeritus **J. Francis Reintjes** and **John A. Tucker**, longtime director of the VI-A program, were this year's recipients of the department's special meritorious service awards.

Lisa Bella, EECS

Classified Ads

Tech Talk ads are intended for personal and private transactions between members of the MIT community and are not available for commercial use. The Tech Talk staff reserves the right to edit ads and to reject those it deems inappropriate.

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All extensions listed below are campus numbers unless otherwise specified, i.e., Dorm, Lincoln, Draper, etc.

MIT-owned equipment may be disposed of through the Property Office.

Deadline is noon Friday before publication.

■ FOR SALE

Full sz. oak platform bed & mattress; 3-drawer bureau, mirror, $150. Call 508-448-9404.

Moving sale: baby stroller, Graco Brougham, $30; snowblower, Snapper gas model, Auger propelled, $100; photographic enlarger, Axomat II, $20. Call x3-7128 or 862-2868.

Futon bed & collapsible frame from Heartwood, 6" foam-core, F-sz futon w/attractive new cover, unfinished pine frame folds up for easy storage, barely used, $125. Stephen x3-7636

White Glennwood Cuisine III gas range, door w/ window, broiler, 8 yrs old, askg $250 or bst. Dave, 508-635-0878.

Mini gym, leather covered slant board based pulley system, askg $60. Call x3-2960.

Brand new boxed set of Encyclopedia Britannica, 1/3 off. Call 489-1386 eves.

Moving sale, must go, heavy-duty super capacity washing machine, like new, Whirlpool, 9 cycles, 2 speed. Call x8-5169 or 387-1451.

Vintage 1920s antique cupboard w/silver drawer, $175, profits benefit scholarships, call MIT Furniture Exchange x3-4293.

Mt. bikes, exc cond: 1990 Trek 7000 20" alum frame Deore LX components, $400; 1994 Jamis Eureka 17", Tange strut shox, ridden 4x, $600; 2 other bikes, pls call. Kim, Draper x8-2418 or 354-4935.

Single rowing shell, $900. Mike x3-7959.

Panasonic 24-pin printer w/color kit, $110; Sega System w/games, $25. Stephen x3-2720.

Apple modem 300/1200 (ext), $10; Springboard Pub II, $15; Thunderscan for ImageWriter, $20; Powerbook 80MB int hd disk, $50; Toshiba 1000 packg $140. Call x3-2402 or <rkg@mit.edu>.

■ VEHICLES

1976 Honda CB550F Supersport, 15K mi, looks & runs exc, orange, 4 into 1, new tank, $1750. Phil, Draper x8-4442.

1983 Toyota Tercel SR5 wagon, 4WD, a/c, 5-sp, ski rack, 4 spkrs, cargo cover, hi mileage, little rust, nvr in accident, new clutch, brks, batt, may nd transm work, grt in snow, $1500 or bst. Ginny x3-9317 or 508-263-8332.

1987 Ford Aerostar V6, a/c, cruise, 5-sp std, 86K, exc cond, $3650. John x3-0831 or 508-683-0825.

■ HOUSING

Berkshires/Lee, MA: Enjoy wk of 7/29 - 8/5 at beautiful Oak 'n' Spruce Resort, fully furn 1BR condo, all amenities, nr Stockbridge, wk of Tanglewood on Parade, $750. John x3-4121 or 273-2092.

Cape Cod: So. Yarmouth, summer rental, new contemp house, 3BR, 2b, elegant, priv pool, lrg deck overlooking water, all glass vw of water from every room, $800/wkly. Call 617-449-9249.

Cape Cod: So. Yarmouth, 3-season rental, 3BR yr-rd home, quiet, furn, cable TV/VCR, w/d, microwv, patio, priv fenced yd, short walk to beaches, etc, no pets. Nancy x3-1096 or 617-933-6741.

Maine: lakefront 2BR modern log cabin avail for wkly summer rental, slps 5 comfortably, dock & canoe, laundry facilities avail, $600/wk. Mark x3-4488 or <magmd@mitvma.mit.edu>.

Maine: Moosehead Lake, Greenville, beaut vws from deck, glass sliders, hot water, heat, woodstove, microwave, gas grill, hammock, slps 6, $350/wk. Call Linc x4167 or 617-665-3524.

Malden: avail 6/1, lrg 1BR apt, 3rd fl of Vict house w/ sep entrance, e-i-k, d/w, gas stove, lrg LR, laundry in bsmt, nice nbrhd, nr market, T, $735/mo, ht/ utils inc. Anne x3-0510 or <lavin@mit.edu>.

Mt. Washington Valley: 4BR lakeside cottage w/ sandy beach, slps 8, nicely furn, w/w, appliances, rowboat, avail wk of 7/2, $750/wk. Linc x5431, <efn@wells.haystack.edu> or 508-779-6473.

Somerville: 1BR, furn, carpets, w/d, only 5 min to Porter Sq T station (Red Line), June-Aug, $625, all utils incl. Call 623-0591.

Somerville: Union Sq, lrg 5-rm+ apt on quiet st, convenient location, nr shopping, direct bus to Kendall Sq & Hvd Sq, $750/mo+. Call x3-6862 or 508-650-0535 eves.

Stoneham: condo for sale, exc location, off Montvale Ave, 1BR, 523 s.f., incl w/d, disposal, d/w, fridge, self-cl oven, a/c, ceiling fan, low maint fee ($75), nw water htr, brick bldg. Linda 617-438-9695.

Winchester: v lrg beaut studio apt in new home, quiet st, sep entrance, deck, prkg, a/c, ht/hw, avail now, no pets, $650/mo. Kim x8-7372 or 729-4591.

West Newton: townhouse condo w/style, 10 yrs young, 2BR, natural hdwd flrs throughout, huge yd w/garden, 1-car gar, easy commute & train, $195,000. Call 527-1466.

■ WANTED

Wanted: 3BR, 2b house in Newton (Cabot or Underwood School district) for 9/1/94 - 8/15/95. Call 332-1392.

Visiting prof & wife sk furn house/apt from mid-August to end of Sept. Emily Baehr x3-9475 or <efbaehr@athena.mit.edu>.

House- and cat-sitter wanted 7/25 - 8/25, Lincoln, walk to stores & commuter rail. Call 259-0379.

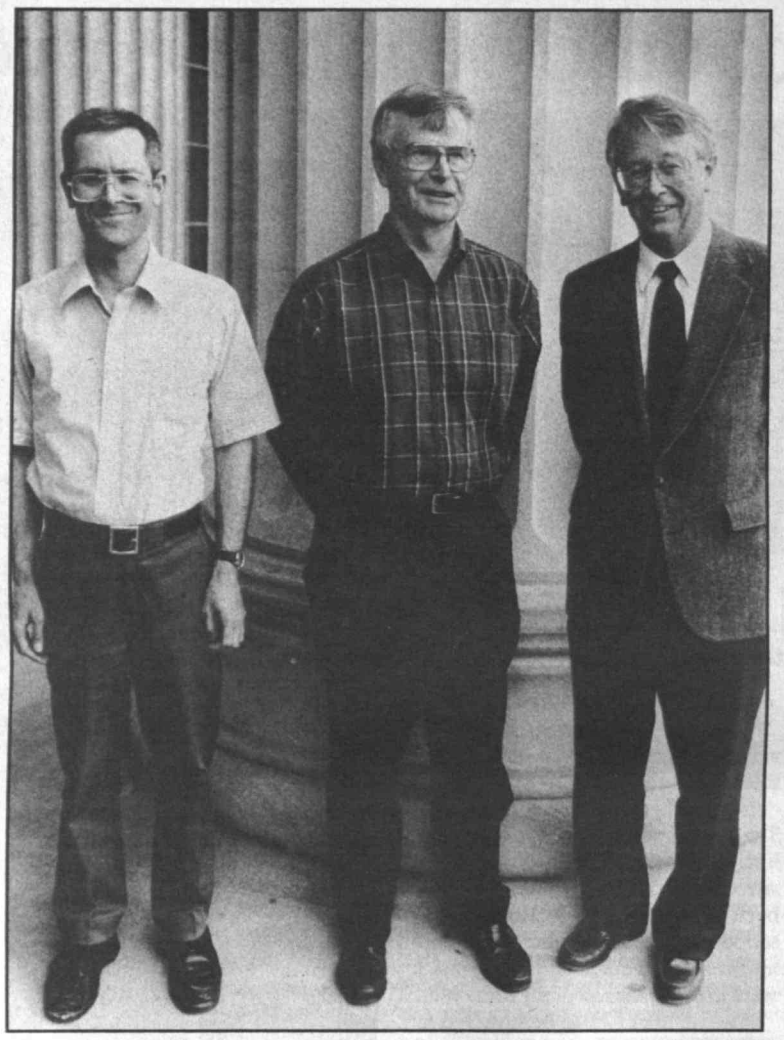
Wanted: nice apt for one, longtime staff member (gentleman, smoke- & pet-free) wishes to move in August or Sept to north or west suburb w/rail or bus svc. Please call x8-6763.

Apt wanted to sublet for summer in Boston vicinity, M, 46, exc ref, college grad BSCE. Wayne 603-926-9315.

Rollerblades, used okay, W's, to fit sz 8.5 foot. Kate x3-2866 or <rubink@mit.edu> or 666-5739.

■ MISCELLANEOUS

Need to convert six videotapes (3h long each) from European (PAL/SECAM) to U.S. (NTSC). Have the equipment to help? Pref by end of June. Yiannis x3-0993 or 623-5612.



APPRECIATED BY STUDENTS—The James N. Murphy award was given to Gary J. King, administrative assistant in economics, Frederick D. Wilson, research specialist in materials science and engineering, and Trond H. Kaalstad, senior administrative officer in civil and environmental engineering. **Photos by Donna Coveney**

Institute Honors Fifty At Awards Convocation

(continued from page 5)

end in April and had 12 of its members participate in the alumni-student telethon.

■ **Jacob J. Seid**, a sophomore in electrical science and engineering from Mission Viejo, CA, won the Irwin Sizer Award for the Most Significant Improvement to MIT Education. As a freshman he helped establish five minor programs in the School of Engineering.

■ Graduate Student Council Teaching Awards were presented to five faculty members. Assistant Professor **Moungi G. Bawendi** of chemistry, lecturer **Fernando P. Domeyko** of architecture and planning, Professor **Charles F. Sabel** of humanities, Professor **Robert S. Pindyck** of management, and Associate Professor **John H. Leinhard** of mechanical engineering.

This year for the first time, the GSC also recognized graduate student teaching assistants and instructors. Award recipients were **Zuhair Kahn** of management, **Barbara A. Masi** of science, technology and society, **Judith B. Cardell** of electrical engineering and computer science, and **Matthew D. Trevithick** of EECS.

■ **Ying Ying Lee**, administrative assistant in residence and campus activities, received the Edward L. Horton Fellowship Award, given by the GSC to a person or organization that fosters fellowship within the graduate student community. Ms. Lee "has done much over the years to provide support and leadership to countless projects and events, all of which brought graduate students together, promoted community and enhanced fellowship," Caryl Brown of the GSC said.

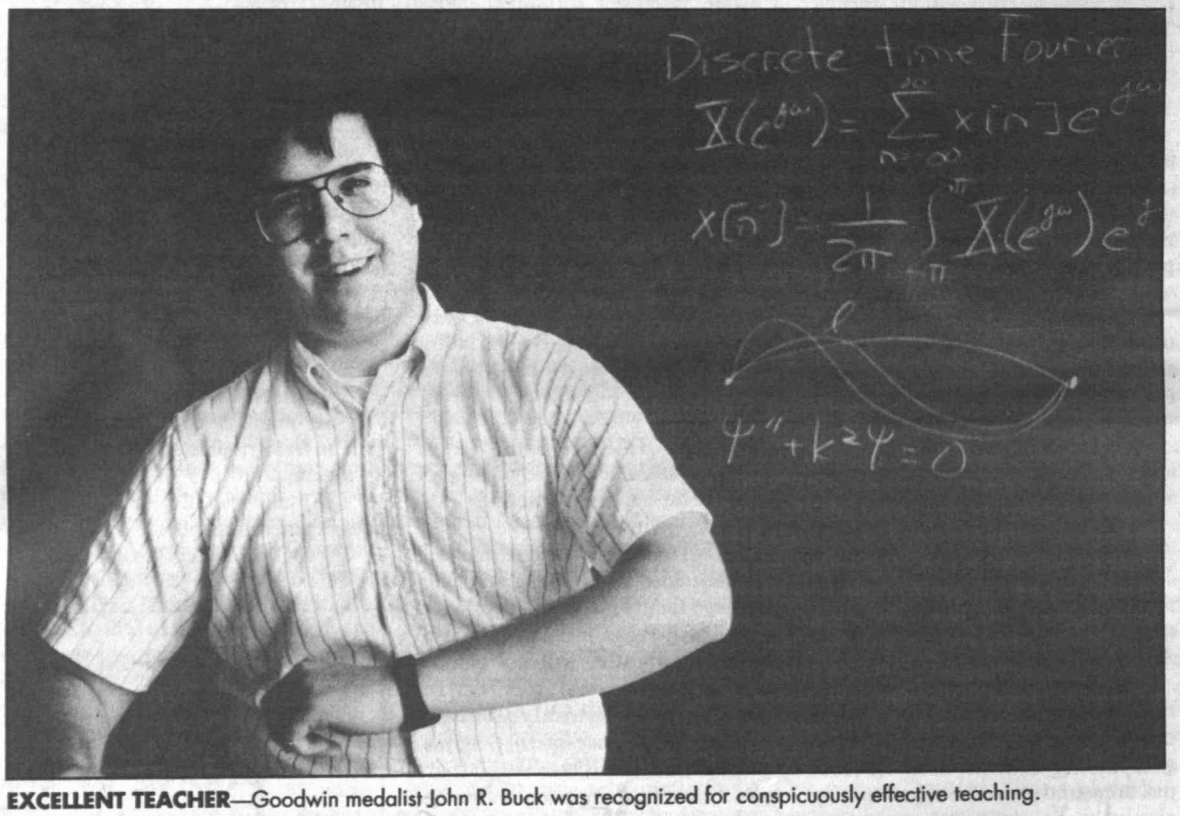
■ **Alan V. Oppenheim**, Distinguished Professor of Electrical Engineering, and Dr. **Michael C. Mohr**, senior lecturer in chemical engineering, received the Everett Moore Baker Memorial Award for Excellence in Undergraduate Teaching.

Professor Oppenheim was praised for his hard work and enthusiasm in putting together the new 6.011 course and for getting to know his students. Of Dr. Mohr, one nominating student wrote, "His classes have been a motivating force in my chemical engineering education."

■ The Association of MIT Alumnae Award, given to a senior woman who has demonstrated academic excellence in coursework and professional activities, was presented to **Tracy E. Adams**, a senior in electrical science and engineering from Hopkinton, MA. She maintained a top grade point average while developing materials and exercises for a course on semiconductors, lecturing a freshman seminar, participating in crew for all four years and serving in the Air Force ROTC.

■ The Goodwin Medal was awarded to **John R. Buck** of Somerville, a graduate student in the Department of Electrical Engineering and Computer Science. It is given to a graduate student in recognition of conspicuously effective teaching. Frank E. Perkins, dean of the graduate school, noted that Mr. Buck was selected ahead of faculty members to be a lecturer for a core graduate subject. "He has established himself as a creative, empathetic, demanding and inspirational teacher, demonstrating unusual sensitivity to the needs of his students and a remarkable attention to preparation," Professor Perkins said.

■ **Christopher A. Adler**, a senior in mathematics and music from Falls Church, VA, was awarded the Louis Sudler Prize in the Arts, given to a senior who has demonstrated excellence in music, theater, painting, sculpture, design, architecture or film. Mr. Adler was called "one of the most musically gifted individuals I have ever encountered" by Assistant Professor of Music Evan Ziporyn. Although the music section rarely allows compositions as senior theses, Mr. Adler's was a song cycle for soprano and piano.



EXCELLENT TEACHER—Goodwin medalist John R. Buck was recognized for conspicuously effective teaching.

WRITE STUFF

Nineteen Produce Winning Words

At a ceremony on May 6, the Program in Writing and Humanistic Studies recognized outstanding writing by 19 students:

Ivana Komarcevic, a sophomore in mathematics from Belgrade, Yugoslavia, received the Boit Manuscript Prize for drama for *Pogledaj Dom Svoj Andjele (Zero Eleven)*. **William Gump**, a senior in physics from Richmond, KY, was runner up and **Eugene Schuster**, a senior in biology from El Paso, TX, received honorable mention.

The Boit Manuscript Prize for fiction was presented to **Cecilia M. Oh**, a senior in writing and humanistic studies from Flushing, NY, for *Marriage to the Japanese Soldiers.*

A poem, *The End of Green Valley Drive*, was picked as winner of the Boit Manuscript Prize for poetry. It was written by **Wayne Pitcher**, a junior in chemistry from San Mateo, CA.

Robert A. Boit Prizes were awarded for essays, poetry and short stories.

The first prize for an essay was given to **Tallessyn Z. Grenfell**, a sophomore in biology from Niantic, CT, for "Pathways." **Shane P.B. Crotty**, a sophomore in biology and writing from Quartz Hill, CA, won second prize; **Venkatesh L. Murthy**, a sophomore in biology from Scarsdale, NY, third, and **Ovidiu Marina**, a sophomore in brain and cognitive science from Winchester, honorable mention.

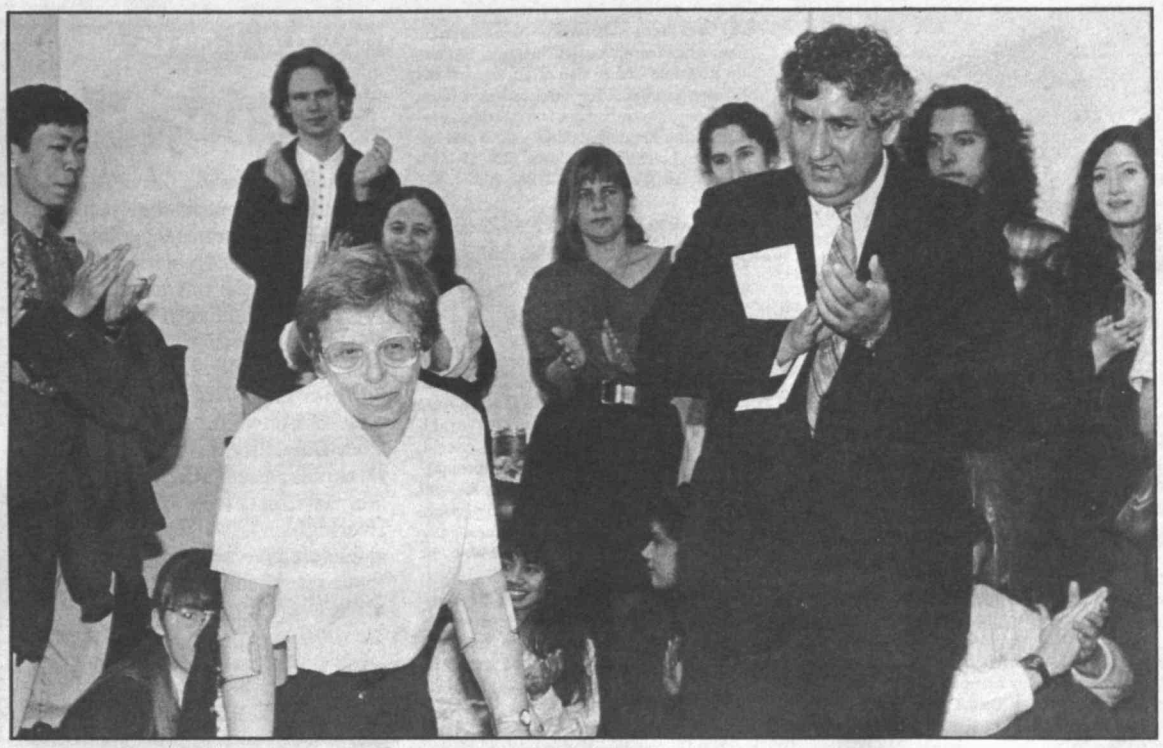
Doris Lee, a senior in materials science and engineering from Gaithersburg, MD, won first prize in poetry for *Biography*. Second prize went to **Todd O. Dampier**, a senior in electrical engineering and computer science from Burke, VA.

The short story, *Gedankenenesperiment*, by **Hilary S. Bromberg**, a senior in brain and cognitive sciences from Ambler, PA, was the first place winner in that category. **Joseph W. Wezorek**, a senior in mathematics from West Mifflin, PA, won second prize; **Yulan Liao**, a sophomore in chemical engineering from San Francisco, third, and **Todd Boutin**, a sophomore in writing and humanistic studies, honorable mention.

Also presented were the DeWitt Wallace Prizes for Science Writing for the Public.

Tobias Ayre, a sophomore in physics from Burlington, VT, received first prize for "Dark Drumsticks and Fast Twitch Fish"; **Joshua N. Winn**, a senior in physics from Deerfield, IL, won second, and **John W. Lin**, a senior in electrical engineering and computer science from Maple Glen, PA, honorable mention.

Honorable mention in the Ellen King Prize for Freshman Writing was awarded to **Lillian T. Chong** of McLean, VA, for her poetry, *Collage*.



APPLAUSE FOR A WRITER—Ilona Karmel receives applause at this year's Writing Prize Competition ceremony as HASS Dean Philip S. Khoury presents her with the Dean's Award for Distinguished Service. **Photo by Nicholas Altenbernd**

Ilona Karmel Wins Special Award

Ilona Karmel, senior lecturer in the Program in Writing and Humanistic Studies, has received unusual and special recognition for her "extraordinary contribution to humanities education at MIT" in the form of a Dean's Award for Distinguished Service.

Dean Philip S. Khoury of the School of Humanities and Social Science presented the award on May 6 at the annual Writing Prize Competition ceremony, at which MIT students receive prizes for outstanding writing.

Noting that the Dean's Award for Distinguished Service "is given only on very rare and special occasions," Dean Khoury said that Ms. Karmel "has been a model of excellence in teaching: dedicated and inspiring, generous and fair, liked and admired by both students and colleagues."

In his remarks, Dean Khoury said that the presence of Ms. Karmel, a critically acclaimed novelist who has taught writing at MIT for 15 years, has made an "enormous difference" to fiction-writing students at MIT.

"The fact that for many years she has shouldered the main responsibility for organizing the Writing Prizes competition obviously illustrates one component of her extraordinary success as a teacher," he said.

He continued: "She is unstintingly generous with her time, as anyone can tell who has seen how long her office hours are... Less obviously, her work with the Writing Prizes shows several of her other strengths—her high standards, her unfailing ability to see what is best and most promising in a student's work, her commitment to encouraging the development of latent (and not so latent) talent.

"Her classes ...are full of electricity and dynamism. Her students build lasting friendships not only with her, but with each other. She has been the director of numerous writing theses ...and her many students can tell you better than I can how much they rely on her insight, strength, and discipline. Perhaps the greatest testimonial is that many of her former students keep on writing, and showing their writing."

Two of Ms. Karmel's literary works, the novels *Stephania* and *An Estate of Memory*, have been translated into several languages, including Chinese, and have been the subject of learned disquisitions at the Modern Language Association annual meeting, Dean Khoury said.

Engineering Salutes 5

Five professors in the School of Engineering have won year-end awards for [illegible] teaching, Dean Joel Moses has announced.

The 1993-94 winners of the Ruth and Joel Spira Awards for Teaching Excellence are Dr. **Elias P. Gyftopoulos**, Ford Professor of Engineering and professor of nuclear and mechanical engineering; Dr. **Anthony T. Patera**, professor of mechanical engineering, and Dr. **Martin A. Schmidt**, associate professor of electrical engineering.

The $1,000 awards were established by Mr. and Mrs. Spira three years ago. Their daughter, Dr. Susan Hakkarainen, and son-in-law, Dr. S. P. Hakkarainen, received PhDs in nuclear engineering from MIT. Mr. Spira is founder and chairman of LUTRON Electronics Company, Inc., of Coopersburg, PA.

The winner of the 1993-94 Bose Award for Excellence in Teaching is Dr. **Michael F. Rubner**, TDK Professor of Materials Science and Engineering.

The $5,000 award was established in 1989 by the School to recognize outstanding contributions to undergraduate education by members of its faculty. It was made possible by a gift from the Bose Corporation and the Bose Foundation, and is a tribute to Dr. Amar Bose, professor of electrical engineering and computer science and founder of the Bose Corporation.

The first winner of the Samuel M. Seegal Prize is Dr. **Charles C. Ladd**, professor of civil and environmental engineering. The $1,000 award, established by Paula Seegal-Thompson and her family in honor of their father, Class of 1922, goes to a faculty member in the Department of Civil and Environmental Engineering or in the Sloan School of Management "who, more than any other, inspired students in pursuing and achieving excellence."

UROP Cites Five

Four undergraduates were selected to receive Peter J. Eloranta Summer Undergraduate Research Fellowships. Winners are:

Oded Asherie, an undeclared sophomore from Larchmont, NY, who will undertake a "Study in Late Medieval and Renaissance Venetian Historiography."

Hilary Bromberg, a senior in brain and cognitive sciences from Ambler, PA, whose project is entitled "Language Without Thought? An Investigation of Williams Syndrome."

Amy Gorin, a senior, who will design a wheelchair flight simulator.

Alexandru Rotaru, a senior in physics from Bucharest, Romania, who will make a film he plans to call *Morning*.

The Fellowships are intended to encourage creativity and stimulate involvement in a broader range of intellectual activity than is normally possible during the term. The winners were selected from 37 submissions.

In addition, **Thuchien Thi Nguyen**, a senior in biology from San Diego, is the winner of this year's Randolph G. Wei UROP Award given to the undergraduate who has made the most outstanding contribution in undergraduate research at the interface of the life sciences and engineering. Her work concerned the kenetics and regulation of homoserine kinase.

Course I Cites Four

The Department of Civil and Environmental Engineering has recognized the work of four students as particularly praiseworthy this year. They are:

Seniors **Michael M. Collins** of Southampton, NY, and **Paul M. Moody** of Bel Air, MD, who received Richard Lee Russell Awards for outstanding academic achievements by students who will begin graduate study in civil and environmental engineering.

Roderick B. Diaz, a junior from Pomona, CA, who received the Leo '24 and Mary Grossman award for academic achievement and a strong interest in transportation.

Eric R. Martin, a senior from Toronto, Ontario, who received the Steinberg Prize recognizing acadmic achievement and a demonstrated interest in construction management.

Phi Beta Kappa Elects Forty

Forty seniors were elected to MIT's Xi Chapter of Phi Beta Kappa. The initiation ceremony will be held Thursday, May 26. The students are:

Tracy E. Adams of Hopkinton (biology, electrical engineering and computer science); Christopher A. Adler of Falls Church, VA (humanities and mathematics); Javier M. Apfeld of Buenos Aires (biology); Carmen M. Barnes of Mexico City (chemistry); Bradley J. Begle of Ferdinand, IN (materials science and engineering); Gregory Y. Chin of Troy, MI (biology).

John H. K. Chiu of New York City (biology); Jan-Hein N. Cremers of Boxmeer, The Netherlands (physics); James S. Derksen of Edinburg, TX (mechanical engineering); Ann A. Esin of Des Plaines, IL (mathematics); Alan E. Freedman of Wantagh, NY (EECS); Melonie A. Hall of Avondale, AZ (mathematics).

Yuk Ho of Hong Kong (EECS); Elliot E. Hui of Arcadia, CA (physics and EECS); Mario A. Jiminez Garate of Sinaloa, Mexico (physics); Devang V. Kantesaria of Windsor, CT (biology); Andrew R. Kirmse of Vienna, VA (mathematics and EECS); Richard R. Lester of Monroeville, PA (physics).

Gregory M. Lubiniecki of Reston, VA (biology); Colin B. McKee of Lancaster, PA (economics); Christopher R. Mindas of Westfield, NJ (physics).

Agha I. Mirza of Karachi (EECS); Ari M. Mizel of Potomac, MD (physics); Kamal P. Nigam of Pennington, NJ (brain and cognitive sciences and mathematics); Karen J. Nutt of Cambridge (civil and environmental engineering); Hana Ohkawa of La Jolla, CA (physics); Tony N. Pira of Peru, IL (nuclear engineering).

Jonathan D. Rosenberg of Woodbury, NY (EECS); Brian M. Scassellati of Bethlehem, PA (brain and cognitive sciences and EECS); Davey Q. Shih of Orange, CA (biology).

David L. Sisson of Corvallis, OR (physics); Stephen C. Stroupe of Libertyville, IL (biology); Marcin O. Szummer of Kiruna, Sweden (mathematics and EECS); Kent R. Thurber of Derwood, MD (physics); Mark B. Tsimelzon of Arlington, MA (mathematics); Craig C. Wiegert of San Ramon, CA (physics).

Joshua N. Winn of Deerfield, IL (physics); Daniel Wolfenzon of San Isidro, Peru (economics and mechanical engineering); Wai Thong Wong of Singapore (biology and chemical engineering); Byungdoo A. Yi, Milwaukee, WI (biology).

Technology & Policy Honors 8

Eight graduate students have been honored by the Technology and Policy Program:

Donald F. Cooke Awards for public service were presented to **Andrew J. Green** of Nepean, Ontario, who also won an Alumni Award, and to **Edmond L. Toy** of Casper, WY, who also received the Bernard Rabinowitz Fellowship.

The Marvin and Joanne Grossman Award was won by **Jonathan I. Kleinman** of Beachwood, OH, who also received an Alumni Award.

Other Alumni Awards in recognition of excellence and leadership were given to **James F. Ellison** of Brunswick, GA, and **Ulrich Knirsh** of Leopoldshafan, Germany.

Judith B. Cardell of Binghamton, NY, received the Alfred Keil Fellowship.

Prizes for the best thesis on technology and policy in 1993 went to **James Melhuish** of Cambridge and **Jim A. Rymarcsuk** of Washington, DC.

Buta Wins First Noyce Prize

Sarah H. Buta, a senior in materials science from Salem, OH, is the first recipient of the Noyce Prize, a $10,000 award established by the Noyce Foundation and the Council on Primary and Secondary Education to recognize a graduating MIT student who has demonstrated academic excellence in science, mathematics or engineering, and who has demonstrated both aptitude for teaching and commitment to serving the community.

Ms. Buta stood out among her classmates in the MIT/Wellesley Teacher Preparation Program. "Her work with students at the Cambridge Rindge and Latin High School earned Sally the respect and admiration of both the teachers and the students there," the Noyce Prize Nominating Committee said. "She has just that combination of qualities that contribute to becoming a really outstanding teacher."

After graduation, Ms. Buta will intern in the education department at the National Aerospace Museum in Washington. In the fall, she will enter the Wellesley "fifth year" program to complete the Massachusetts Certification requirements to teach science and math at the high school level.

Institute Calendar

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

May 25 - June 5

■ SPECIAL INTEREST

Lecture by John Deutch, Deputy Secretary of Defense—May 26:** Sponsored by the MIT Media Lab, 3pm, Bartos Theater, Wiesner Building. More info: Dianne Tavitian, x3-0338.

■ SEMINARS & LECTURES

WEDNESDAY, MAY 25

Transient Tracers in the Antarctic Deep Outflow Experiment*—Dr. Tom Haine, MIT. Oceanography Sack Lunch Seminar, 12:10pm, Rm 54-915. More info: x3-0251.

Heavy Meson Electromagnetic Splittings and Light Quark Masses*—Dr. Raman Sundrum, Harvard Univ. Joint Theoretical Physics Seminar, LNS, 4:30pm, CTP Seminar Rm, Bldg 6, 3rd floor.

THURSDAY, MAY 26

Lecture by John Deutch, Deputy Secretary of Defense**—See Special Interest, above.

FRIDAY, MAY 27

Frame Relay—H.K. Pathak, AT&T Bell Labs.** Distinguished Lecture Series sponsored by CAES presented via PictureTel. Interactive lecture w/audiences from several locations participating. Space limited to 20 participants, call x3-3783 if you wish to attend. 12-1:30pm, Rm 9-253.

Simultaneous Measurements of $(\bar{p},\bar{p}')$ and $(\bar{p},\bar{p}'\gamma)$ Observables for the 15.11 MeV, 1+, T=1 State in ^{12}C at 200 MeV*—Dr. Steven Wells, Indiana Univ. Bates Friday Seminar, 12:30pm, Bates Library.

THURSDAY, JUNE 2

The Relevance of Space for the 21st Century: Key to Survival on Earth*—Dr. Peter Glaser, V.P., Arthur D. Little. Sponsored by NSS/SEDS, 7:30pm, Bldg NE43, 8th floor playroom. More info: x3-2988.

■ COMMUNITY INTEREST

African American Parenting**—Dates and time to be scheduled. Continuing discussion series, begun in spring 1993, on the special challenges faced by African American families. New members welcome. Cosponsored by the Family Resource Center and the MIT Medical Dept. More info/preregistration: x3-4911.

Alcoholics Anonymous (AA)*—Meetings every Tues, 12-1pm; Thurs, 12-1pm, Rm E23-364. For info: Alise, x3-4911.

Women's 12-Step AA*—Meetings every Monday evening, 5:30-7pm, Rm E23-364. More info: Alise, x3-4911.

Al-Anon*—Meetings every Fri, noon-1pm, Health Education Conference Rm E23-297; every Tues, noon-1pm, Rm 66-056; and every Mon, 12-1pm, Lincoln Lab Bldg 1218, Family Support Ctr. The only requirement for membership is that there be a problem of alcoholism in a relative or friend. Call Alise, x3-4911.

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

Alexander Technique*—Tuesdays 5:30-6:30pm, Private Dining Rooms 1 & 2, Student Center. Sponsored by the MIT Women's League. More info: Lisa First 661-8079.

Cancer Support Group**—Meetings every Thursday, 12-2pm, Bldg E51. For those with acute and chronic forms of cancer. Sponsored by the MIT Medical Dept. For information about weekly luncheon meeting, call Dawn Metcalf, Social Work Service, x3-4911.

Co-Dependents Anonymous (CoDA)*—Meetings every Thurs, 6:30-8pm, Rm 66-168. Info: Alise, x3-4911.

Eastgate and Westgate Programs**—To obtain a list of programs sponsored by the Family Resource Center at Eastgate and Westgate, call x3-1592.

Family Resource Center**—In addition to Parenting Workshops and Programs, the Family Resource Center also offers support and training programs for child care providers, workshops at your request, and individual consultations concerning parenting, child care options, and work/family issues. Call x3-1592. Lincoln Lab families can call 981-7028.

The Furniture Exchange at MIT**—Great buys throughout the store. A service project of the MIT Women's League. Regular hours: Tues/Thu, 10am-4pm. Bldg WW15, 350 Brookline St. Call x3-4293.

Gay, Bisexual, and Lesbian Employees and Supporters (GABLES) at MIT**—Come to discuss and work on issues ranging from domestic partner policies to gays in the military. Take part in varied cultural, educational, and social activities. For info on upcoming events, call x2-1014. To sign up for the staff lesbigay e-mail lists, send e-mail to <gables-request@athena.mit.edu>. If you have questions about GABLES, call Stephen, x3-6736.

Graduate Student/Postdoc Parenting Discussion Group**—Ongoing meetings weekly on Thursdays, 11am-12pm. New members welcome. No fee. Discussion of special issues for graduate students and postdocs who are parents. Cosponsored by the Family Resource Center and the MIT Medical Dept. More info/preregistration: x3-2916.

Guide for Foreign National Spouses Seeking Work**—Guides provide information on topics such as American resumes, job interviews, volunteer work, employment agencies, salary negotiation, visa issues, much more. Free information booklets available in Rm 5-106 (International Students Office), Rm 4-105 (International Scholars Office), and Rm 20A-023 (Office of Special Community Services). Reference binders may be used in Rm 12-170 (Office of Career Services); ask for Cathy Taylor.

Hosts to International Students Program*—Each year many international students arrive at MIT to study. Far from family, friends and familiar ways, they face a challenging transition. Through the MIT host program one can offer assistance, encouragement and occasional hospitality to our students from around the world. This is not a home-stay program but rather one planned to promote friendship among people from different cultures. Faculty, staff and alumni/ae (singles, couples or families) are particularly encouraged to participate in this most rewarding volunteer opportunity. If you are interested, please call Kate Baty x3-4862.

Infant-Toddler Child Care Briefing—May 31:** Introductory discussion for expectant parents and those new to parenting or child care, covering types of care, costs, finding and evaluating care, and parental leave. Preregistration required, call x3-1592. Led by Kathy Simons, Administrator, MIT Child Care Resource and Referral Programs. 12-1pm, Rm 4-144.

Informal Embroidery Group**—MIT Women's League, 10:30am-1:30pm. Upcoming date: **June 1.** Meets in the Emma Rogers Room 10-340. Info: x3-3656.

Job Search Support Group**—A self-help group for spouses of foreign nationals who are looking for paid or volunteer work. Sponsored by the MIT Wives' Group. More info: Christine 720-2494 or Miho 661-7691.

Narcotics Anonymous*—Meetings at MIT, every Mon, 1-2pm, Rm E23-364 (MIT Medical Dept). Call 569-0021.

Overeaters Anonymous (OA)*—Meets Thursday, 1-2pm, Rm E23-364. More info: x3-4911.

New Overeaters Anonymous (OA)*—Meets every Friday, 12-1pm, Rm E23-364, except June 3, Aug 5, Oct 7 and Dec 2. Info: Alise, x3-4911.

Parenting Children with Special Needs**—Dates and time to be scheduled. Participant-led group for those with children of all ages who have special needs. Sponsored by the Family Resource Center. More info: Mary Hess 617-484-5040 or <hessma@bcvms.bc.edu>.

Playgroups**—The MIT Wives Group, with the cosponsorship of the MIT Family Resource Center, sponsors and provides ongoing support for establishing and maintaining informal parent-child playgroups. Contact Wives Group, Rm E23-376, x3-1614.

Single Parents Discussion Group**—Dates and time to be scheduled, group currently being organized. Sponsored by the Family Resource Center and the Medical Dept. More info: Marcia Yousik, x3-2916.

Tai Chi*—Ancient Chinese art, exercise, stress reduction, anti-aging, no age requirement, MIT affiliation not required, Student Center, West Lounge, meets Wednesdays 5-6pm. More info: x3-4724. Sponsored by the MIT Women's League.

MIT Toastmasters**—Upcoming meeting: **June 10.** An organization that helps people improve and practice their public speaking skills. 12:05-1:30pm, Rm E19-220. Sponsored by MIT Personnel Office.

Weight Watchers**—New 8-week session begins May 25. Meets Tuesdays, 12-1pm, Rm 8-219. More info: Leslie Torrance, x3-4965.

Working Parents Group**—Ongoing meetings weekly on Tuesdays, 12:30-1:30pm. Led by Jackie Buck, Social Worker, MIT Medical Department. Cosponsored by the Family Resource Center and the MIT Medical Dept. New members welcome, no fee, preregistration required, call x3-4911.

Yoga*—Mondays, beginners, 5:15-6:30pm, Rm W31-2. Sponsored by the Women's League. More info: Ei Turchunetz 862-2613.

■ HEALTH EDUCATION

Nursing Mothers' Support Group**—Third Wednesday of each month, 11am-12pm, Rm E23-297. No fee. No registration. Call x3-2466 for details. Sponsored by the Medical Dept. and the Family Resource Center.

Childbirth Preparation**—Early Pregnancy, Lamaze Childbirth Preparation, and Lamaze Review classes are offered to patients of the MIT Medical Department's Obstetrics Service. Call x3-1316 for details.

Tape Time for Health**—A free video loan program. Topics include birth, parenting, baby care, smoking cessation, etc. Visit the Health Resources Center to borrow a tape or call x3-1316 for a list of titles available.

■ MITAC

Location: Room 20A-023, 18 Vassar St, Cambridge - 9:30am to 3:30pm, Monday, Wednesday, Thursday, & Friday. Room LIN-A-218, Lincoln Labs, Lexington - 1:15pm to 4pm; Thursday & Friday. MITAC is closed Tuesday and all Institute Holidays. Call x3-7990 or e-mail <byg@mit.edu> for futher information.

Discount Movie Tickets: Loews Cinemas $4.75 ($4.25 plus 50¢ service charge), Showcase Cinemas $4.75 ($4.25 plus 50¢ service charge), General Cinemas $5.00 ($4.50 plus 50¢ service charge).

Aquarium Discount Tickets: $5.50 (for ages 11 and over, valid through May 1995, reg. $8.50).

Boston Today Discount Book: $1.10 (reg. $6) includes two for one coupon from: Bay State Cruise Co, Parmizzano's (dinner), Dockside, more. Valid through October 1994.

■ SOCIAL ACTIVITIES

Chinese Lunch Table. Meets every Tuesday, 12-2pm, Student Center, Rm 439. Bring your own lunch and come practice speaking Chinese. All levels welcome. Sponsored by the Chinese Students Club.

Esperanto Conversation Group. Meets Mondays 7:30-9pm in the SCC Coffeeshop in the Student Center. Sponsored by the MIT Societo por Esperanto. More info: <speak@athena.mit.edu>.

Japanese Lunch Table. Meets Thursdays 12:30-2:30pm in Rms 407 and 491 in the Student Center. Bring a lunch. The MIT Japanese Wives' Group is eager to welcome all who wish to come and talk—either in English or Japanese. Make new Japanese friends, and learn about Japanese culture and osotraditions. Free babysitting provided. Call x3-2839.

■ MOVIES

Admission to below Lecture Series Committe Movies is $2.00, and MIT or Wellesley identification is required. For the latest Lecture Series Committee movie and lecture information, call the LSC Movieline, x8-8881, or check TechInfo.

June 3: Free Sneak Preview! City Slickers II, Rm 26-100, 8pm. **June 4:** Beverly Hills Cop, Rm 26-100, 8pm.

Send notices for Wednesday, June 1 through Sunday, June 19 to Calendar Editor Rm 5-111, before 12 noon Friday, May 27.

CULTURAL GIFTS

Music, Theater Accolades Listed

Nine students who have made outstanding contributions to the cultural life of MIT were recognized at the annual Music and Theater Arts Awards Ceremony earlier this month. Professor Alan Brody, chair of the Music and Theater Arts Section, presided at the occasion in Killian Hall.

Rosa Chen-Hui Ren, a senior in civil and environmental engineering from Daly City, CA, and **Robert J. Dyckman**, a senior in music and theater arts, received the Joseph D. Everingham Award recognizing a single creative accomplishment. Ms. Ren was cited for her role in the Shakespeare Ensemble's *Master/Mistress of My Passion*, and Mr. Dyckman for his acting in the Dramashop production of *Spring Awakening*.

Edward S. Darna Awards, honoring substantial contributions to the life of the theater at MIT, were presented to **Michelle A. Starz**, a senior in biology from Glenshaw, PA, and **Eugene F. Schuster**, a senior in biology from El Paso, TX.

The Gregory Tucker Memorial Prize recognizes students for exceptional ability in composition, performance and/or music history studies. This year's winners were **Alan F. deLespinasse**, a senior in electrical engineering and computer science from Adrian, MI, and **Adam T. Lindsay**, a senior in brain and cognitive sciences from Dewitt, NY.

Christopher A. Adler, a senior in mathematics from Falls Church, VA, and **Mary Beth Rhodes**, a senior in chemistry from Santa Barbara, CA, received the Ragner and Margaret Naess Awards in recognition of their high level of private performance study.

Given for the first time this year, the Philip Loew Memorial Award honors a single creative achievement in music. **Pelarin D. Bacos III**, a senior in music and theater arts from Pukalani, HI, won it for a string quartet, *Suite*, he composed for a music course.

Tau Beta Pi Initiates 37

The Massachusetts Beta Chapter (MIT) of Tau Beta Pi held its spring initiation on May 10. Following are alphabetical lists of seniors and juniors who were initiated.

Class of 1994:

Jeffrey Breedlove of Sioux City, IA (mechanical engineering). Richard C. Davis of Hopkins, SC (electrical engineering and computer science). Sandra C. Eltringham of Tucson, AZ (chemical engineering). Elliot E. Hui of Arcadia, CA (physics). Joseph Karlin of Philadelphia (mechanical engineering).

Daphne Karydas of Sharon (chemical engineering). Andrew J. Kass of Oakland, CA (EECS). Erik M.A. Kline of Saratoga, CA (aeronautics and astronautics). Jerome Chun L. Lui of Willowdale, Ont. (EECS). Michael P. Markmiller of Malibu, CA (mechanical engineering).

Michael S. Mermelstein of Potomac, MD (EECS). Brian M. Scasselati of Bethlehem, PA (EECS). Guru Sivaraman of Richmond Hill, Ont. (EECS). Tolga Uzuner of Istanbul, Turkey (EECS). Rupert Young of Sheffield, MA (EECS).

Class of 1995:

Michael T. Decerbo of Trumbull, CT (EECS). Eric J. Ding of Cupertino, CA (EECS). Xiang D. Dong of Brooklyn, NY (chemical engineering). Marcus G. Frank of Petropolis, Brazil (chemical engineering). Iliana L. Fujimori of Bayport, NY (EECS).

Rohit Gupta of Columbus, OH (EECS). Steven G. Johnson of St. Charles, IL (EECS). Sandra K.Joung of Lisle, IL (materials science and engineering). Laura S. Juliano of Whitesboro, NY (EECS). Yee Chuan Koh of Kuala Lumpur, Malaysia, (chemical engineering).

Bonnie Ky of Wayne, NJ (chemical engineering). Erin B. Lavik of McLean, VA (materials science and engineering). Thein H. Lee of Penang, Malaya (EECS). Carla L. Oshiro of Plainsboro, NJ (mechanical engineering). Ketaki N. Patel of Jersey City, NJ (chemical engineering). Ben Y. Reis of Brookline, MA (EECS).

Sahana E. Sarma of Libertyville, IL (EECS). Emilija M. Simic of Belgrade, Yugoslavia (EECS). Herb Singh of Riverside, CA (EECS). Soykan Soyucayli of Ankara, Turkey, (mechanical engineering). Justin A. Strittmatter of Shreveport, LA (chemical engineering). Kareem A. Zaghoul of Bethesda, MD (EECS).

Books Available

The 1994 edition of the MIT Alumni/ae Register listing the most up-to-date address information on some 84,000 individuals is now available from the Alumni/ae Association. The hard-bound books are $45. Copies are available by requisition to Alumni Records, Rm 12-090.

Also available at a bargain close-out price of $10 are copies of MIT: A Portrait, a hard-cover 128-page book of color photographs of the campus.

For more information, call x3-8261.

AIDS Walk Update

Early registration figures for the June 5 AIDS pledge walk have been disappointing, according to Sgt. Cheryl Vossmer of the Campus Police, one of the organizers.

"We know of only about 20 people who are planning to participate as part of the MIT team so far," she said. However, there will be a final preregistration session on Friday, June 3, in Rm 8-105, 11:30am-1:30pm, when individual walking papers will be available and people can sign up for the team.

Last year the MIT team had more than 100 members and raised some $20,000, to become the top university team in the effort. Many more walkers are needed this year to equal or beat that record, not to mention rising to a challenge from Harvard, Sgt. Vossmer said.

She reminded people interested in participating that the advantage of joining a team is that the Boston Foundation matches team pledges up to a total of $50,000.

Walking papers are available from Sgt. Vossmer or at the Information desk in the Student Center. More information on the walk is available by e-mail request to <walk-info@mit.edu>.

Three Receive Wilson Support

Carroll L. Wilson '32 Awards support student proposals on the application of technology to international problems. The three recipients this year are:

Gwendolyn K. Lee, a junior in chemical engineering from Brea, CA, for "A Call for Service."

Amy B. Smith, a graduate student in mechanical engineering from Lexington, MA, for Field Testing and Technology Transfer of the Screenless Hammermill.

Elizabeth A. Stock, a graduate student in urban studies and planning from Scarsdale, NY, for "Rural Road Contractors: How Will They Manage?"

Kelly Prizes Have Musical Tone

The I. Austin Kelly III Prize is given annually for outstanding humanistic scholarly essays to two undergraduates. The winners for 1993-94 are:

Pelarin Bacos III, a senior in aeronautics and astronautics from Pukalani, HI, for "A German Unification: An Investigation of Unifying Elements in Beethoven's Ninth Symphony."

Adrian P. Childs, a senior in mathematics and music from Cottage Grove, WI, for "Trends in the American Piano Sonata, 1900-1950."

Sloan Senior Prize

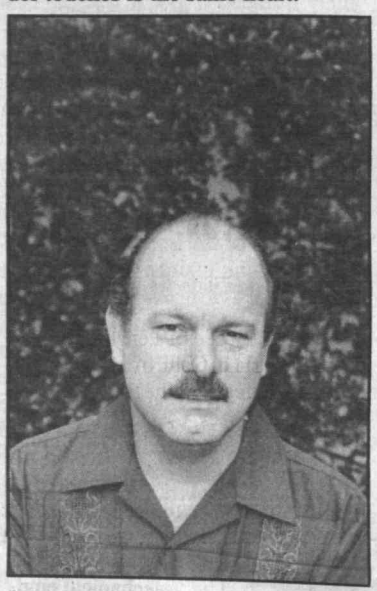
The Sloan School of Management has given its Senior Prize in recognition of high scholastic standing, leadership and professional promise to Sunredi Admadjaja of Jakarta, Indonesia.

The Arts

For this final Arts Page of the academic year, we offer some parting words, heard this past year, from those who visited MIT and from those who live and work here. Summer arts news will appear in Tech Talk's "run-of-paper" spaces. Calendar listings will be incorporated into the Institute Calendar. Many thanks to the student photographers: Matt Barnhart '95, Wilfredo Sanchez '94, and Sharon Young Pong '96. And, last but definitely not least, a big thank-you to Hina Ansari '94, for her help throughout the year.

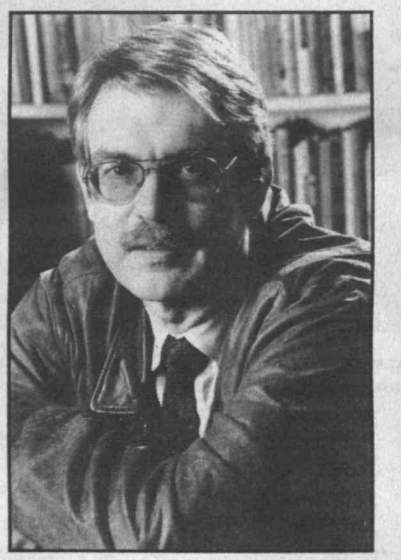
The Arts Page is produced by the Office of the Arts in collaboration with ARTSNET. Lynn Heinemann, writer; Susan Cohen, layout; Mary Haller, editor. E15-205; 253-4003.

"Two people are contemplating a glorious sunset. One of them sees Rayleigh scattering, differential absorption, complicated refraction and reflection and the hairs on the back of her neck stand up in the wonder of it. The other one inhales the sea air and hears the gulls calling, but is mainly lost in the ineffable delicacy of the nameless color, the white that is not white, that separates the salmon of the sun's dying glow from the lapis of the encroaching night, and the hairs on the back of his neck stand up in the glory of it. The knowledge that informs their sense of wonder is completely different, but the heart that the wonder touches is the same heart."



—Joe Haldeman, Adjunct Professor, Program in Writing and Humanistic Studies, addressing "The Three Cultures: Reflections of a Science Fiction Writer," part of the Windows on MIT *Lecture series October 18, 1993*

"MIT is a wonderful place for an artist to flourish, ...to connect to some of the most extraordinary students that one can conceive of. It also is a place that I think is in a real golden age artistically."



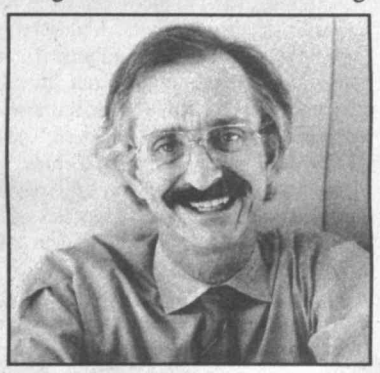
—Professor ***John H. Harbison*** *on being named the recipient of the 1994-95 James R. Killian Jr. Faculty Achievement Award*

"In my first year [at MIT], ...I participated in almost no arts activities; in my senior year, not a week went by without my attending or being involved in numerous artistic activities. I am amazed at the number of great figures I have encountered through the MIT humanities departments and the residency program. These encounters have been irreplaceable in my development as a musician and composer. I believe very few institutions can offer individuals of such a high caliber and great diversity as I have seen at MIT."
—Chris Adler '94

"The arts can be taught as a serious discipline at a very young age, and this early training teaches much about rigor, repetition, concentration, commitment, as well as passion, imagination, and joy. Just as science has now proven our mothers right about the therapeutic value of chicken soup, it would now appear they were also right about music lessons."

—Ellen T. Harris, Associate Provost for the Arts, from a speech delivered at the Chicago Academy of Sciences

"We must not divide the world into nerds and jocks any more than we want to divide the world into technologists or humanists. One of the things



that's happening, I think, is that technology education is in fact, waking up. ...I think we need to work on the connection between the quality of life and cultural education and make sure we have the right blend."
—Professor ***Woodie Flowers*** *'73, School of Engineering. Speaking on "Engineering Beauty" as part of the Windows on MIT series December 20, 1993*

"What makes the arts so special at MIT (and the aspect which I will most fondly remember) is that the teachers involved genuinely care about and respect their students. They treat them as equal partners in the artistic growth process. Atmospheres like that aren't available at arts schools."
—Adrian P. Childs '94

"I appreciate the fact that [MIT is] primarily a technical institution but on the other hand, I've been really excited by the amount and quality of artistic activity that I've seen here, and the dedication to it . ...There is a great deal of curiosity and need and ability to deal with subjects beyond the math and sciences."

—Playwright David Henry Hwang 1994 William L. Abramowitz Lecture April 15, 1994

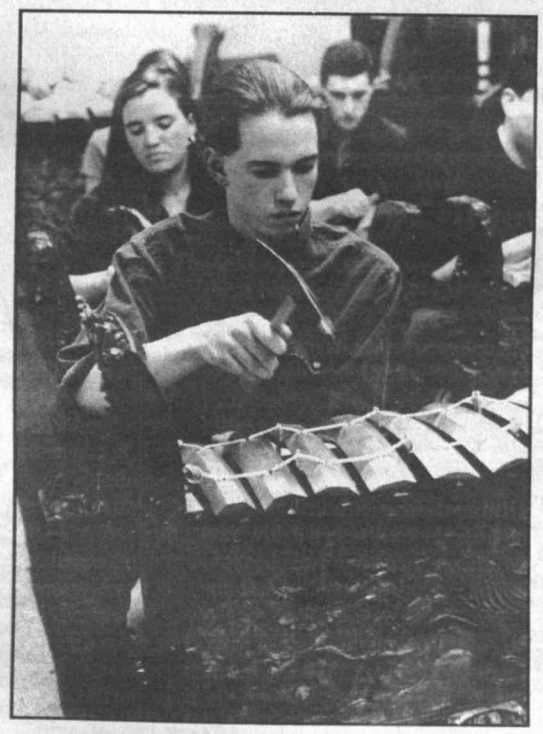
Life after MIT...in the Arts

Among the talented members of MIT's Class of 1994 are several graduates who will be moving on to work and continued study in the creative and performing arts:

Cheston ("Chip") Buchanan '94 leaves MIT with a degree in Civil Engineering to attend Boston University's Master of Arts degree program in Creative Writing. Buchanan was awarded a 1993-94 List Foundation Fellowship to support the writing of *Pike*, a novel in which a teenaged girl from rural Kentucky moves into the city, loses her child, and is forced into prostitution. The first-person narrative is accompanied by Buchanan's pen-and-ink drawings. Buchanan has been awarded a Martin Luther King, Jr. Fellowship to study at BU.

Chris Adler '94 and Adrian Childs '94, who have combined affinities for math and music at MIT, will both pursue Ph.D. degrees in music composition: Adler at Duke University and Childs at the University of Chicago. Adler, a math major, who plays organ, piano, and Balinese gamelan, has received a J.B. Duke Fellowship for his graduate work. The 1994 Sudler Prize winner (an award presented to a graduating senior who has demonstrated excellence or the highest standards of proficiency in a specific arts discipline), was praised by Professor of Music Evan Ziporyn as "one of the most musically gifted individuals I have ever encountered."

Childs, who is graduating with degrees in mathematics and music, was co-recipient of the 1994 Laya and Jerome B Wiesner Student Art Award for outstanding achievement in music. "The world will forever need musicians such as Childs to recreate musical invention, to fill that gap of communication between paper and ear, between ink and sound." wrote The Tech of Childs' recent senior recital.



The other recipient of this year's Laya and Jerome B. Wiesner Art Award is **Franz Elizondo-Schmelkes '94**, a double major in mechanical engineering and theater arts. Professor Alan Brody praised Elizondo-Schmelkes' "commitment to serious work and ...extraordinary level of creative productivity." After graduation, he plans to return to his hometown (Quertaro, Mexico) to start a theater company which not only entertains, but serves the community.

Dancers often seem to defy the laws of gravity, but few know the science involved in such a feat. **Erik Kline '94** with a degree in aeronautics and astronautics, is one who does. He plans to make the leap as a professional tap dancer, with an "ultimate goal to be a general dancer, an actor, and a director of both stage and screen."

(Clare) Ellen Shea '89, receiving her masters degree in Architecture, appeared with Ballet Theatre of Boston this past season. Shea's dream is "to find a 'real' job in architecture to sustain a dance career." She's also an accomplished photographer, whose exhibition *The Faces of Egypt* (produced with Tarek Hamdy) was shown in the MIT Museum's Compton Gallery. The exhibition will be on view at the Boston Public Library in June.

Other recent graduates are already successfully pursuing artistic endeavors: **Archie Roberts '92 and Deep Katdare '92** both graduated with degrees in Political Science and are currently studying and acting in theater: Roberts is studying with Uta Hagen in New York City and working off-Broadway; Katdare will be performing with the Equity company of the New Jersey Shakespeare Festival this summer while continuing his training with Gloria Maddox of the T. Schreiber studio in New York City.

Sameera Iyengar '93 will attend the University of Chicago next year, studying Bengali and English literature. Her MIT major was in mathematics, with a minor in theater. **Ryan Yu '93**, MIT's first graduating Theater Major, continues his studies at the prestigious Royal Academy of Dramatic Arts in London. He was the only American to be chosen by audition for admission to the Academy last year.

■ MUSIC

For recorded information on upcoming concerts call the MIT Music and Theater Arts Concert Line, 253-9800. Updated weekly

Live Jazz Jam—May 25. Jam by local musicians. Must be 21 or older to get in. 8:30-10:30pm, Muddy Charles Pub in Walker Memorial. Moto Nakamura, 253-5050

VOX³: Voice Motion Experience—May 27-29. Collaborative interactive extravaganza by students from Prof Tod Machover's "Projects in Music and Media" class and Prof Sharon Daniel's "Video Art" class. May 27-28—8:30pm-1:30am; May 29—2-5pm, Philippe Villers Experimental Media Facility (E15, "The Cube"). 253-0392

Tech Night at the Pops—June 2. The Boston Pops, directed by guest conductor John Williams, showcases MIT composers and musicians. Guest pianist, David Deveau, MIT lecturer. Sponsored by the Alumni/ae Association. Special MIT ticket prices: $29 first balcony; $11 second balcony. Contact Eliza Dane, 253-8230

■ THEATER

Theater & Dance Performance Hotline, 253-4720 for complete up-to-date information.

***Love Letters**—June 5.** Starring the author, A.R. Gurney, professor of literature (on leave) and actress Kitty Carlisle Hart, member of the Council for the Arts at MIT. Tech Day event for returning alumni. Limited number of tickets available for members of the MIT community. Reception with actors follows. $30. 2pm, Lobdell Dining Hall. Info: Jane Snyder, 253-8232

■ DANCE

MIT Folkdance Club. Sun—International Dancing: Early teaching for beginners–7-8pm; Teaching & requests–8-11pm, Sala de Puerto Rico or Lobby 13. MIT/Wellesley students free, $.25 others. **Tues—Advanced Balkan Dancing:** Regular teaching & requests, 8-11pm, Student Center 4th floor (491/401). MIT/Wellesley students free, $.25 others. **Weds—Israeli Dancing:** Early teaching for beginners–7-8pm; Teaching & requests–8-11pm, Sala de Puerto Rico or Lobby 13. Call 253-FOLK for locations on a given week.

■ EXHIBITS

List Visual Arts Center (E15): ***Pieter Laurens Mol.*** Dutch artist combines elusive images with materials such as sulfur, zinc, rust, gunpowder and lead. ***Sandy Walker: Woodblock Prints.*** Large, dramatic woodblock prints by California artist. Shows run through June 26. Hours: Tues, Thurs, Fri 12-6; Weds 12-8pm; Weekends 1-5; closed holidays. 24-hr Hotline, 253-4680

MIT Museum (N52): ***Light/Space/Time: CAVS/MIT—25 Years.*** Exhibition highlighting the ground-breaking work in art-science-technology and artistic contributions of the Center for Advanced Visual Studies at MIT. **Opening Reception—June 4**, 1pm. Show runs through October 2. ***Holography: Artists and Inventors.*** Explores the history of holography as well as technical and artistic applications. 265 Mass Ave. Tues-Fri 9-5, Weekends 1-5. 253-4444

Compton Gallery–*Charles H. Woodbury, Class of 1886: Artist.* One of the earliest American impressionists. May 26 through September 16. Mon-Fri, 9-5pm, Compton Gallery (enter 77 Mass Ave). 253-4444

Hart Nautical Gallery—*Course 13, 1893-1993: From Naval Architecture to Ocean Engineering.* The history of the Dept of Ocean Engineering. ***Permanent Exhibition of MIT Museum's Ship Models.*** Ongoing. Weekdays 9-8. 253-5942

Strobe Alley: ***Doc Edgerton's Strobe Alley.*** Photographs, instruments, and memorabilia that document Harold Edgerton's invention of the strobe light. ***Optical Alchemy.*** Full-color fluorescent photographs taken at night during underwater dives by Charles H. Mazel, research engineer, MIT Department of Ocean Engineering. Bldg 4, 4th floor. 253-4444

Rotch Library: ***Artists In The MIT Libraries.*** Exhibit showcasing paintings, photographs, sculptures, and mixed media contributed by 14 staff members from the MIT Libraries. Through June 3. Rotch Library. Info: Garrett Eastman 253-5661

Student Art Exhibition: ***MIT in Watercolor.*** Paintings by Lian Zhen (G), on view through June 6. Wiesner Student Art Gallery (2nd floor Student Ctr). 253-3913

■ OTHER

Behind-the-Desk Application Deadlines. Playwrights/Authors and Musicians—12noon, May 31. Series sponsored by the MIT Working Group on Support Staff Issues with MIT Music and Theater Arts Section for readings and concerts. Playwright info: Sue Downing, 253-2877 <suedown@mit.edu>; Concerts info: Clarise Snyder, 253-2906 <csnyder@mit.edu>

Student Project To Be Presented at Conference

(continued from page 1)

ing it. "This process is time consuming and does not allow for real-time control of the system," Ms. Pellegrini wrote in an abstract for the ACS conference.

Ms. Pellegrini and colleagues succeeded in bypassing most of these steps by interfacing a bioreactor and an HPLC unit with a novel auto-sampling device that "draws out samples from the [bioreactor] through a rapidly rotating" filter. In contrast, the filter used for standard HPLC sampling is fixed, and without steps like centrifugation it clogs within seconds.

Similarly, although automated HPLC sampling is not new, "many of the systems currently available have limited applications because they use a fixed filter," said Ms. Pellegrini's UROP supervisor Jean-François Hamel, a research engineer in chemical engineering. "They work only with a dilute fermentation broth [the mixture of microorganisms and associated compounds removed from the bioreactor]."

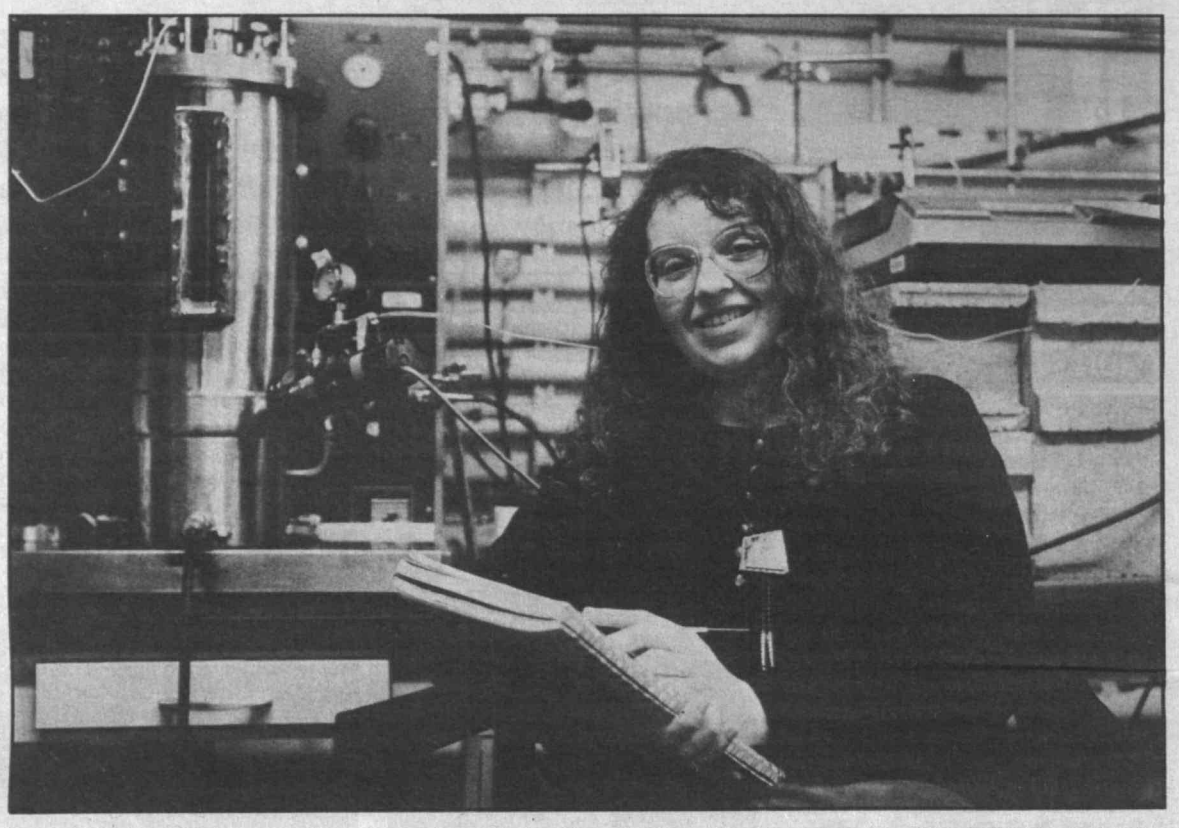
The new device, however, "proved capable of filtering samples even when the fermentation broth was extremely viscous," Ms. Pellegrini wrote. It also "worked well throughout the course of the [125-hour fermentation] run."

During fermentation, a team of students compared the concentration of glucose sugar detected by the automated system with that detected by a standard system to further validate the system. They found only minor differences.

The new system was tested with a bacterium that produces cellulose for special paper, air filters, high-quality diaphragms for audio equipment and more. The fermentation broth for this bacterium is especially thick, so "it was a good challenge to the system," said Dr. Hamel, who is also a lecturer in chemical engineering and supervised the team of students who worked with Ms. Pellegrini in 10.27, the Chemical Engineering Projects Laboratory.

Ms. Pellegrini's teammates are juniors Mei-Ling Pan, Heather Lee, and Laura Vojvodich of the Department of Chemical Engineering. All are co-authors of the ACS paper, as are Dr. Hamel and Claire Sahut of the Commissariat A L'Energie Atomique in France. The latter institution developed and provided the auto-sampling device used in the work; the device had never been used for this application before.

Ms. Pellegrini will attend graduate school this fall at the University of Pennsylvania, where she'll "probably continue in biochemical engineering or maybe get into biomedical engineering."



NEW AND IMPROVED—Graduating senior Nicole Pellegrini got her scientific career off to a good start by helping to develop a better automated process for monitoring microorganisms during fermentation in a bioreactor. **Photo by Donna Coveney**

Asked whether her UROP work and hands-on experience in 10.27 influenced her decision to pursue these studies, she replied: "They definitely, definitely influenced me. It was the first time I actually got to see what's involved in a biotech lab, and I really enjoyed it!"

The Aga Khan: Leader of Ismailis, Development Network

(The following background article on MIT's commencement speaker, the Aga Khan, and the Ismaili Muslim community is based on information supplied by the office of the Aga Khan.)

MIT's commencement speaker this year, His Highness Prince Karim Aga Khan, 49th hereditary Imam—spiritual leader—of the Ismaili Muslims, has been described as a bridge between the North and the South and between the East and the West.

The Aga Khan is first and foremost a religious leader, whose concern is for the welfare of the Ismaili Muslim community and those among whom they live. The community has earned wide recognition for its institutional endeavors to improve the lot of the poor and underprivileged in the developing world.

The Aga Khan, 57, graduated from Harvard in 1959 with a BA in Islamic history. He succeeded his grandfather, Sir Sultan Mohamed Shah Aga Khan, as Imam of the Ismaili Muslims on July 11, 1957, at the age of 20.

The tradition of international service has been a strong one in the Aga Khan's family. His grandfather was well-known as an international statesman and twice president of the League of Nations (forerunner to the United Nations). The Aga Khan's father, Prince Aly Khan, was Pakistan's ambassador to the United Nations, and his uncle, Prince Sadruddin Aga Khan, special consultant and chargé de mission to the Secretary General of the United Nations, was previously UN High Commissioner for Refugees.

The Aga Khan

MUSLIM PROPHETS

Contemporary Islam is a monotheistic faith of nearly one billion adherents, some 20 percent of the world's population. Ismaili Muslims belong to the Shia branch of Islam, one of the two major branches of Islam, the Sunni being the other. Both branches of Islam and their subdivisions share fundamental beliefs which bind all Muslims together. Each branch holds the Quran (Koran) to be Allah's final revelation, and the culmination of the message that had been revealed through other prophets of the Abrahamic tradition before him, including, more explicitly, Abraham, Moses and Jesus whom the Muslims revere as Prophets of Allah.

All Muslims believe the Quran guides and illuminates the conduct and thought of believers in accordance with their inner capacities as conditioned by external influences. Through verses which extol man's rationality and verses in allegories, parables and symbols, the Quran itself invites the believers to derive newer insights to address the needs of time and place.

Sunnism and Shiism both represent legitimate interpretations of the Islamic message. Over a period of time different schools or communities of interpretation evolved within both Sunni and Shia Islam. Within its fundamental unity, Islam thus allows a multiplicity of interpretations.

In common with other Shia Muslims, the Ismailis affirm that after the Prophet's death in 632 C.E. (Common Era), Hazrat Ali, the Prophet's cousin and son-in-law, became the first Imam of the Muslim community and that this spiritual leadership (known as Imamat) continues thereafter by heredity through Ali and his wife Fatima, the Prophet's daughter. Succession to Imamat, according to Shia doctrine and tradition, is by way of Nass (Designation), it being the absolute prerogative of the Imam of the time to appoint his successor.

For long periods of their history, the Ismaili Imams were also temporal rulers. The Fatimid Caliphate, centered in Egypt, emphasized education as the key to the development of man's mind and the Fatimids established Al Ashar, one of the world's earliest universities, attracting eminent scholars, irrespective of creed or race, from far and wide.

The purpose of society in Islam is to help the individual realize the full potential of his or her life. In the modern period, the view of Islam as a thinking, spiritual faith continues to find resonance in the guidance of the Aga Khan and his immediate predecessor, who had described Islam as a natural religion which values intellect, logic and empirical experience. Religion and science, he said, are both endeavors to understand, in their own ways, the mystery of Allah's creation.

A principal theme of the Quran is man's piety in his individual as well as social characteristics. And piety consists not only in fulfillment of ritual duties but in meeting one's social obligations. This message is pervasive: "Among the pious are they who give their wealth, and feed the needy, the poor, the prisoner for no reward except for the sake of God; acknowledge in their wealth the right of the beggar and the destitute; are humble and spend openly and secretly in charity of which Allah has bestowed upon them."

In the Ismaili Muslim tradition, the Imam gives practical expression to the ethical and spiritual vision of society that the message of Islam inspires. One way in which this is done is through the creation of an institutional and social order that befits time and place.

Today, the Ismailis live in some 25 countries, mainly in Central and South Asia, Africa and the Middle East, as well as in Europe, North America and Australia. Since the present Aga Khan assumed the office of Imamat in 1957, there have been major political and economic changes in most of these countries. He has adapted the complex system of administering the Ismaili Muslim community, pioneered by his grandfather during the colonial era, to a world of nation states. Wherever Ismailis live, they have elaborated a sharply defined institutional framework to carry out social, economic and cultural activities.

DEVELOPMENT NETWORK

Under the Aga Khan's leadership, this framework has expanded and evolved into an international network of institutions involved in fields that range from education, health and rural development in the sub-Saharan Africa and South and Central Asia, to architecture in Muslim societies and the promotion of private sector enterprise.

Known as the Aga Khan Development Network, its constituent institutions, all founded over the past 30 years, include the Aga Khan Foundation, Aga Khan University in Karachi, Pakistan, Aga Khan Fund for Economic Development and the Aga Khan Trust for Culture, which includes the Aga Khan Program for Islamic Architecture at MIT and Harvard. The Aga Khan Development Network also includes the Aga Khan Health Services and the Aga Khan Education Services, providers of health care, schooling and other educational services in South Asia and East Africa since the beginning of the 20th century.

OPEN TO ALL

Open to all, regardless of origin or religion, the institutions of the Aga Khan Development Network are supported from a variety of sources. Besides benefitting from the resources provided by the Imamat, they have also been supported by voluntary contribution from the Ismaili Muslim community as well as the time, energy and professional talent they donate to specific programs. Many international and bilateral agencies have recognized the Network's major achievements in health, education and rural development, contributing to them through grants to the Aga Khan Foundation. The Aga Khan Fund for Economic Development and the Aga Khan Trust for Culture benefit from similar partnerships with organizations which share their respective concerns.

In view of the importance that Islam places on maintaining a balance between the spiritual well being of the individual and the quality of his life, the Imam's guidance deals with both aspects of the life of his followers. The Aga Khan has encouraged Ismaili Muslims, settled in the industrialized world, to contribute towards the progress of communities in the developing world through various development programs. In recent years, Ismaili Muslims, who have come to the US and Canada, mostly as refugees from Asia and Africa, have readily settled into the social, educational and economic fabric of urban and rural centers across the continent.

Friday Commencement Set

(continued from page 1)

a commissioning ceremony will be held for about 30 graduating cadets and midshipmen in MIT's Army, Air Force and Navy Reserve Officers Training Corps (ROTC) units at the frigate USS Constitution at the Charlestown Navy Yard Historical Park. The speaker will be Air Force Secretary Sheila Widnall, former MIT associate provost and professor who is now on leave from the Institute.

Public Parking Options Near MIT

The Campus Police Department has compiled the following list of public parking lots to aid in easing Commencement congestion:

—MIT, 139 Massachusetts Ave. (corner of Vassar St.), $7 per day or $2 per hour, x3-8232.

—Park and Lock, 354 Third St., $6 per day, 547-2685.

—Kinney Systems, Four Cambridge Center, (entrance at Ames St. and Broadway), $2.75 for one hour, $5.25 for two hours, $7.75 for 12 hours, $10.50 for 24 hours, 492-1956.

—Kinney Systems, Ten Cambridge Center, $2.25 for one hour, $4.50 for two hours, $6.75 for 12 hours, $9 for 24 hours, 621-3115.

Tech Day Celebrates Arts

(continued from page 1)

faculty in music and theater, visual arts and architecture, creative writing, photography, and the emerging media of interactive video, holography, and hyperinstruments.

"Creativity has always been at the center of MIT's identity," said Associate Provost for the Arts Ellen T. Harris, who will moderate the Friday morning program. "This year's Technology Day is an opportunity to celebrate that creativity, and a chance to explore the question, 'What is the role of the arts in an MIT education?'"

Alumni Week festivities will lead off with the traditional Tech Night at the Pops, which this year features MIT talent under the baton of Boston Pops Laureate Conductor John Williams. The program includes a performance by music lecturer and celebrated pianist David Deveau, a piece by Pulitzer Prize-winning composer and Professor John Harbison and an appearance by a surprise MIT guest conductor.

As a special closing event of the weekend, playwright and MIT Professor A. R. Gurney and actress Kitty Carlisle Hart (a member of MIT's Council for the Arts), will perform Gurney's Broadway hit, *Love Letters*, on Sunday at 2pm in Lobdell.

A limited number of tickets are available for purchase by the MIT community for the two performances. Tickets for Tech Night at the Pops on Thursday, June 2, at 8pm in Symphony Hall are $26 and $11, and may be obtained by calling Eliza Dame in the Alumni/ae Association at x3-8230.

Tickets for the performance of A.R. Gurney's *Love Letters* are on sale for $30 each; call Jane Snyder in the Alumni/ae Association at x3-8232.

Mary Haller, Office of the Arts