

2 professors win Nobel Kendall, Friedman confirmed existence of quarks

By Reuven M. Lerner

Physics Professors Jerome I. Friedman and Henry W. Kendall, PhD '55 were awarded the 1990 Nobel Prize in physics on Wednesday for their research confirming the existence of quarks.

Friedman, 60, and Kendall, 64, are the ninth and 10th Nobel laureates currently affiliated with MIT.

The \$700,000 award, which will be shared with Richard E. Taylor of the Stanford Linear Accelerator Center, was announced by the Swedish Academy of Sciences early Wednesday morning. Kendall answered questions regarding his research at a news conference later that day.

Friedman, who was attending a conference in Fort Worth, TX, was told about the award by his wife. "It was so unbelievable, I literally thought I was still sleeping and that this was part of my dream," he said.

President Charles M. Vest, who took office on Monday, expressed excitement about the award. "Professors Friedman and Kendall brought great distinction both to themselves and to the Massachusetts Institute of Technology," he said. "We're very

pleased to be able to join today in celebrating their accomplishments, and congratulations to them on behalf of all their MIT colleagues."

"We're ecstatic not just because it honors a great intellectual accomplishment, but because . . . they provide good examples — that you can be a great scientist and a great humanist at the same time," said Professor Robert J. Birgeneau, head of the physics department.

This was not the first award that Friedman, Kendall, and Taylor have received for their work. Last year, they were given the American Physical Society's W. K. H. Panofsky Prize, worth a total of \$5000.

See pages 20 and 21 for excerpts of Kendall's press conference, and other stories on MIT's Nobel laureates.

Friedman, a faculty member at MIT since 1960, was head of the Department of Physics between 1983 and June 1988. Last year, he was named William A. Coolidge professor of physics.

He is a fellow of the American Physical Society and has served on numerous advisory commit-

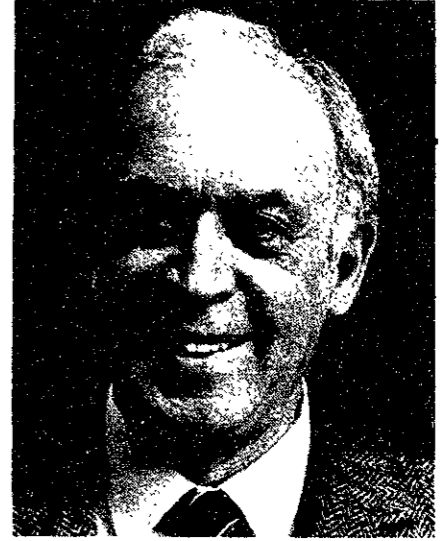
tees. In 1980, he was elected to the American Academy of Arts and Sciences. He received his bachelor's, master's and doctorate degrees from The University of Chicago.

Kendall studied mathematics at Amherst College before coming to MIT. He received his PhD here in 1954. He worked as a post-doctoral fellow at Brookhaven National Laboratory and MIT between 1954-1956, after which

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Sean M. Dougherty/The Tech
Professors Henry W. Kendall PhD '55 (left) and Jerome I. Friedman were awarded the Nobel Prize in physics on Wednesday.



Donna Coveney/MIT News Office

Wrighton named new provost

By Dave Watt

President Charles M. Vest on Tuesday announced the appointment of Mark S. Wrighton, head of the chemistry department and CIBA-GEIGY professor of chemistry, to the position of provost. Wrighton took over the provost's office that day.

In a press release, Vest cited Wrighton for his "intellect, devotion to teaching, willingness to serve others, knowledge of the Institute, and dedication to MIT."

The provost is the chief academic officer at MIT, who, among other responsibilities,

oversees the budgets of all of the departments and schools and manages undergraduate education.

Wrighton, while serving as head of the chemistry department, also ran one of the largest research groups in the department. His group of about 25 people studies a wide variety of sub-

jects related to electrochemistry, including molecular electronics and the mechanisms of photosynthesis. The funding for his research totals over \$1 million per year.

Unlike former Provost John M. Deutch '61, Wrighton will continue his research group while serving as provost. However, he said he would like his group to be roughly half the size it is now. He is looking for a "sleek, efficient research group," according to Tayhas R. Palmore G, one of his students.

Synergism and diversity

Although he plans to spend his first few months learning the details of his new job, Wrighton said he already sees issues he believes need attention, including promoting faculty and student diversity, making research more a part of the undergraduate experience, and controlling ever-rising tuition costs.

Wrighton believed that strong research and teaching programs build on each other. "The US

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Sean M. Dougherty/The Tech
Provost Mark S. Wrighton

Faculty approve timetable for ROTC

By Andrea Lamberti

On Wednesday, the faculty took a definitive stance on MIT's relationship with the Reserve Officers' Training Corps, whose policy excluding gays and lesbians conflicts with the Institute's non-discrimination policy.

The faculty approved a resolution giving the Department of Defense five years to end its discriminatory policy. If the policy is not changed, MIT will most likely break with ROTC.

A resolution proposed by the MIT Committee on ROTC outlined a comprehensive, but flexible, course of action for the Institute to take over the next several years. If the DOD fails to eliminate the conflict between the policies of MIT and ROTC, the ROTC program might be made unavailable to MIT students.

The committee was charged with setting a deadline by which MIT should end its participation in ROTC if the DOD does not

change its policy. In May, the faculty asked the committee to set a date by Wednesday's meeting.

The resolution asks the administration to work to reverse the DOD policy within five years. MIT should both work individually and collaborate with other schools to achieve this goal, the resolution states.

According to the resolution, the president will then establish a task force to evaluate whatever progress has been made and recommend a subsequent course of action, with the "expectation that inadequate progress toward eliminating the DOD policy on sexual orientation will result in making ROTC unavailable to students beginning with the class entering in 1998."

MIT publications would note the end of the ROTC program beginning no later than the fall of 1996.

The resolution requests that the ROTC committee report at

least once a year on MIT initiatives toward change in the DOD policy. It should also report on "the committee's assessment of progress at the national level," it adds.

The Executive Committee of the MIT Corporation and the ROTC committee should begin a dialogue, focusing on the need for action and possible cooperation among schools by faculties, administrations, and corporations, according to the resolution.

Alvin W. Drake '57, chair of the ROTC committee and professor of electrical engineering, introduced the resolution and explained the process behind the committee's consensus.

The coming battle to reverse the policy is not with the DOD or ROTC, Drake said. It is "with Congress, [and] the people who send those people to Congress."

Most faculty support the resolution

David M. Halperin, professor of literature and faculty advisor to Defeat Discrimination at MIT, supported the motion. Although it might be moderate compared to the actions of some other institutions, he said, it is not a "tactical retreat. [The resolution] represents a plan for action."

President Charles M. Vest saw the resolution as a vehicle for uniting the MIT community, characterized it as an "excellent motion," and said he will embrace it "with a great deal of enthusiasm."

Paul E. Gray '54, chairman of the corporation, qualified the entire motion as "constructive," and pledged to serve as the link between the faculty and Corporation on the issue. Faculty Chair Henry D. Jacoby voiced the strong support of the Faculty

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inside

An interview with President Charles M. Vest.
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The Graduate Student Council opposes insurance refunds.
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The MIT Festival Jazz Ensemble compact disc highlights five years of Jazz Ensemble history. Page 15.

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The poetry of Sharon Olds evokes sympathy, inspires rage, and deals with the personal pain and rage of bad sexual experiences. Page 15.

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Philip Kaufman's *Henry & June* is a superb film translation of the diaries of Anais Nin. Page 14.

GSC opposes any optional coverage

By Dave Watt

In a rebuff to MIT Pro-Life, the Graduate Student Council overwhelmingly adopted a resolution opposing optional abortion coverage in the MIT Student Health Insurance plan. The resolution was passed 21-2 at the GSC meeting in Walker Memorial Tuesday evening.

The resolution, in the form of a letter the GSC will send to Linda L. Rounds, executive director of the Medical Department, expresses the GSC's opposition to allowing "optional coverage for any procedure under the current MIT student insurance plan." At present, Student Health Insurance covers the cost of elective abortions.

Olof C. Hellman G, who introduced the resolution at the meeting, said it came in response to a petition circulated by MIT Pro-Life, which proposed making the plan's coverage of abortions optional for policy holders. The petition has been signed by more than 100 people, over half of whom are graduate students, according to Juan A. Latasa '91, Pro-Life's insurance liaison.

Hellman explained that allowing this one exemption might set a precedent, allowing other groups to demand refunds for medical procedures to which they object.

Latasa was surprised to hear that the GSC had passed such a resolution. "MIT Pro-Life was never asked to submit or explain our proposal to the Graduate Student Council," Latasa said.

"This is such a personal issue that I don't think they can say that it's in the interests of all graduate students to support this. This just shows that a referendum on the matter could be helpful," he added.

Other business

On other matters, the GSC called for the MIT administration to donate the land of the homeless shelter at 240 Albany St. to the organizers of the shelter. The shelter, run by the Cam-

bridge and Somerville Program for Alcohol Rehabilitation (CASPAR), is the only homeless shelter in Cambridge that permits people with drug or alcohol problems to stay there. [See story on Albany St. shelter, page 1.]

Also, the GSC announced changes in their policy regarding appointments to Institute committees. The GSC said it will from now on appoint the graduate students who serve on Institute committees.

Previously, the GSC merely recommended students for the committees, and the committee chair, a member of the faculty, then selected the graduate students for the committee from the GSC recommendations. It is not clear whether this new GSC decision will have any effect on the committee appointment procedure.

The GSC said it will also require those students working on the committees to make progress reports back to the GSC, and that it now reserves the right to remove students from the committees when the council believes they are not representing graduate students' interests.

The first appointments made under the new GSC policy were to the Ad Hoc Committee on Demonstrations. The council chose Andrew D. Silber G and Hellman, but with the provision that the students would serve on the committee only if President Charles M. Vest responded to the GSC resolution on appointments in a letter.

In the resolution, the GSC demands that Vest address three points. Vest is asked to write that he "is aware of and understands" the GSC's new committee appointments policy; that he agrees that all members of a given committee should sign its final report, or be permitted to include dissenting opinions; and that "in view of the history of problems with the committee process," he is committed to reviewing the whole issue of committees and representation at MIT.

Groups fight to preserve the Albany St. homeless shelter

(Continued from page 1)

go — we are their only option," said Margaret McAllister, case manager at the shelter. The shelter is ideally located in a non-residential neighborhood, McAllister added.

It operates 24 hours a day, seven days a week and provides mostly emergency care for alcoholics and drug users from the cities of Cambridge and Somerville. "Our mission is first to keep people alive," McAllister

said.

In addition, the shelter caters to the basic needs such as food, clothing and hygiene. The homeless can also take advantage of the counseling services the shelter offers and the strong ties it has with various detoxification centers.

The shelter, which receives support from the federal government, is staffed by a few professional counselors, but mostly by volunteers.

Errata

Due to a production error, the following line was deleted from Tuesday's article on the women's soccer team ["Babson blanks women booters"]: "The team's conference record last year was 0-6; this year it is 1-4."

Tuesday's story on the World Series incorrectly stated the number of deaths in last year's earthquake in Northern California ["A's, Reds open Series tonight in Cincinnati"]. Fewer than 100 people died in the quake.

The caption under the front-page picture accompanying last Friday's story on University Park ["RCB hears tenant appeal"] incorrectly described the houses in the picture. They are not the houses for which tenants are fighting. The houses in the picture were torn down.

A story which ran two weeks ago on the colloquium on the Reserve Officers' Training Corps contained an incorrect statistic ["Panel condemns discriminatory policy," Oct. 5]. Sixty to 70 percent of the nation's commissioned officers come from ROTC programs.



Afternoon sun makes Lobby 7 a garden of shadows.

Christian S. Marx/The Tech

Faculty approve ROTC resolution

(Continued from page 1)

Policy Committee. Provost Mark S. Wrighton, at his first faculty meeting as provost, saw the situation as an opportunity for MIT to become a leader in forging new policy, and vowed to do "all in his power" to work toward the change.

Some faculty members at the meeting felt that the resolution was not strong enough. Professor of Literature Louis Kampf said he would vote for the measure because "if we don't pass it, we'll wind up with nothing."

Kampf added that the resolution created "a hint of a deadline, but not really a deadline," because MIT will not automatically break with ROTC if the policy is not changed.

Professor of Physics Vera Kistiakowsky shared Kampf's sentiments. She proposed an amendment that would guarantee a break with ROTC if the military did not change its policy in five years, but the amendment was voted down.

Status of report on demonstrations

Jacoby reported on the status of the study panel on policies related to demonstrations. In May, the faculty called on the president to appoint a panel to review the processes by which demonstrations on campus are handled. The panel would make recommendations for handling demonstrations and establish an advisory committee to be consulted in times of crisis and to monitor demonstrations.

Six faculty members and two members of the administration have already been chosen for an

Ad Hoc Committee on Demonstrations. Two undergraduates and two graduate students will serve on the committee, but the committee's progress and discussions have been delayed by discussions of MIT governance, Jacoby said.

Steven D. Penn G, vice president of the Graduate Student Council, opposed the process by which the committee is being formed. He announced that the GSC has begun appointing representatives for Institute committees, rather than letting committee chairs select them from a list of nominees. [See story on Tuesday's GSC meeting, page 1.]

"I think the faculty should amend its rules right away" in response to the change in the GSC appointment process, Penn said.

GSC President Michael D. Grossberg G criticized the committee selection process in general, and emphasized that all members of a committee should be consulted before a final report is written.

Manish Bapna '91, president of the Undergraduate Association, offered two suggestions for the Ad Hoc Committee on Demonstrations: Its meetings and hearings should be open to the community, and a lawyer should be included on the committee.

Accolades all around

Despite the heavier tone of discussion on the ROTC program at MIT, several members of the faculty were praised by their colleagues at the meeting.

Robert J. Birgeneau, head of the physics department, commended two professors who received the 1990 Nobel Prize in

physics on Wednesday. Physics Professors Jerome I. Friedman and Henry W. Kendall PhD '55 received the prize, along with Dr. Richard E. Taylor of the Stanford Linear Accelerator Center, for their research confirming the existence of quarks.

And under the guise of a "faculty resolution on the leadership transition," Jacoby presented a tribute to Gray, extolling his tenure as president of MIT.

President Charles M. Vest, leading the faculty meeting for the first time, thanked the faculty, and related what he learned about MIT from interviews with faculty and students over the summer. A common thread running through all the conversations revealed a commitment to education, particularly undergraduate education; a commitment to service and the issues facing mankind; and a sense of the uniqueness of MIT.

Vest identified what he viewed as the emerging issues facing the Institute. "In no way to imply criticism of the past . . . The Institute [is] lacking a clear definition of itself," he said.

Other issues to be addressed include developing enhanced approaches to federal relations, maintaining and enhancing undergraduate education and the undergraduate experience, and dealing with difficult budgetary constraints, Vest continued.

Vest affirmed his personal goal to maintain and strengthen the presence of women and underrepresented minorities at MIT. "It is very difficult to see the changing face of America in our faculty and staff," Vest said.

news roundup

from the associated press wire

World

Israel changes settlement policy

Israel is backing off from a promise not to settle any more Soviet Jews in East Jerusalem. The Israeli Foreign Ministry said Foreign Minister David Levy issued the change in a letter to Secretary of State James A. Baker III. The letter says Israel "made no commitment" to not house immigrants in East Jerusalem or in the occupied territories. The administration opposes the housing as an obstacle to peace in the Middle East.

South African state of emergency ends

The president of South Africa said the state of emergency in the province of Natal is over. F.W. de Klerk ended the rules for the province, which has been wracked by black-against-black factional killings. De Klerk said he hopes the return to normalcy leads to full negotiations with the African National Congress on power sharing with the black majority.

The ANC has not yet responded, but South Africa's leading financial daily said the ANC is talking about money, and hoping that corporations will give it some. Corporate officials said they are less than enthused about funding a group that wants to nationalize big business.

United Nations may make Iraq pay reparations

Diplomats of the five permanent members of the UN Security Council are pushing a resolution to make Iraq pay countries that have suffered economic losses due to the Persian Gulf crisis. Secretary-General Javier Perez de Cuellar told a German magazine the United Nations has already imposed the toughest sanctions possible against Iraq and said he sees little progress toward a peaceful settlement. He mentioned the possibility the Security Council could authorize military action against Iraq.

Many Western Europeans would support military action, a recent Gallup survey showed. Seventy percent of those questioned in Great Britain, France, Germany, Italy, and Spain said they favor the use of military force to push Iraq out of Kuwait.

Beirut wall comes down

Beirut is becoming one city again. Lebanese government bulldozers are tearing down the wall that divided Beirut into Christian and Moslem sectors, and reopening the roads that link them. The goal of the new government is reunification, now that it has crushed Christian General Michael Aoun's militia. Aoun is holed up in the French embassy, and a Moslem radio station said he is not expected to come out soon.

Report recommends flying backwards

Two British reports said turning commercial airplane seats around to face the rear of the planes could be the safest way to fly. The investigators recommended research on turning seats around, improving seats and seat belts, strengthening floors, modifying engines and improving pilot training.

The reports suggested that even a slight change in the way passengers brace themselves for a crash could save lives now. One study said that lives could also be saved if airline cabin crews instructed passengers about how to take the proper position rather than telling them how to put on life jackets.

The British Civil Aviation Authority said research in all of the issues raised by the studies will continue.

House approves tariffs on Chinese goods

The House has voted to raise tariffs on Chinese goods to punish the Beijing government for crushing the democracy movement last year. It is preparing another measure making continued open trade with China dependent on human rights improvements. President Bush has indicated he will veto both bills.

Nation

Budget efforts continue

The Senate has rejected efforts to rewrite a compromise deficit-reduction package that would double gasoline taxes. Senate leaders are pressing for quick approval so negotiations can begin with the House, which has passed a "tax the rich" version that President Bush has promised to veto.

Bush said he is looking for a package that will protect income tax indexing, bolster incentives, and push investment. He said those are the factors that will keep the economy moving and create jobs.

Bush has dropped his threat to let the government grind to a halt tomorrow. Congressional leaders said the president will sign emergency legislation keeping the government functioning normally through Oct. 24.

Clean air bill nears approval

Congressional negotiators are one step away from agreeing on a major overhaul of the nation's clean air laws. A tentative accord has been reached on controlling toxic industry emissions. Negotiators must figure out how to deal with acid rain, though. The Bush administration estimated that the bill, if enacted, will ultimately cost \$21 billion to \$25 billion per year.

National Guard may be employed to end Washington, DC murders

Washington, DC Mayor Marion Barry might enlist the National Guard in the fight against the rising murder rate in the nation's capital. Nine people were killed in Washington over the weekend, bringing the number of murders in the city to 373 this year. Barry said he is considering a nightly curfew in high-crime neighborhoods. If that does not work, he said he will call out the Guard.

Two dead in California shootings

A shooting rampage near Oakland, CA left two people dead and two others seriously wounded, according to police. They said a lone gunman shot and wounded a cashier at a fast-food restaurant, then went to a nearby market, killing one person and wounding another. The fourth victim was a cabdriver, who was fatally wounded. Police are holding a 34-year-old parolee in connection with the shootings.

Weather

Vigorous Westerlies

More fall-like weather will return for this weekend as a strong low, tracking to our west and north pulls much chillier air in its wake. A small high will then bring fair and slightly warmer weather for Saturday and Sunday, before clouds increase once again late Sunday, with showers arriving Sunday night and into Monday.

Friday: Showers ending in the morning. Strong westerly winds will turn to the northwest and continue with gusts up to 25 mph (40 kph). High temperature around 60°F (16°C) under partly to mostly cloudy skies. Slight chance of a brief sprinkle late in the day.

Friday night: Clearing, chilly with lows in the upper 30s and low 40s (3-4°C) along the coast.

Saturday: Mostly sunny, milder and less windy. Highs in the low 60s (16-17°C)

Saturday night: Clear and cool, with a low around 42°F (6°C).

Sunday: Fair with increasing clouds late in the day. Temperatures in seasonable 60s (16-21°C), with winds turning to west-southwest.

Forecast by Marek Zebrowski

Compiled by Brian Rosenberg

The Tech News Hotline:
253-1541

DO YOU HAVE ASTHMA?

We are paying for people with asthma to participate in a research study on asthma at the Beth Israel Hospital. If interested please call: 735-2676

National Collegiate Alcohol Awareness Week October 14 - 20, 1990

To: MIT Students who participated in the Medical Department's survey, Alcohol Drugs and Student Attitudes at MIT
Fr: The Health Education Service; E23-203, W20-547

Thank you for participating! Here are the answers to the 10 quick questions on alcohol and drugs that many of you requested.

Ten Quick Questions on Alcohol and Drugs

- T F 1. Alcohol is considered to be a drug.
- T F 2. Switching drinks will make a person drunker than staying with one kind of alcoholic beverage.
- T F 3. Someone under the influence of alcohol is apt to do something that would be out of character when sober.
- T F 4. Memory loss following a drinking occasion happens to most drinkers now and then.
- T F 5. Women can tolerate greater quantities of alcohol by body weight than men.
- T F 6. 80% of college students in the United States use drugs.
- T F 7. Mood altering drugs do not cause addiction.
- T F 8. Unlike other drugs, marijuana has no withdrawal side effects.
- T F 9. Marijuana smoke is more harmful to the lungs than cigarette smoke.
- T F 10. Unlike crack, cocaine poses little risk of addiction.
- T F 11. More information on these and other questions about alcohol can be obtained at the GAMMA table in Lobby 10 today or at the Student Health Resource center in W20-547.

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opinion

Japan buys time in Korea

Column by Matthew H. Hersch



Announcing the corporate merger of East and West Germany

The Tech

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I spent all of yesterday waiting for the collapse of communism in Asia. The clock in the time bomb attached to North Korea's tired, wasted old government maybe slow, but it is still ticking. After 40 years of dictatorial rule by Kim Il Sung, North Korea stands as one of the last bastions of aggressive, militaristic communism on the planet. Now with its communist neighbors China and the Soviet Union economically broke and seeking better relations with the West, North Korea stands isolated. But just when it looked like we could collectively squash the North Korean government into oblivion, Japan is moving in with hoards of capitalist cash to secure better relations with its old enemy.

With industrial production dropping by 3.3 percent a year, North Korea's economy is in worse shape than the Soviets'. With China and the USSR no longer willing or able to supply North Korea with raw materials, and Eastern Europe no longer forced to buy North Korean exports, the nation's international trade is nearly dead. Lacking the hard currency to buy oil, grain and other products, the North will have difficulty pulling through the winter. Faced with mounting troubles, North Korea's leaders are looking outward to find allies among their old enemies — the South Koreans and the Japanese.

South Korea's recent restoration of diplomatic ties with the North, however questionable, seemed inevitable. While the war between the nations may have never ended — Kim's government was recently implicated in the assassination of a large part of the Southern government's cabinet and the bombing of an airliner — the cultural ties between the inhabitants of the divided region seems to have survived. Far more alarming than the South's moves for reconciliation has been Japan's recent resumption of diplomatic contacts with the North.

In late September, an influential leader in Japan's ruling Liberal Democratic Party visited Kim in the North's capital, Pyongyang, responding to Kim's earlier indications that an accord between North Korea and Japan would be possible. The meeting ended with a speedy pseudo-treaty between the two nations which stipulates that the North will receive

Matthew H. Hersch, a freshman, is an associate opinion editor of The Tech.

monetary compensation for Japan's domination of North Korea during World War II. While the payment of such reparations seems reasonable, such reimbursement must not be handed over to the present government of the North.

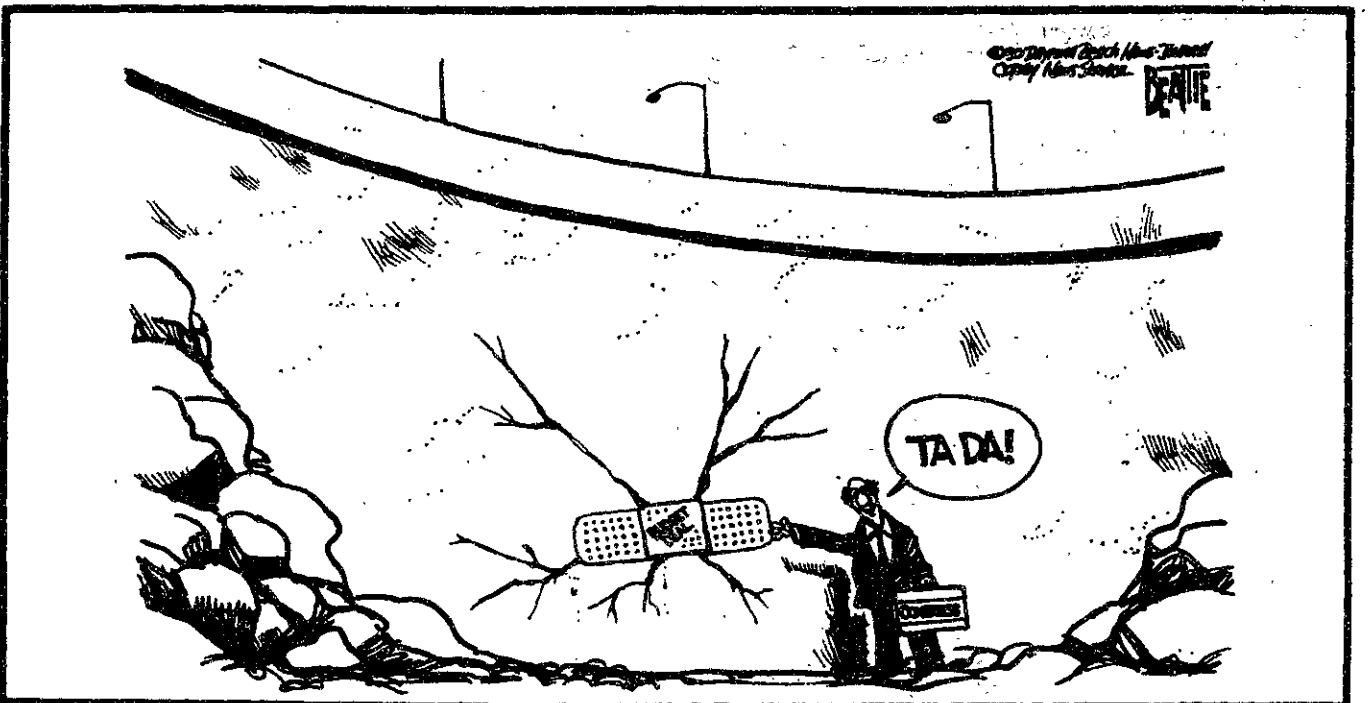
If Japan makes such payments, it would, in effect, declare that North Korea's punishment for its history of waging war against a member of the United Nations and sponsoring terrorism, militarism, and other nastiness is the infusion of enough cash into the North's economy to keep it solvent for years.

Japan has nothing to gain economically from better relations with North Korea; its moves are political. The North shows no signs of allowing Japanese enterprises to open in the North, and the North's rigid, centrally planned economy shows no signs of modernization or change. With one of the world's largest and best trained armies, the North is, however, a large enough threat to security in Asia for Japan to do anything it can to placate it. Japan's plan to aid North Korea is appeasement to a monster that it fears, rather than concern for the development of a fruitful friendship. If Japan pays North Korea's extortion fee, the world diplomatic consensus against wanton aggression will crack. Japanese Prime Minister Toshiki Kaifu, already taking heat for dragging his heels in supporting the multinational blockade of Iraq, cannot afford another political embarrassment.

Japan may be concerned that an isolated, weakening North Korea, like oil-dependent Iraq, may lash out against unfriendly neighbors. South Korea, occupied by 45,000 American troops and enough nuclear weapons to pulverize North Korea, is no Kuwait. Kim, especially aware that his old communist allies would not come to his aid, would not attempt to wage war now.

The Western nations, and forward-thinking Eastern European neo-capitalists, should join in an economic boycott of North Korea, in an effort to squeeze Kim's government, and his dangerously large army, out of power.

With the fear of a trade war between Japan and the United States now lessened, Japanese-American relations may fare better in the next decade than they have at any time since the Vietnam War. Arguments over Japan's foreign policy, unfortunately, may spoil this new relationship.



LETTERS TO THE EDITOR

Honor our teachers with 1991 class gift

I am writing this letter because I have an idea for the Class of 1991 class gift and would like to hear what some other students think of the idea.

MIT is known as one of the world's premier research institutions. Every year there are one or two incidents that remind us how much more MIT values a good researcher than a good teacher. The Institute does not do enough to promote teaching or recognize the teaching ability of its professors.

My idea for our class gift would help remedy this. I would like to see a fund established to start the Class of 1991 Freshman Teaching Award.

One way in which this award could work would be to let MIT handle the investing of the money but with the following restric-

tions: Each year half of the interest earned would be reinvested in the fund so that the fund would grow and the award would continue to be meaningful.

The other half of the interest earned would be given to the professor who wins the award. Of course, he should also get something else — perhaps a trophy in the shape of Aladdin's lamp or a beaver. There should also be a permanent tribute such as a large plaque displaying the names of all the winners.

The award should be limited to the professors of Introduction to Solid-State Chemistry (3.091), Principles of Chemical Science (5.11), Physics I (8.01), Physics II (8.02), and Calculus (18.01 and 18.02). These classes are the ones which most MIT students must take.

The professors of these classes

are the ones whose teaching-ability matters to the most students. Teaching ability is also more important to freshmen, who are just getting acquainted with the Institute, than to other students.

Finally, the most important thing about this award is that it would be given by the students. The freshmen should be able to vote to give it to whomever they want. If four straight classes vote to give the award to the same professor, the fifth should not be prevented from doing the same.

I do not think that more needs to be said about such an award. I would like the officers of the Class of 1991 to address the issue. Whatever they decide, it is time that someone did more to recognize teaching ability around the Institute.

Lee Heavner '91

opinion

LETTERS TO THE EDITOR

Ignorance perpetuates "wall" separating "blacks"

Writes Rebecca Geisler '93 in her recent letter in *The Tech* ["Blacks must be more integrated into community," Oct. 12], "there is a wall around the black community which is in some cases impenetrable."

That's an interesting concept. And since I am under the assumption that there may be more readers who know as little about blacks as Geisler, I think that some elaboration on that concept is in order.

Whites and others from around the country and around the world come to MIT with all their racial prejudices and misconceptions about blacks, a race with which they have no experience. They are all ignorant.

But it is not this ignorance that bothers me. More than once since I came to MIT have I calmly responded with "Yes, we do bathe regularly," or "Yes, my entire body is this color," or "Yes, we do comb our hair," or "No, our hair does not need special

treatment to stand up like that." I am quite willing to define some term or demonstrate some dance to someone curious about my culture. But that's not usually the case.

Usually the whites who are willing to accept blacks are only willing to do it when those blacks meet their terms. Verbally they say that blacks should integrate when what they really mean is that blacks should assimilate. It's as though their attitude says, "Hey, let's put all these racial differences aside. Be as white as me, and everything will be okay."

But I'm not white; I'm black. I like it, and I'm proud of it. And until whites and others are willing to accept the fact, there will be racial tension in our society.

It's like the melting pot analogy proposed by a friend of mine in the freshman class. He says that perhaps America, often referred to as the "Great Melting Pot," is striving towards the wrong goal.

A melting pot is a place in which several different things become part of one homogeneous mixture, leaving the original ingredients unrecognizable. He says that maybe we should maintain our identities while complementing and improving on each other.

So to Geisler and all the others who think like her, please stop criticizing us and start doing your part. If you are interested in black students here, go out and start meeting them. It may not be as easy as meeting a Chinese or Korean or white person because there are only 200 of us here on the undergraduate level, but we are here nonetheless.

Please do not tell me that the wall between us is impenetrable until you have tried to break through it. And please do not criticize me for not trying to climb a wall which you may have helped build.

Albert W. Morton '92

Last week a letter by Rebecca Geisler '93 appeared in *The Tech* ["Blacks must be more integrated into community," Oct. 12], voicing her concern about how "blacks" at MIT interact with the white community. As two international students who are not white, we were disturbed by certain generalizations and assumptions she made.

First, Geisler says that at MIT "there is a wall around the black community, which is in some cases impenetrable." But Geisler does not tell us exactly who or what this "black community" is. If Geisler has not noticed, international students form 10 percent of the undergraduate population at MIT, and not all of these students are white.

There are African and Caribbean students here, who Geisler may also consider "black." As a Jamaican and as a Gambian, we wondered if we were the ones who walk around MIT with a social "wall" surrounding ourselves. We don't think we do, nor do we think we belong to any group that does.

In fact, we come from countries where one's integrity is measured largely by one's hospitality and generosity towards others. We keep our homes open and will willingly offer food and drink to the unexpected guest.

The many North Americans who visit our countries each year to enjoy the warmth of our climate and of our people can attest to this sociability. Consequently, to imply that we are anti-social, that we are apprehensive about

meeting "whites," unfairly represents the way we were brought up and is to a degree insulting.

Nonetheless, Geisler appears to have written the letter with apparent good intentions, speaking for those that genuinely want to integrate themselves with the "black community."

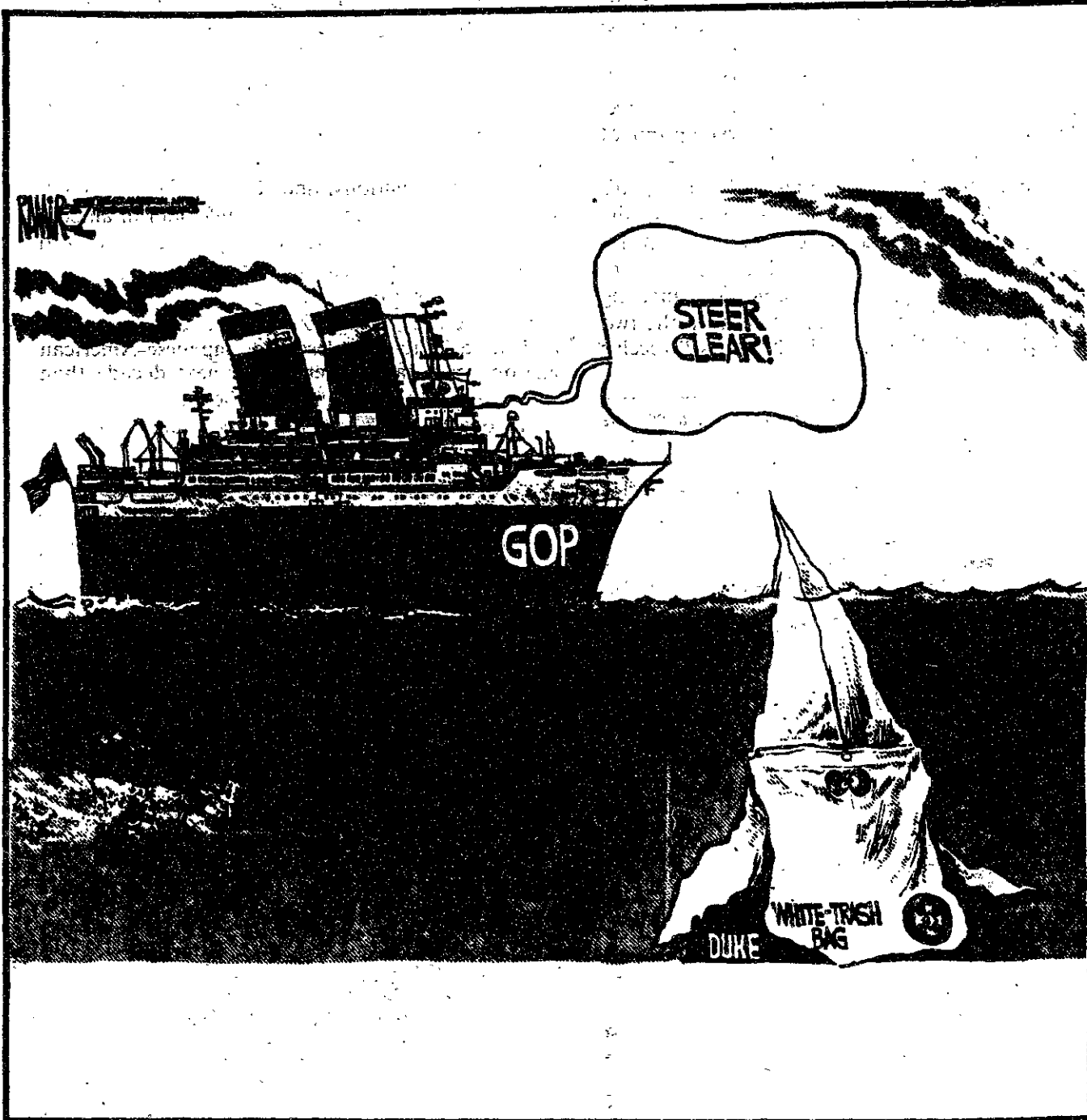
But the mere use of the term "black community," an oversimplified expression that suggests an inability to view the group as a culturally varied one, already says a lot about how separately she perceives herself in relation to these people.

How does Geisler expect to meet people and to have them feel comfortable around her if from the outset she is manifestly preoccupied with differences, like color, rather than similarities, and if she sees the person not as an individual, but someone belonging to some over-generalized group, separate from her own?

Geisler implies that MIT is in general an integrated place, that a reluctance to integrate is a problem peculiar only to a certain "black community."

We ask Geisler to look around. Look at the 33 different living groups scattered throughout Cambridge and Boston, some of which have erected their own walls around themselves. Look at how the freshman housing proposal was rejected overwhelmingly last year, and at the separatist nature of rush, and ask yourself just how integrated we really are.

Colin McGregor '92
Yusupha Jow '92



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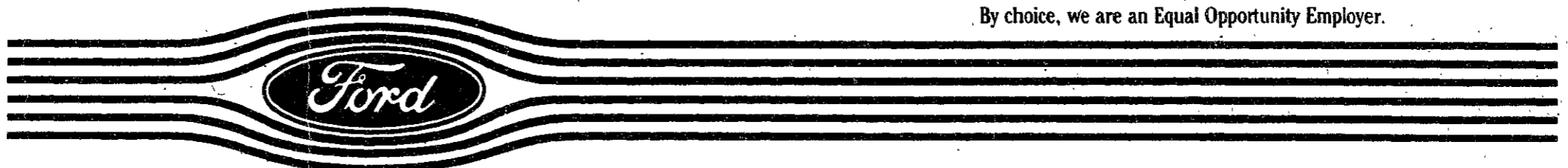
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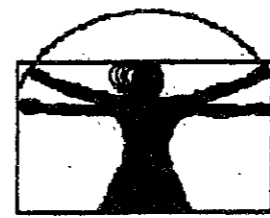
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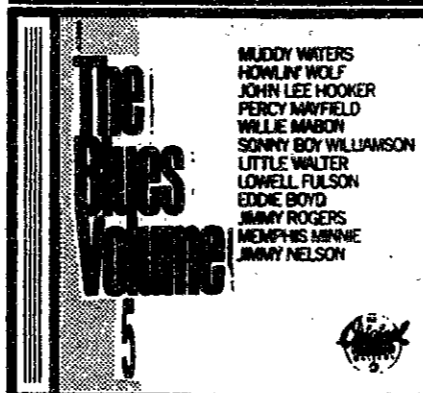
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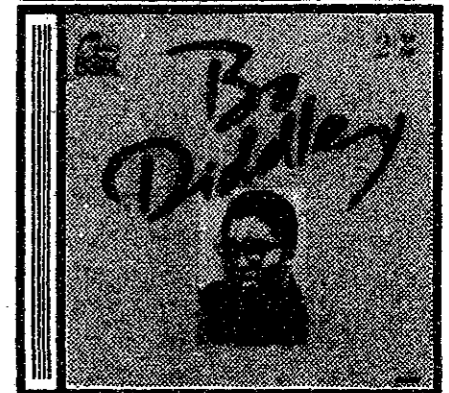


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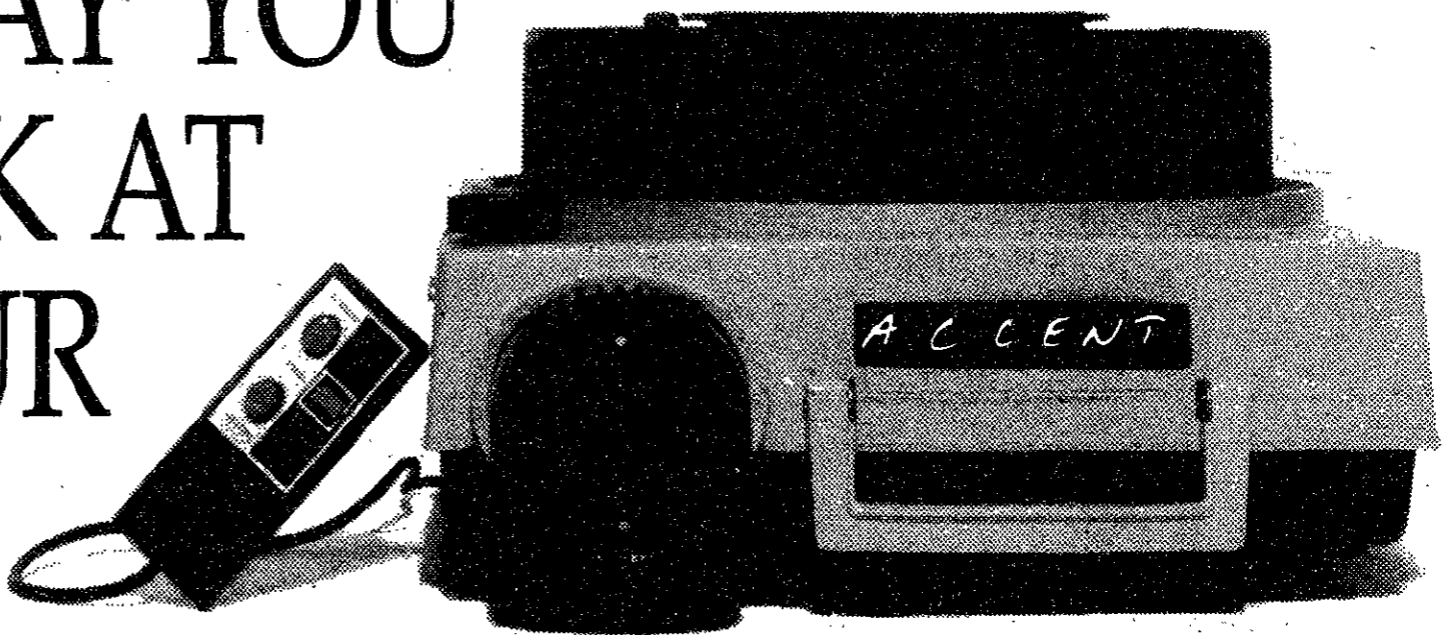
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 - Oct. 25, Murata, Hewlett Packard, Vector Research & Sony, 4PM-7PM
 - Oct. 26, Casio, Code-A-Phone, Ricoh & JVC, 2PM-5PM
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Moving the Institute forward into the

Interview

By Prabhat Mehta

The man who walked out of his 3-208 office to greet me at 10:10 am Monday was quite different from what I had expected. Countering the reserved, quiet, almost shy demeanor presented in the numerous publicity photos circulating around The Tech office, this man delivered a hearty, low-pitched greeting betraying his Appalachian and Midwestern roots.

He sits back, not behind his enormous desk, but at a chair on the other side of the office. He is at ease, even though he is the first "outsider" to occupy his current position since Karl Taylor Compton. He is Charles M. Vest, 15th president of the Institute.

I spoke with him only a couple hours after he took his new post, but already, he noted, he had been victimized by a hack. "I almost couldn't find my way to work," he told me, referring to the wall-sized bulletin board covering his office door that morning.

"My first major policy is that we're going to keep that," he said later that day. "The first time issues get hot on campus, we'll pull it out."

Q: You haven't been here too long.

A: That's right. . . . Well, it's been two hours.

Q: I suppose you're still trying to get acquainted with MIT. Have you formed an opinion on what you think is good about MIT — what you think we should continue doing — and what you think could be changed?

A: Well, let me try to make a few observations given the fact that I've only really been on the job for two hours and do not have a very specific agenda set forth. I think the best way to begin answering that is to tell you a little bit about how I spent the last two months since I've known I was going to be coming here.

I have tried to spend about three days a week up here most weeks; sometimes it's been four. During that time I have met with a very large number of faculty, a few students, but primarily faculty and administrators — I think somewhere over 110, individually — for about an hour at a time, largely in a passive mode, asking them what they see as the key issues here at the Institute and what things they believe I'm going to need to learn about and understand and worry about as we get started this fall. I've kind of taken that down and begun working that into a full and lengthy outline of what the issues are, from the very specific things to the broader ones. But there are a few themes that have really come through in all of those discussions.

First, virtually every faculty member I talked to within the first five or 10 minutes got around to talking about undergraduate education. It has given me a sense that the faculty do, within this great research university context, believe that education is the primary reason they're here. I know that students everywhere always believe that teaching and undergraduate education are downplayed. But I really think it is at the core of the Institute, and I hope to keep that and amplify it as well.

The second thing is a sense of uniqueness at MIT — particularly in the extent to which people here are concerned about the present and the future. If you look at the classical university structure of a school that is more dominated by the liberal arts, you notice that people spend a lot of more time thinking about and learning about the past, which is very important. But the way in which MIT engages with private industry and government is quite unique. It gives us a real presence in the way the world operates. This tremendous creative energy we have, looking forward to the future — it is the second thing that falls out of almost all of these discussions.

The third thing I've noticed, and this may sound a little altruistic, is that there is a real sense of service to the world at the Institute that you don't find on many campuses. I think MIT really does believe it plays a leadership role in the United States and in the world at large. It certainly has, at least since the Second World War, and I think that we ought to continue to build on that.

So when you put all of these things together, I think the issue is what are new

areas of endeavor that we need to be looking at. That really is for the MIT community to define, but I want to work with the university over the coming years to begin some global planning and thinking about the future.

A few things come immediately to mind. One is that somehow — despite the stringent budgets that all universities are going to be facing in the next few years — somehow we have to be sure that we maintain the flexibility to let MIT faculty and students do the really creative and innovative and unusual things that they have always done. That's how you become a leader. You don't just say, what are the big trends? And let's move with the trends. But you ask how do you do these things? How do you start a Media Laboratory, for example? Or, going back several years, what brought about the really innovative work that went on with radar and microwave systems and so forth? Somehow we have to be able to maintain our ability to do new things.

I think also another obvious trend in both education and research is going to be grappling with how we work with problem areas that cut across so many different boundaries. A rather obvious example is global and environmental change. It is a problem which involves physical science, technology, politics, social science and internationalization. How do work together across boundaries to grapple with problems like that?

Other obvious examples include how to use the world's energy resources more wisely and efficiently and effectively; thinking about the ramifications of the rapid advances in biotechnology, that have not only a scientific basis but ethical and policy questions associated with them. I think MIT is very well situated to deal with issues like this and that is an area that has tremendous appeal to me, and I hope it does to our faculty as well.

I think all of us also have to become concerned with the problems associated with our nation's educational system. As thoughtful citizens, we must see it as one of the most daunting challenges in front of us right now. It encompasses the entire spectrum of education, and in many ways the problems in the K-12 system are even more troublesome than those that are facing higher education. There has been a lot of interest and enthusiasm expressed by the faculty I have talked to around the Institute for finding appropriate ways for MIT to help with some portion of that problem, whether it is defining what science curricula should look like today, or finding new ways of using technology to improve and assist education. As I looked around the Institute there were 50 programs of one sort or another going on already, including individual faculty involvement with secondary schools. That is encouraging. But I think all of us have to be worried about our educational system.

Another area that weighs quite heavily on my own mind is the whole area of the diversity at the Institute. I think that, particularly given the large emphasis on technology and science here, the amount of diversity that has been created in a fairly short space of time in the undergraduate student population is something we really should be proud of. On a relative basis, it is much better than most other first-rate institutions and certainly those emphasizing science and engineering.

But I think we are going to have to work a lot harder on the faculty and staff levels over the coming years because ultimately I think making progress in that area — changing the face of the professoriat, so to speak — is a major part of meeting the challenge of educating more minority students. So that's something that I hope I can help bring to the top of peoples' agendas over the next several years.

We must keep up our efforts, particularly at the graduate level, to attract more women and underrepresented minorities because MIT is a great supplier of faculty for other universities around the world, and I think we can help the long-term problem in that way, but I'm also hoping that in the short term we can make more progress in our own faculty.

So those are a few things that I have on my mind.

Q: It's interesting to talk about changing the face of the professoriat. That's a big problem nationwide, obviously, and you just made an interesting point — that MIT is as a supplier of faculty, and so we

have what may be considered a double effect with regards to attracting more women and underrepresented minorities. As we make progress in improving diversity for our own campus, we do so for those colleges and universities which hire faculty from MIT as well.

Q: Obviously enriching the MIT community is not easy to do because it involves, as you pointed out, reforming our educational system K-12, as well as at the university level. But have you thought of any specific ways that MIT could change its posture to help attract more women and underrepresented minorities, for both the student body and the faculty?

A: Well, I think that the question is much easier to answer at the student level. That's why we've made fairly strong progress there. I think there is no substitute for having an involvement with young minority people and young women in junior high school, particularly in junior high school, and perhaps into high school. Some of that we may do directly from the Institute, with students, faculty, and so forth, helping out. It may also mean getting professional organizations more heavily involved.

The number one thing you have to do is get to the young people and build their enthusiasm for science and education in general, as opposed to just publicizing MIT. I think we must begin with building enthusiasm for mathematics and science and those other fundamentals they must have. I think there are good opportunities to take those young people and work together with the private sector to get them intern-like jobs in the summer to see a little bit about what goes on in a real company in engineering. We just need to do all those "inspirational" kind of things.

Improving diversity in the faculty is much more difficult because the current production of minority PhDs, particularly in science and engineering, is so small. I saw a stunning way of stating this not long ago, and my numbers may not be exactly right, but they're close. If you took the number of African-American PhDs graduating annually in engineering right now, assume that the same percentage of those people went into teaching that typically goes into teaching among all PhDs in engineering fields, and spread them uniformly across all of the US engineering schools, you would be able to hire an African-American faculty member once every 19 years. That's the magnitude of the problem we are facing. Looking at women, it's every five or six years, I believe. So that's why I think that a large part of what we do has to be concentrating together with other major universities on attracting those students who now are beginning to come in somewhat more representative numbers in the undergraduate population, and really encourage them to work in advanced research and teaching careers.

In terms of building our own faculty, given that environment, I think that the number one thing that I can do is really just continue to let people know how important I believe this is, and keep it on all of our consciousnesses collectively and just get people to bring that in as major factor as they think about individual hiring decisions. There's no magic solution. I think we just have to move it up on all of our agendas.

Q: We've talked both about issues specific to MIT and about larger issues in which MIT can play a role as far as policy goes. There has been a debate emerging recently about what the national role of a university is — what obligations it has to serve the national interest. An article which ran in The Wall Street Journal a few months back claimed there was "Rising Nationalism at MIT."

Q: You can look at MIT strictly as an educational institution or as an institution that has a larger role to play in its society. Obviously MIT must play some sort of larger role given its position as a leader in science and engineering. How do you view our national role as changing within the next 10 years, specifically with regards to issues like international trade and national productivity and prosperity?

A: When I referred earlier to the fact that at MIT much more than most universities is going to be engaged in real time with the world around it, that is very much what I had in the back of my mind. I think that MIT does have and should continue to have a role as leader in the United States, and really in the entire international community.



MIT President Charles M. Vest in his new

I am disturbed about the extent of techno-nationalism that is beginning to develop around the country. Unfortunately it is likely to become even more of a factor if the economy continues to move more deeply into a real recession — I hope it doesn't happen, but it certainly is a clear and present danger for all of us.

But I still think that in the long run that the cosmopolitan nature of American universities and certainly at a place like MIT is very important. I think that the dividing lines between national interests and global interests are going to get fuzziier and fuzziier over the decade ahead. We have to contend with Europe, we have to contend with the Pacific Rim, and I think that it is not appropriate to view that simply as a horse race. I think the world is interconnected now in ways that it has not been in the past, and those interconnections are going to be even greater in the future.

So yes, we simply need to pay a lot of attention to American productivity and I think we've begun to absorb a real leadership goal there, for example through the groups that led to *Made in America* and *The Machine That Changed the World*. The latter, which has just been published, while I have read only excerpts, clearly helps analyze the changes in formats of manufacturing technologies from craftsmanship to mass production and now to lean production. These are lessons that we're learning back and forth across the world. We've learned a lot about management and, increasingly, technology from other countries, and we've served as a wellspring, as well. So I hope that we will be able to maintain a fairly internationalist view because I believe that in the long run that best serves the nation.

Q: You talked about techno-nationalism. I imagine you were also partly referring to problems MIT has had with its Industrial Liaison Program — controversies regarding foreign access to technologies developed at MIT. Do you see techno-nationalism as a force countering efforts at universities in the next 10 years?

next century, Charles Vest thinks globally



Prabhat Mehta/The Tech

v office

A: Techno-nationalism will be a forceful pressure — there is no question about that. And I think we want to maintain a healthy balance of US involvement, that is I certainly hope that most of our programs continue to be dominated by US corporations because I hope US corporations will value what we do here and value that interchange.

But as I stated earlier, I also would not want to see us beginning to throttle back on the amount of interaction we have with other countries. I hope that we will continue to broaden. In particular, I would like to see Europe become a stronger component of our interactions. I think what we need to do is to place as much emphasis as we can on the quality of access to information and making sure that relationships are really two-way flows, because we have things to gain from these other countries as well.

Q: Getting back to educational issues . . . I've noticed we've discussed the broader problems afflicting our educational system on a national level. Have you given any thought to some of the specific educational concerns at MIT? One very interesting proposal is that engineers be required to study for five years. What is your opinion of lengthening the engineer's term?

A: I think that the answer to that question really needs to be focused not on "Should we have a five year degree, or not?" but "What is it we want to accomplish in engineering education?" What creates what I like to think of as a robust education for the future — one that can move and change as the world changes so rapidly? It is clear that you could do a better job of providing all the information and learning skills that people need if you required five years, six years, or seven years; one could learn forever.

I think that MIT again has played a leadership role in beginning to study and address this question. There are major issues about what the content of the curriculum should be; what the economics of a

five-year degree are; what the job market is; how it would be viewed by the private sector. It is not obvious to me that we would want to just switch to a five-year curriculum. The whole system of university education, training, experience, and work and how it's financed has to be looked at as a whole.

But I do think that it is time for the curriculum in engineering here and elsewhere to begin changing to reflect some of the realities of the world — the increasing international nature of all that we do, the interdependence of technology with society at large. We need to do an increasingly better job of teaching students how to participate well in team approaches to problem solving and design, while not giving up an inch of what America has always been really great at, which is individual innovation and initiative. All these things have to be balanced. My guess is that out of this thing will eventually come a subset of students who may have a five-year option of some sort to look at.

If you stop to look at it, there really is a lot that could be done within the context of a four-year bachelor's degree and a traditional master's degree. I suspect that whatever emerges, if it is a five-year plan, it is going to include some degree that is a non-bachelor's degree. And it will probably start as an experiment, and go from there. But again, I would want to emphasize that that's not something the president decides — that's a faculty decision — and the key thing is to keep the faculty engaged in serious debate and consideration of what is needed in an engineering curriculum.

Q: One of the things Dr. Gray stressed was having our engineers understand the more humanitarian aspects, or social consequences, of their engineering. By doing so, he'd hoped the engineer would more forcefully take on leadership roles in science and engineering policy. Partly the efforts of undergraduate education reform aimed at facilitating that. Do you see any areas in education which need further reform?

A: I believe that engineers must understand more about the societal context in which they practice their profession. I personally believe that not just at MIT, but in general, that the undergraduate curriculum needs to be broadened a little bit. I think we need to work with our colleagues in humanities and social sciences to better define what we mean by that. I would like students to have the opportunity to think much more deeply about the context in which technology is applied. I think that as we look at the environmental and energy challenges that are facing us, it's obvious we need to do that. Whether one approaches that in sort of a massive way, by saying that everybody must spend more and more time on those aspects of education, or whether this becomes a branching out in education, I don't know. I think that's open for debate.

We must recognize that MIT will always attract some of the brightest students in the world, and we want to make sure that they are able to understand not only teamwork, production, manufacturing, social content, but also the other side of the spectrum — that the science base of engineering is changing. There is more and more to learn here; I think we have still just scratched the surface of computer and information technology as it applies to the practice on engineering. Advances in biology will have widespread effects on all areas of engineering that we really haven't begun to understand yet. There is an increasing feedback into engineering from the social sciences that used to always go the other way. Now it's coming into engineering.

All of these things have to happen simultaneously, and I think the core of the debate is whether you try to force an understanding of all these aspects into a four- or five-year curriculum.

Q: Getting to a different issue now that you might have to deal with in a couple of days at the faculty meeting. One of the biggest controversies on campus last spring involved the Reserve Officers' Training Corps. What do you think about ROTC's policy of excluding gay men and lesbians, and how do you think MIT should respond to it?

A: There are some things that make me optimistic, and some things that make me pessimistic. First of all, let me just be unequivocal: I support a broad participation

of gay males and lesbians in our society. I am 100-percent behind the Institute's non-discriminatory policy, and I feel there is an absolute incongruence between our policy and those of the Department of Defense.

What gives me optimism is that as I talk to people, I sense that there is as near unanimity on this topic as one could ever hope to find on any topic on a university campus. I think that students, faculty — almost across the board — believe that we need to work toward resolving that problem, and not having repeats of the incident that happened to [Robert L. Betticker '90] last spring.

The pessimism is that the wheels of a large bureaucracy such as the Department of Defense turn very slowly on social-based issues. And quite frankly, as I've talked to people around the country, I've come to believe that we can't expect a lot of support from the Congress, or really from the population as a whole. I think we must recognize that this is an issue which will take time to resolve. But nonetheless, we should not let up our efforts to try to bring it to a resolution.

I think we have to approach this by building a coalition around the country, and whether we like it or not, we've got to recognize that the only real solution to the problem is in Washington. So we've got to focus our collective efforts on that; recognize that it is not likely to be changed overnight, but frankly I believe that it's inevitable that eventually it will be changed, and I think that we just need to do our part to try to speed up the time scale.

Q: What do you think of the efforts of some faculty members to put a deadline on MIT's commitment to the ROTC program if the DOD fails to change its policy in the near future?

A: Well, this is an area that the faculty is going to have to debate and decide on, and I think it's inappropriate for me to make a specific statement right now. I look forward to the debate at Wednesday's faculty meeting and hope that something that is pragmatic and has a chance of ultimately being effective will come out of that discussion. I have complete faith that it will.

Q: Another issue from last spring was the Coalition Against Apartheid's divestment protests. Divestment aside, many community members were concerned about how the students were treated during the demonstrations. Thirty-two students were arrested on a single day last spring. Jennifer Huang '90 was recently convicted of assault for a crime she allegedly committed during the protests. I don't know if you read a lot about what happened, or talked to people about the protests. But how do think MIT should deal with its students in such circumstances?

A: This is a university campus, and we should thrive on forthright statements of views and on major issues, we're going to have dissent and freedom of speech and expression around here — it's a great part of the tradition of this and any other first-rate university.

At the same time, of course, there do have to be some reasonable standards of conduct on the part of every member of the community so that what we do and say and how we act don't infringe on the rights of others. It's my understanding and experience that unless one can arrive at a truly broad consensus around the campus of what those limits of conducts are and how they will be judged and dealt with, we will just have one occurrence after another of problems that we won't know how to handle. So I'm very much in hopes that the committee on demonstrations that Dr. Gray has begun putting together will come back with a set of recommendations that as a community we can live with.

Otherwise, what happens is you get forced into positions where I or others have to make *ad hoc* decisions, and that's not the way for the community to best thrive.

Q: What is your opinion on the divestment issue?

A: The issue in my view is not as simple as whether to divest or not. It is really an issue of shareholder responsibility. I believe MIT's is a position that has been thoughtfully taken and that the moral and ethical issues have been thought through, but it's an issue that I think will continue to be discussed and monitored within the Corporation, and I look forward very much to taking part in that now and in the

future and doing what's needed for progress in South Africa.

I also understand that we have had or have some educational interaction with people of color from South Africa. I'd like to learn more about that and see if that is something that can be maintained and possibly strengthened as a way of doing something positive and meaningful.

Q: Tuition increases have consistently been outpacing the inflation rate in recent years, and it seems as if there hasn't been any real attempt to address the problem of how we're going to bring tuition under control. The University of Michigan being a public school, you probably haven't had to deal with this issue very much. But do you have any thoughts on the problem?

A: I'm very concerned about this general trend. What is happening is that we are expecting of ourselves, and society around us is expecting universities to do more and more and more, and there are no resources in the long run to take care of these increased responsibilities. Every day across any university administrator's desk come requests for perfectly good things to make us better employers; to provide better facilities for teaching; to keep competitive with salary pressures and faculty; and so forth and so on; but no new resources. So that is the real problem.

As the costs are rising faster than revenues, something has to be done to bring them in balance, other than simply to increase the revenue through tuition. Now MIT has taken a very bold step to begin to deal with this problem through the Campaign for the Future. Ultimately, the success of the campaign will have to be a very major part of our coming to grips with this. Although we do a much better than most schools right now, I think we have to continually monitor our own operations to be sure we are focusing appropriately on the fundamental mission of the Institute and not carrying a lot of costs that are not needed to accomplish that.

I think all of these things are going to have to be done: careful monitoring and continuing attention to the administration of the budget and costs within the Institute; heightened efforts to raise more private resources; renewed focus on our primary mission as much as possible. But we're in a terribly competitive world and the pressures aren't going to go away. At the same time, I certainly agree with the premise that tuition cannot grow in an uncontrolled manner. The balance that I really worry about is the balance between tuition level and our ability to provide appropriate financial aid. If that begins to get out of kilter then we will have problems of the first magnitude.

Q: Speaking of resources, MIT lost a lot of resources when the new magnet lab went to Florida. Dr. Gray and others have been very outspoken about this controversy. Do you have any opinions on the matter?

A: I'm not sure we have enough time to go into that. I'm very disconcerted by the nature of that decision, not only for the Francis Bitter Lab, but in general. It is clear that the peer evaluations of the two proposals did not end up being the dominant force in that decision, and that does not bode well for American science and technology. This is an issue that I have followed very closely, and I look forward to working with the new director of National Science Foundation and others to try to make sure that in the future, decisions are made on a more rational basis. In the mean time, of course, we will all be rolling up our sleeves to do all we can to maintain the excellence of the Francis Bitter Lab.

Q: You're probably going to give yourself more time to get comfortable with the Institute. What sorts of things are you planning to do in the next couple of months?

A: This is sort of the next phase; I've already described what I did over the summer. To an extent one just jumps into the job at this point, and the next phase of my learning about the Institute will be total immersion.

To answer your question, I do plan to go out of my way during this year to be at various events and meet people, and I'm going to do that to a greater extent than I might normally; so that's going to be an informal component. I'm going to make sure I have the chance to interact very informally with student groups and go to dinners and dormitories and things like that.

Henry & June poses paradox of innocence and sexuality

HENRY & JUNE

Directed by Philip Kaufman.
Starring Maria de Medeiros, Fred Ward,
Uma Thurman, and Richard E. Grant.
At the Cheri and Harvard Square.

By JOANNA STONE

"I FEEL INNOCENT," pro-
nounces the protagonist,
Anais, time and again during
the course of *Henry and
June*. Indeed, in perhaps the most contro-
versially erotic film of the decade, we find
a protagonist who personifies innocence.
However, this same protagonist is the in-
carnation of female sexuality. And here is
where the paradox arises.

Lying naked next to her husband's best
friend, fantasizing about her lover's wife,
Anais maintains, even intensifies, her own
innocence. For it is not her acts which dic-
tate her state of innocence, it is instead her
self-perception. Never during the course of
Henry and June do we forget that we are
seeing the decadent European society of
the early 1930s — around which the film is
centered — through the eyes of Anais.

Henry & June is based on the unexpur-
gated diaries of Anais Nin. Thus, the
world we see in this film is the world as
described by the diary entries of a young
woman. The film skillfully maintains a
diary-like quality to it, not only through
constant reference to the diaries of Anais,
but also through an unreal-world quality



Fred Ward and Uma Thurman in Philip Kaufman's *Henry & June*

heightened through all mediums of the
film. Indeed, the dialogue uttered can be
thought of as that of writers — overly elo-
quent, lacking spontaneity. And the events
that occur throughout the film lack a cer-
tain credibility — presumably dramatized
through the perception of a writer.

When Anais first embarks on her affair
with Henry Miller, it is behind a stage on
which her oblivious husband plays the
bongos. The fantastic quality of this un-
likely scenario is heightened through the
photography, a translucent red screen sep-
arating Anais from her husband, his shad-
owed image and a close up of his hands
shows him playing the drums to a climax.
One can imagine that this would be the
scene as recalled by a romantic writer.

Indeed, the quality of the photography ap-
pears picturesque throughout. Even the
film's finale has a fairy-tale quality to it —
not until the end do we first become cog-
nizant of sunlight — consistent with
Anais' imagination.

It is by no mistake that Marie de
Medeiros, who plays Anais, is able to ap-
pear overtly wide-eyed through the film.
Medeiros manages to portray the dichoto-
my of innocence and erotica with great
deftness. It is Anais' role to tell us a story,
it is Medeiros' role to hold the film, and
she does so beautifully. The audience can
sympathize with, envy, or abhor Anais, yet
with Medeiros' strong performance one
never loses interest in her.

Thus, the film *Henry & June* is not

about the author Henry Miller and his
wife June; it is about how Anais Nin per-
ceived Henry and June, how she loved and
sexually yearned for them, and how she
viewed herself in relation to both of them.
It is indeed a rendition of Anais' tribute to
them.

Similar to his work with Kundera's *The
Unbearable Lightness of Being*, director
Philip Kaufman does a superb job of tak-
ing a written work of art and transforming
it to the screen. Through such a transfor-
mation, he does not lose any of the work's
original point of view or original naive
beauty.

Equal in greatness to the film's achieve-
ment of the visualization of the written re-
cords of one woman's sexual awakening, is
the exceptional performance by Uma
Thurman as Henry Miller's wife, June. So
rare is it in today's cinema to witness a
performance which lacks flaw. Yet, Thur-
man manages to produce just such flaw-
less work. She is completely believable as
the promiscuous, lower-class girl from
Brooklyn (quite a change from her upper-
class, 18th century virgin role in *Danger-
ous Liaisons*). If it is Medeiros who holds
the audience, it is Thurman who steals the
show.

The amount of quality and talent dis-
played in this film is far too expansive to
list. All that can succinctly be said is that,
like Kaufman's earlier work (*The Unbear-
able Lightness of Being*), *Henry & June* is
a must-see.

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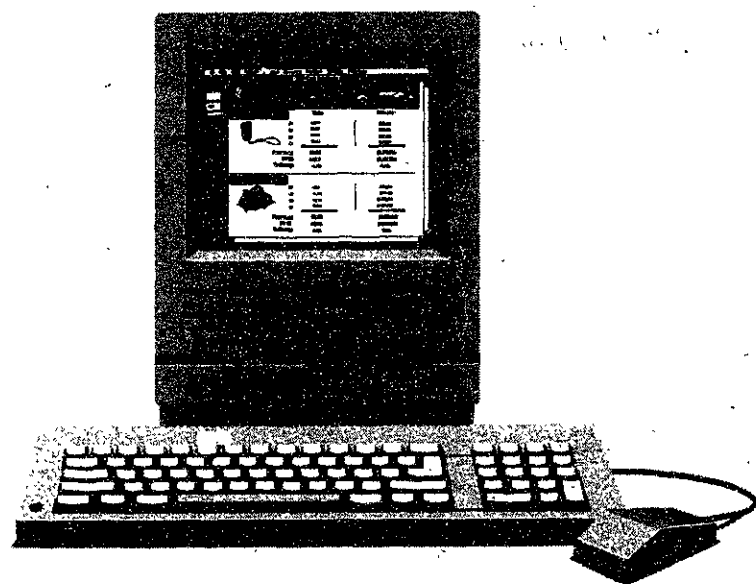
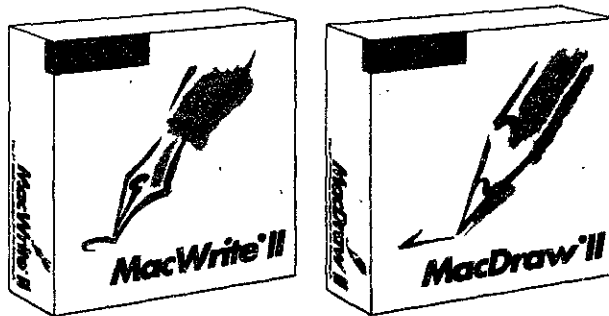
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ARTS

Five years of Jazz Ensemble on CD

MIT



MIT FESTIVAL JAZZ ENSEMBLE
Debut compact disc.
\$8 general, \$7 MIT/Wellesley students.

By MARK ROMAN

MIT'S FESTIVAL JAZZ ENSEMBLE has been making a name for itself over the past several years, through local performances and national festivals. Despite the turnover that comes with a collegiate career, the ensemble has managed overall continuity and consistency. With the release of their debut compact disc, they can now build on that reputation with radio stations and the listening public.

The 11 selections on the disc offer 70 minutes of music, but even at that length the listener won't feel put upon or overloaded. The production is smooth and clean, and the sound a pleasure. The music covers a broad range, demonstrating the versatility in the ensemble's repertoire, from more quiet, contemplative pieces to the full-scale swing normally associated with jazz orchestras. Categorizing the music isn't a very easy thing to do, and as tired as that description gets to be, it is entirely appropriate for describing the ensemble and its work.

Represented on the disc are five years of Jazz Ensemble history, highlighting the involvement of the students who played and the people who took the ensemble beyond a pedestrian student activity and made it into a serious and worthwhile student endeavor. Chief on that list are two champions of the ensemble, Herb Pomeroy and

Jamshied Sharifi '83. Pomeroy, a widely recognized jazz arranger, musician, and educator, organized the band in 1962 and conducted it for 22 years. Under his direction, the Jazz Ensemble earned national acclaim at collegiate jazz festivals, and gained its reputation as an outstanding collegiate band.

Sharifi, a graduate of MIT and the Berklee School of Music, and former member of the ensemble, assumed directorship after Pomeroy. Sharifi's role is particularly notable, in that most of the selections on this disc are his original compositions.

It is this kind of personal involvement and creative input that distinguishes the work of the ensemble from other concert jazz bands, and characterizes the approach



Jamshied Sharifi '83, director of the MIT Festival Jazz Ensemble

of the musicians as well. For many this is not an academic effort, but a matter of personal commitment — something outside of their academic program which they find the time to do. It is this dedication that has earned the ensemble its well-deserved reputation — even among music schools — and has fueled the creation of this album, from the composition, arrangement, and performance of the music, to the engineering, production, and realization of this disc.

Arrangement and direction on the entire disc is first-rate. Larger ensemble work can lapse into an incoherent, unwieldy sound without able direction and charting, while the MIT Jazz Ensemble seems to effortlessly avoid these pitfalls in their performance. Especially pleasing are the quieter pieces, like "Turn" and "Rain," because they demonstrate the musicianship of the entire ensemble and the ability of the trumpeters to elicit the power of their instruments without overplaying. Sharifi's orchestration makes rich use of a variety of instruments and exploits the talents of the musicians. "Crossing Time Zones" demonstrates the technical capability of the group, with parts scored in different time signatures. The best work on the album, however, is "Katarina's First Song," an original composition by Sharifi. The arrangement and performance show the band at its best.

More uptempo and swinging are "Boston Baritone," "One Road," and "Giant Steps," with their rock-solid rhythm and precision. The ensemble builds from a quiet opening on "Giant Steps," to lean, swinging solos from saxophonists Mark Messier '93 and Steve Saito '91, and pianist Michael Valdez '90. The Miles Davis composition, "Tutu," gets a fine reading from the rhythm section and Ray Zepeda '88 on saxophone. The tune seems to extend into something longer than it should be, and while the performance is no liability, it squanders some of the

punch it builds in the beginning.

Across all the tunes, however, the saxophonists repeatedly stand out. Their sound is wonderfully tight and cohesive, and the musicianship on the solos remarkable. Witness the soloists' work on "Turn" and "Katarina," and the entire section on "One Road." Zepeda has clear command of his instrument, which is featured on "Turn" and "Katarina," as does Messier on "One Road" or Susan Ward '92 on "The Change," none of which ever sound rehashed or gratuitous.

Where does the ensemble take it from here? Their debut disc illustrates the evolution of some serious musical talent, and gives us a hint at how much potential there is waiting in the wings. The MIT Festival Jazz Ensemble has done remarkably well with this disc, and it should earn further respect among the Boston jazz community, collegiate ensembles, and beyond.

(The MIT Festival Jazz Ensemble CD will be on sale today in Lobby 10. The ensemble will perform in a CD release concert on Oct. 20 in Kresge at 9 pm.)



Sharon Olds at Media Lab — love her or hate her

SHARON OLDS READING

Works by Sharon Olds and Galway Kinell.
Bartos Theatre, Wiesner Building.
Thursday, October 18, 7:30.

By NIC KELMAN

POETRY AT THE MEDIA LAB has been running successfully now for three years under the apparently competent guidance of Uri Wilensky — himself a poet about to be published — and the evening with Sharon Olds was the second in the current series. It was, according to Wilensky, the most difficult in his three years to arrange, as her poetry has been referred to as "seeing description as a means to candor," "having no subject off limits," and having "shattered pious conventions for poetry."

Olds herself said last night that she initially felt "poetry was something one should do absolutely by oneself" but that now she feels it is something to be shared . . . in general. She currently has three books to her name, all collections of her poetry and all published since 1980, and is about to have her fourth published.

The format of the poetry series is such that each visiting poet reads first from their favorite poet(s) and thus allows the audience to gain greater insight into the poet and his or her poetic influences, a system which is both commendable and successful. Thus Sharon Olds started with readings from one of her favorite poet's books, *When One Has Lived a Long Time Alone* — since it was this book's birthday yesterday — and then continued with readings from her unpublished collection, *The Golden Cell* (her third book), and *Satan Says*.

Before analyzing her poetry, it must be said that Sharon Olds cannot read aloud (not necessarily to her shame, as T. S. Eliot himself was equally monotonous). This

is, of course, irrelevant to her work, but is very directly involved with a poetry reading and must lead to the advice that, unless you would like a signing, you should not attend a reading by Sharon Olds. It will detract from her work, should you appreciate it in the first place.

But what about her poetry?

It seems that where Sharon Olds is concerned you will either love her work or hate it. Her poetry is highly introspective and self-indulgent, dealing almost entirely with bad sexual experience. It seems she feels that the whole human race wants to be "fucked senseless," and nothing more, an opinion which is very sad to hear.

In a Plath-like way she deals with personal pain and rage using words which suggest she has never had a loving sexual relationship and is indeed almost afraid of love ("love would mean we are helpless" — from "You Kindly"). It seems she feels like a poor victim who must try to be strong and constantly says, "don't worry I'll be fine" in a more than slightly unconvincing tone. This viewpoint was emphasized when she said that her heroine was Muriel Rukeyser and then described her as "a very strong woman." She obviously feels that to be open and in love is in some way weak.

She is also not lacking in her share of pretension — both in her work and in her following. She included words like 'penis' and 'his sex' at a rate of 1½ times a minute during the reading, using them in a very unnatural manner, suggesting that she felt such words *should* be used rather than that they come naturally — totally the opposite to the style Henry Miller began with such flare in the early sixties. Likewise the audience included its share of people who said "mmmmmm" at the end of every piece and nodded vigorously in agreement (there was one man who even did this display of 'understanding' after a poem



Christian S. Marx/The Tech

Sharon Olds

about menstruation — a topic pioneered by Plath).

In some ways, such poets who are obviously in tremendous pain deserve sympathy, but in other ways they inspire rage. Life is tough but you're always better off than someone else, and it is a shame that poets like Sharon Olds do not seem to realize this. More often than not it is simply their own paranoia that makes them a victim rather than true unfortunate circumstance, and it is those to whom fate has been truly unkind that really deserve our

attention. Furthermore, it is usually those who suffer most that have the greatest patience and understanding, rather than an inner bitter anger which seems to arise out of mediocrity.

Sex does not have to be a bad or empty experience, love really does exist, and poets like Sharon Olds should turn their attention from themselves more frequently and produce material that is less dated and self-piteous.

But then again, it is this quality that separates the Ezra Pounds from the Rupert Brooks, and the Lord Byrons from the John Clares, and there is a large public who empathizes with poems with such internal pathos. These people obviously greatly appreciate writings such as these; they are themselves neither mediocre nor self-piteous, but merely more sincerely in pain (i.e. rather than 'artistically' in pain).

If you enjoy Sylvia Plath or Ted Hughes' early work or, indeed, Galway Kinell, then read Sharon Olds . . . otherwise stay away. However, whatever your preference, if you enjoy poetry, attend the rest of the series at the Media Lab. It promises to be interesting if not necessarily enjoyable.

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Counseling

The Samaritans — someone to talk to and befriend you, are on call 24 hours a day, 7 days a week. The center, at 500 Commonwealth Avenue, Kenmore Square, is open from 8 am to 8 pm every day for people to come in and talk. Service is free and completely confidential. Call 247-0220.

The Beth Israel Hospital hosts a **Rape Crisis Group** on Tuesdays at 7:30 am for women who are experiencing disruption in their lives immediately following or up to six months after being raped. The long-term crisis group meets Thursdays at 6 pm. For more information, call (617) 735-4738.

Today, more than one million men and women are demonstrating by their personal example that alcoholism is an illness that can be arrested. If you have an alcohol related problem please get in touch with the **Alcoholics Anonymous** group nearest you — with complete assurance that your anonymity will be protected. Call 426-9444 or write: Alcoholics Anonymous, Box 459, Grand Central Station, NY 10163. You will receive free information in a plain envelope.

Counseling and HTLV-III blood screening services are available for individuals concerned about exposure to the virus associated with AIDS. For more information about this free confidential service sponsored by the Department of Public Health and Counseling Services, call 522-4090, weekdays from 9 am to 5 pm. Outside Boston call collect.

Getting High? or Getting Desperate? If drugs are becoming a problem, call or write: Narcotics Anonymous, 264 Meridian St., East Boston 02128, (617) 569-0021. Local meetings held at the MIT Medical Department, E23-364, on Mondays from 1-2 pm.

The Greater Framingham Area Veteran's Outreach Center is holding rap sessions for Vietnam veterans every Wednesday (except the third week of the month, when they will be held Thursday) at 7 pm. There is also a group for the wives of Vietnam veterans. For more information, call 879-9888.

Announcements

The "Statement of Registration Status" is still required of all male students who are expected to register for the draft, if they want to receive federal financial aid. Women, underage students and those who have completed the statement in previous years do not have to file statements.

MIT requires male students who have completed the statement by indicating they are "underage" to submit the statement annually until they have registered.

Miscellaneous

A new Pentagon Audit Project provides detailed listings of military contracts awarded to local companies and colleges across the United States. The system can help requesters determine what weapons systems are made or based in their area, or find out whether companies in which they own stock are doing military-related work. For more information contact Paul Brink at (215) 241-7060.

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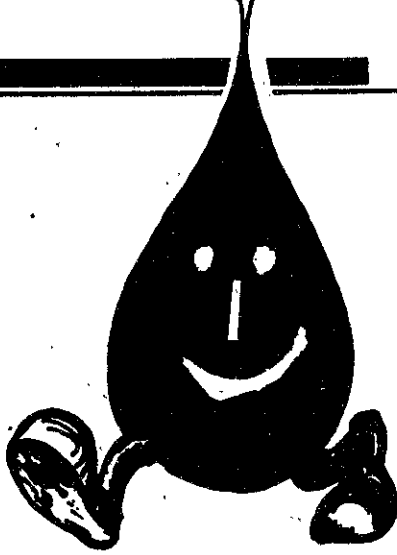
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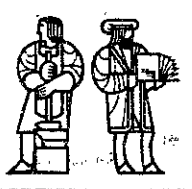
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Application Deadline: 19 October 1990
 Awards Announced: 23 October 1990

MIT physicists share Nobel

(Continued from page 1)

he served as a research associate, lecturer, and assistant professor of physics at Stanford.

He returned to MIT as a faculty member in 1961. Kendall has been chairman of the Union of Concerned Scientists, a Cambridge-based group that deals with safety and ethics in science, since 1973.

Experimentally proved existence of quarks

In the late 1960s, Friedman, Kendall, and Taylor executed a famous series of experiments on the scattering of electrons by protons, deuterons (a proton bound

to a neutron), and heavier nuclei. The research for which the prize was awarded was done from the late 1960s through 1973 at the two-mile-long Stanford Linear Accelerator Center in California.

This research gave the first clear evidence for a charged, point-like substructure — quarks — inside these massive particles. The interpretation of their data gave strong support to the quark model and provided the experimental underpinnings for the development of quantum chromodynamics, the currently favored theory of strong interactions among particles. This “strong force” is one of the four basic

forces of nature.

The Nobel Prizes were established under the terms of Alfred Nobel, who is best known for inventing dynamite. They are awarded annually by the Swedish government in the areas of peace, chemistry, literature, physics, and physiology or medicine. There is also a Nobel Memorial Prize in Economics, which was created by the Central Bank of Sweden in 1968 in Nobel's memory.

Friedman, Kendall, and Taylor will formally receive their awards in Stockholm on Dec. 10, the anniversary of Nobel's death.

Vest names Mark Wrighton provost

(Continued from page 1)

system is built on the hope that a strong research enterprise will make our traditional educational enterprise stronger. We've realized an element of that hope, but we need to do much more,” he said in a recent interview.

“Undergraduates often don't have much appreciation for how the research enterprise really works,” Wrighton said. “It's amazing to me that people can come through [MIT] and not understand the day-to-day activities of the faculty.”

Wrighton connected the lack of knowledge undergraduates have about how research is done with public indifference toward basic research generally. “One area where we as educators have fallen

short,” he said, “is that we haven't acquainted . . . the public at large . . . with why research is going to lead to a better formal educational experience for students.”

Wrighton and Vest have both said they support faculty and student diversity. “We intend to build an institution which has a stronger representation of minorities and women on the faculty,” Wrighton said.

Wrighton pointed out that the

problem of recruiting minority students and faculty cannot be solved with money alone. “I regard [the difficulty] as one of identifying the best people, letting them know that you have programs that are good for them, and providing a setting, and delivering on it.”

“Saying that you have it is one thing, but delivering on it [is another]. The experiences of those who are here count a lot,” he explained.



William Chu/The Tech

As You Like It is being performed tonight through Sunday night and next week Thursday through Sunday in La Sala de Puerto Rico by the MIT Shakespeare Ensemble. Pictured are Cheryl Casquejo '91 (left), playing Ganymede, and Greg Swieringa '91, playing Orlando.

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Announcements

The sports medicine division of the MIT Athletic Department sponsors a fitness training program for all interested students and employees of the Institute who hold valid athletic cards. Individuals over the age of 35 must obtain medical clearance from a personal physician before being allowed to participate in the program. The tests consist of a submaximal aerobic ergometer test, flexibility exercises, body fat percentage, and muscular strength and endurance measurements, and takes about 40 minutes to complete. For further information call x3-4908, 2:30-6:00 pm, Monday-Thursday. The tests are free of charge.

The Boston University Astronomy Department sponsors Open Observatory Night every Wednesday from 8:30-9:30 pm. For more information call 353-2360.

Harvard University Graduate School of Design is sponsoring lectures. For more information call 495-9340.

All first-time student loan borrowers (Perkins, Technology, or Stafford Student Loans) are required to attend a loan counseling session. Please contact the Bursar's Office for a schedule of the sessions.

Surplus equipment is available for departments and members of the MIT community in the Equipment Exchange, building NW30, every Tuesday and Thursday from 11-3 pm. Thirty days after being advertised in *Tech Talk* the equipment is sold.

The Science and Humanities Libraries (Hayden Building Libraries) are now open from noon Sunday to 8 pm Friday — 24 hours a day — and from 8 am to 8 pm on Saturday. From midnight to 8 am access to the libraries is limited to members of the MIT community. Circulation and reference services are not available during restricted hours.

Investment Banking Opportunities at First Boston

First Boston, a special bracket investment banking firm, headquartered in New York, will be recruiting for its financial analyst program. Positions are available in the Investment Banking and Sales and Trading Departments. All Seniors are cordially invited to attend a presentation.

Presentation:

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Room 4-163
7:00 p.m.

Interviewing schedule:

February 6, 1991

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Excerpts from press conference with Kendall

(Editor's note: Below is an edited transcript of a press conference held on Wednesday, following the announcement that Professors Jerome I. Friedman and Henry W. Kendall PhD '55 would share the 1990 Nobel Prize in physics.)

Also at the press conference were Professor Robert J. Birgeneau, head of the physics department, President Charles M. Vest, and Provost Mark S. Wrighton.)

Q: How did you first come about the discovery of quarks?

A: In this case, it was not a sudden event — like Archimedes discovering the law of buoyancy in leaping out of his bathtub, shouting "eureka!" This slowly came out of the pattern of data that we had been accumulating since the late 1960s.

Q: What was the experiment designed for?

A: The experiment was specifically designed to illuminate the internal structure of the neutron and proton. You see, the accelerator itself is a huge device, two miles long, and it was designed to carry out studies of this sort. So there was no question about the objective, which was to see what was way, way, way down inside the atomic nucleus. But the particular results we got were unexpected.

Q: Why do you think it's taken 20 years to recognize this?

A: Well, I'm not familiar with the inner workings of the Swedish Academy of Science, so I really don't know, except that, as I said, the whole hard interpretation took a long time to develop, and I can say that probably reflects part of it.

Q: Dr. Kendall, isn't it true that it's impossible to see an individual quark?

A: Yes, that represents the nature of these very small systems. We had accumulated absolutely unmistakable evidence that the principal constituents of the neutron and proton were physical quarks. On the other hand, we did not try, but attempts were made, to actually produce these quarks so that you could see them as isolated entities in the laboratory. Those numerous attempts — in laboratories around the world — failed. It is now believed to be a fundamental property of these things, that they cannot be made manifest so that you can see them as if you've seen an electron or as you can see a neutron or proton.

Q: Can you give a simple definition of a quark? And also, were there more than one kind of quark detected?

A: I want to emphasize that we did not identify a specific type of quark. Some more quarks have been devised since the originals at the time of our experiments. There are two that in different combinations make up the neutron and the proton, but we did not observe them in the most direct form. We observed them by quite clear unambiguous evidence out of the data that we took.

Birgeneau: I wonder if I can interrupt briefly. The timing of this happened to be propitious. On Oct. 15, [Charles M. Vest] came from Michigan to be the new president of MIT, and we have a chance to remind him why MIT in general — and physics at MIT in particular — are such

great institutions. And Chuck has just named my good friend and former fellow department head Mark S. Wrighton as provost, which is basically chief operating officer of the university, so we welcome him.

Q: What was the award that you received last year, the Panofsky prize?

A: Yes, we were awarded the Panofsky prize in experimental physics by the American Physical Society. That was for this same work.

Q: Will this honor help you in any way in your work in terms of credibility or money?

A: Well, I would hope so. And I would hope that it would also help MIT, and in general, the problems that science and technology have in our country. This award, of course, is for work that was done by the two of us who are at MIT — completely at MIT — and with enormous support from the physics department here. It was done in what we have long referred to privately as a "golden age" when the federal government funded research, both basic and applied, in a quite unstinting way. There were not the problems of both research support and support for teaching of students that have been developing in much more severe forms in recent years.

Q: Do you think such an undertaking would be possible today?

A: Well, it's not easy to answer that question, simply because the scale of experiments has expanded a lot. Work that was done with the two-mile accelerator was on a scale which today would be relatively small. The high-energy physics community is looking toward a much larger accelerator in order to open up new fields of research. This is the Superconducting Supercollider in Texas. And I noted just a few days ago that the Senate and House Conference Committee cut 23 percent off the budget. So that's not a very good beginning. The signs are certainly troubling, but that's another area.

I would like to mention that one person who did not share in the prize directly but really who had a great role in it was W. K. H. Panofsky, who was the originator of the Stanford two-mile machine. It remains a great instrument of science.

Q: Can you tell me how the understanding of quarks has progressed in the twenty years since your work? How much more has been done?

A: Well, there's a great deal more known about the quark substructure. Other quarks have been identified. And it is now believed that the bulk of these nuclear constituents — both the stable ones, and the enormous variety of unstable nuclear constituents that are made in these particle accelerators — are all constructed out of combinations of quarks. So, that has come a long way.

The nuclear structure and substructure that form the quark has been fitted into a comprehensive theory which has now gained immense power in contributing to our understanding of these processes at a very deep level. And that was all largely unknown at the time, around 1970, when we did these measurements. So things have indeed come a long way. And in fields connected with this particular project, there have been a number of Nobel prizes awarded for subsequent developments of great importance. So, we have progressed a lot since the 1970s.

Q: What are you doing now?

A: Well, academically, I'm teaching. Although, I've fortunately gotten a relief this afternoon. I'm involved with a col-

MIT alumnus wins chemistry prize

By Reuven M. Lerner

The 1990 Nobel Prize in chemistry was awarded on Wednesday to E. J. Corey '48, a professor of organic chemistry at Harvard University. Corey, who also received his doctorate from MIT, was cited for his work in organic synthesis.

His work has led to successful blood clotting treatment, asthma medications and the well-known drug erythromycin.

Corey has received numerous awards in the past, including honorary degrees from Harvard University, the University of Chicago, Oxford University, and the University of Illinois. He has also received the Order of the Rising Sun Gold and Silver Star from the government of Japan, the Gold Medal Award from the American Institute of Chemists, the Japan Prize in Science, the President's National Medal of Science, the Wolf Prize in Chemistry, and the American Chemical Society Award in Pure Chemistry.

Corey has been especially cited for his contributions to synthetic organic chemistry that have resulted in the syntheses of important bio-organic substances of great chemotherapeutic value, and the development of computer-assisted approaches to organizing the logic of synthesis.

At a press conference on Wednesday, Corey discussed his research on developing a common "language" for describing chemical reactions. "The logic I've developed is the first general language which can be used to solve any synthetic chemical problem, regardless of what molecule one wants to construct."

He added that "many of the therapeutically active compounds that have been tested and put on the market in recent years have been developed by people who have been influenced by this work."

league here in the department in support of a proposal to build a very large detector at the Superconducting Supercollider — which is on its way to being built, I hope, in Texas. And I and Jerome Friedman and other colleagues are also in a continuing research program at Stanford. We're still doing something at the two-mile machine after a gap of a good number of years. We're back in there doing something, looking for new phenomena.

I also, for those of you who may not be aware of it, have had a long-standing personal interest in the impact of science and technology on our society. Since 1975, I have been the chairman of the Union of Concerned Scientists — which has been looking at, and trying to ameliorate, some of the serious side effects that technology has had when it has occasionally been misapplied in our society and in the world at large. I have been a participant in the controversies over nuclear reactor safety, a number of strategic weapon systems, the threat of nuclear war, and more recently, getting some grip on the greenhouse effect. That has taken up a number of weekends and evenings over many years.

Birgeneau: I'd like to make a general comment that I hope all of you will report. Obviously, we're ecstatic over this Nobel prize here at MIT. But, we're ecstatic not just because it honors a great intellectual accomplishment, but because both Jerry and Henry are outstanding as human beings, and they provide good examples that you can both be a great scientist and a great humanist as well. They are outstanding teachers, they have a commitment to increasing the

number of minorities in physics. Henry has played a leading role in a variety of social causes. It is possible to be a real human being and a great scientist simultaneously. I know that the scientists at the Swedish Academy have done the community as a whole a great service by honoring these two people.

[Unidentified]: President Vest wishes to make some brief remarks at the close.

Vest: Probably there's nothing more obnoxious than the administrators horning in on such a remarkable event, but I couldn't resist.

Professor Friedman and Kendall have brought great distinction both to themselves and to the Massachusetts Institute of Technology. I'm very pleased to be able to join today in celebrating their accomplishments. I bring congratulation to them on behalf of all of their MIT colleagues.

Their careers and accomplishments remind us all of the great importance of research universities such as MIT to our nation and the world. Our government, industry, and citizens must exhibit good stewardship and enthusiastic support of the institutions that enable such great scientists and scholars to continue the critical mission of increasing our understanding of the world around us, perpetuating our sense of wonder at the inner workings and beauty of nature. Finally, I share the hope with Professor Kendall that this recognition of the accomplishments of Professors Friedman and Kendall will inspire our nation's children and young men and women to join them in pursuing careers in science, engineering, and mathematics. Congratulations!

Nobel laureates at MIT

There are 10 current or emeritus MIT faculty members who have won Nobel Prizes:

- Har Gobind Khorana, a professor of biology and chemistry, won the 1968 Nobel Prize in physiology or medicine for interpreting "the genetic code and its function in protein synthesis." His work was done at the University of Wisconsin.

- Salvador Luria, professor of biology, emeritus, shared the 1969 prize in physiology or medicine for discoveries concerning "the replication mechanism and the genetic structure of viruses."

- Paul A. Samuelson, Institute professor of economics, emeritus, won the 1970 Nobel Memorial Prize in Economic Science for working to raise the level of scientific analysis in economic theory. He was the first American to win the award.

- Samuel C. C. Ting, professor of physics, shared the 1976 Nobel Prize in physics for discovering the J particle, a heavy elemental particle of subatomic matter.

- Franco Modigliani, Institute professor of economics, emeritus, won the 1985 economics prize for his "pioneering analyses of saving and of financial markets," often referred to as "life-cycle savings."

- Susumu Tonegawa, professor of biology, won the 1987 prize in physiology or medicine for discovering how gene fragments combine to produce countless variations in the immune response of humans.

- Robert M. Solow, Institute professor of economics, won the 1987 economics prize for developing a mathematical model to determine factors that drive economic growth and showing that mature economies reach a stage where growth "will be exclusively determined by technological progress."

- Jerome I. Friedman and Henry W. Kendall PhD '55, professors of physics, shared the 1990 physics prize with Richard E. Taylor of the Stanford Linear Accelerator for confirming the existence of quarks, an inner structure of protons and neutrons, in the atomic nucleus.

- Eric S. Chivian, a psychiatrist in the MIT Medical Department, shared the 1985 Nobel Peace Prize as a leader of International Physicians for the Prevention of Nuclear War.

Three former MIT faculty members have also won Nobel Prizes:

- Charles H. Townes, provost and a professor of physics from 1961-1966, shared the 1964 physics prize for work "in quantum electronics," developing the laser and maser.

- David Baltimore '61, a faculty member from 1968-1990 and director of the MIT-affiliated Whitehead Institute from 1982-1990, shared the 1975 prize in physiology or medicine for "discoveries concerning interaction between tumor viruses and the genetic material of the cell." Baltimore is now president of Rockefeller University in New York City.

- Steven Weinberg shared the 1979 prize in physics for work involving the search for an underlying physical principle of the universe, "the theory of the unified weak and electromagnetic interaction between elementary particles, including . . . the prediction of the weak neutral current." Weinberg did the work at MIT from 1967 to 1973, and he continued at Harvard University, where he was working when awarded the prize.



Reuven M. Lerner/The Tech
Professor Henry W. Kendall PhD '55 discusses his work with quarks for which he and two of his colleagues shared this year's Nobel Prize in physics. Also pictured are physics department head Robert J. Birgeneau (left) and Provost Mark S. Wrighton.

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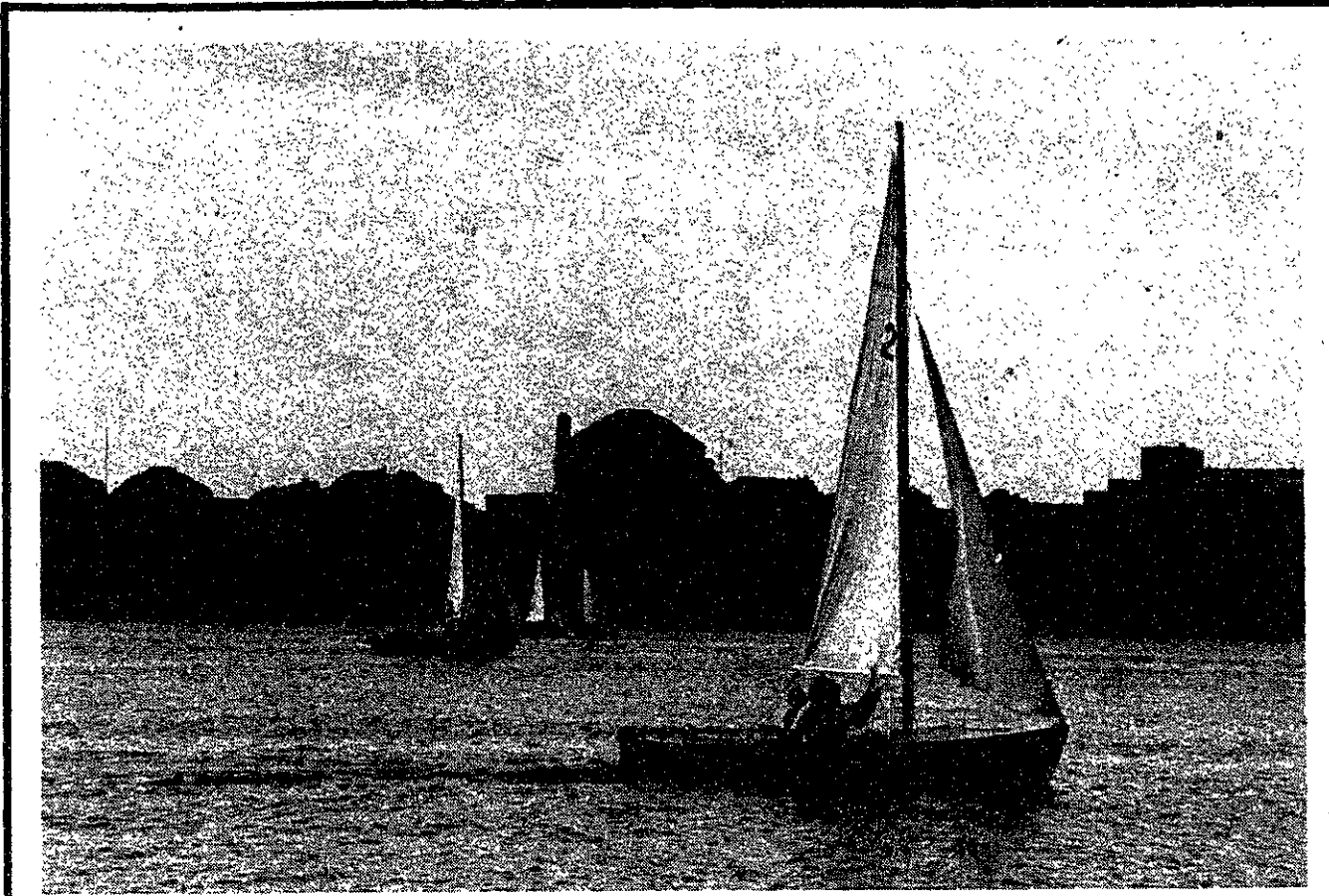
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sports



Students take a break from tooling at the 'Tute to sail on the Charles River.

Christian S. Marx/The Tech

Spikers deflate WPI in four-game match

(Continued from page 24)

A short second game

winner to Gardner, put game four and the match on ice.

Coach uses new strategy

Altman, pleased with her team's performance, used tonight's game as an opportunity to implement some new strategies.

"We used a three-person service receive, which is something we've been working on for a while." Altman was also impressed with her players' willingness to serve aggressively.

"We're going to have to do that against Springfield [College on Tuesday], which will be a tougher match."

In the first game, MIT pulled out to a 7-2 lead by virtue of strong serving by Parrish and Liu. After a WPI timeout, the visiting Engineers pulled only a bit closer, to 8-4, before MIT ripped off seven straight points, winning on Liu's service winner.

Setter Rego, perhaps in trying to provide a light moment, tried to power tip on game point, but found herself about a foot too low to accomplish the feat. The ball went — admittedly with great force — into the net, and WPI's defeat was delayed by a moment.

Game No. 2 progressed in a fashion similar to that of the first game, but at a more reasonable pace, as it took only 11 minutes for MIT to dispose of the hapless WPI team.

MIT played pinball with WPI's back-row players: MIT's front row blasted shots downward, and WPI, when it could get a hand on the ball, sprayed the shots ceiling-ward, as often as not.

WPI took a 1-0 lead early, but soon fell behind, 2-1. MIT then ran off another seven straight points, as Parrish served WPI into disarray. With MIT's lead at 10-1, a Rego ball handling error gave WPI the serve, and a chance to mount a storming comeback. But it was not to be.

MIT finished out the game on two Gardner kills, a Rego service winner and two sloppy WPI plays.

WPI coach Nancy Vaskas congratulated MIT on the victory. "MIT is always a strong team. We expect that every time we come here. Our team is young, and its important for us to play teams like MIT."

The Engineers travel to Springfield College Tuesday, and finishes its regular season Thursday with a match at Bentley College.

3 crew teams to race in Head

(Continued from page 24)

will compete in the men's lightweight eight event.

Another of the MIT crews will compete in the women's youth eights, in which each participant must be under 19 years of age.

In women's graduate crew, one MIT crew will compete in the championship four event, and another in the lightweight four event. Both crews are predicted to show a good standing, as they have performed very well in previous races. Schmill, who coaches them both, thinks that they have a chance of winning a medal. In each event in the Head-of-the-Charles, three medals can be won.

MIT alumnae will also be par-

ticipating. Liz Bradley '83, who competed in the 1988 Olympics, will be in the championship eight event, and Bill Malecki '88 and Linda Muri '86 will row in singles.

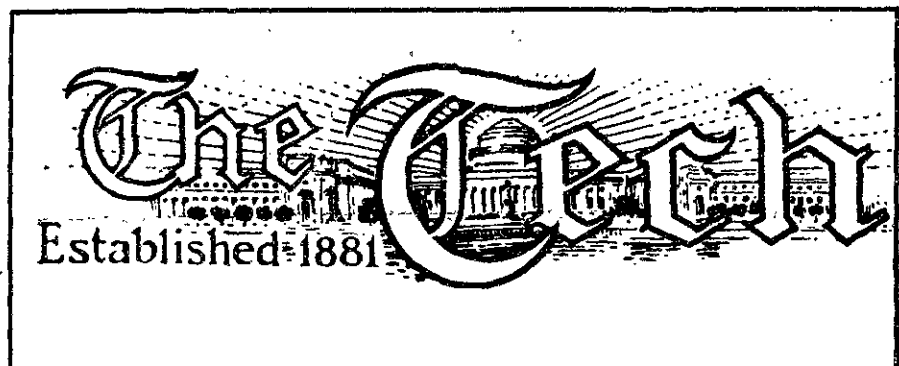
At least one MIT faculty member will be visible: Mathematics Professor Hartley Rogers Jr., who rows in the Head-of-the-Charles every year, will be rowing in a singles event.

Coaches compete as well

Two coaches and an assistant coach from the MIT crew teams will also compete at the Head-of-the-Charles. Tom Tiffany, the novice women's coach, will cox the women's eight from Boston Rowing Center, while Schmill will be coxing the men's masters four

from Seattle's Lake Washington Rowing Club. Assistant coach Vic DiGravio, who coaches the freshman lightweight crew, is the coxswain for the lightweight men's varsity crew from MIT.

The Head-of-the-Charles begins at 8:40 am Sunday. It takes place between the BU Boathouse, next to the BU Bridge, and a spot right before Newton's Public Theater, which covers a distance of three miles. Any location on or near either the Weeks Memorial Bridge (the footbridge over the Charles River connecting De Wolfe St. and Harvard Business School), or the Anderson Bridge (at John F. Kennedy St. in Harvard Square) affords an excellent view of the event.



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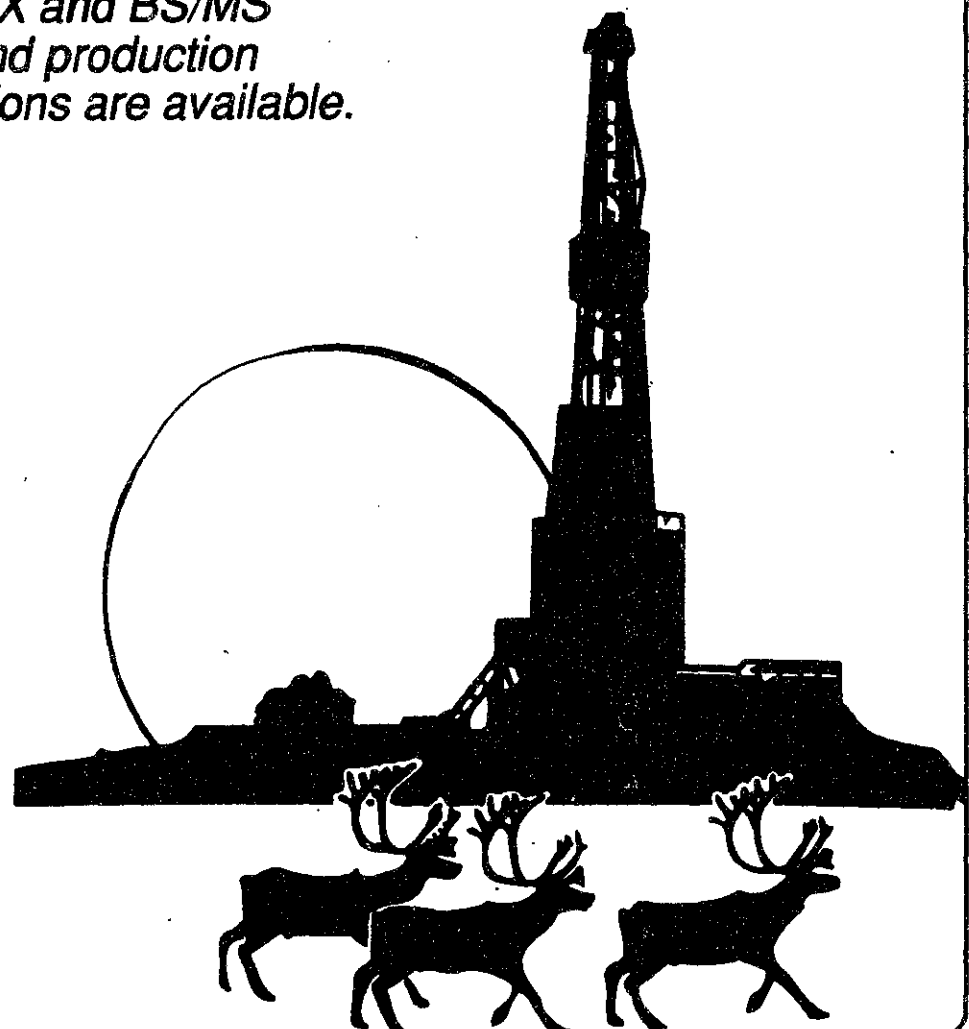
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sports

Words on Sport/ Mohammed Eissa

Celtics top Pistons, but so what?

Break out the champagne bottles: The Boston Celtics destroyed the Detroit Pistons, 116-98, on Tuesday night. Does this mean that the mystique is back? Is the Garden going to start haunting opponents again?

Before you start waiting in line for playoff tickets, remember that the game was only an exhibition game. The Celtics always perform well in the pre-season because they are still fresh. As soon as the season starts to take its toll, however, their age catches up with them, and the rest is history.

That is not to say that their play was not commendable. On the contrary, they did play excellent ball, and they did beat the defending champs, the Pistons.

On of the keys to Boston's win was the recently re-signed Brian Shaw. He brought in an element of speed that was previously missing from the Celtics. He had 12 points, nine assists, five rebounds and two steals. His shooting was horrendous, however, as he hit only 33 percent from the field. Overall he did show promise for the future since the Celtics have set as a priority improving their defense and emphasizing the running game.

* * * * *

One thing to remember is that the Piston guards were unstoppable. Isiah Thomas and Joe Dumars are the main offensive weapons for the Pistons and no Celtic can stop them. Their speed and outside shooting ability make them a dangerous threat. Dumars had 20 points on 9-17 shooting, and Isiah had 21 points on 8-20 shooting. For only 28 minutes of play, these are respectable figures.

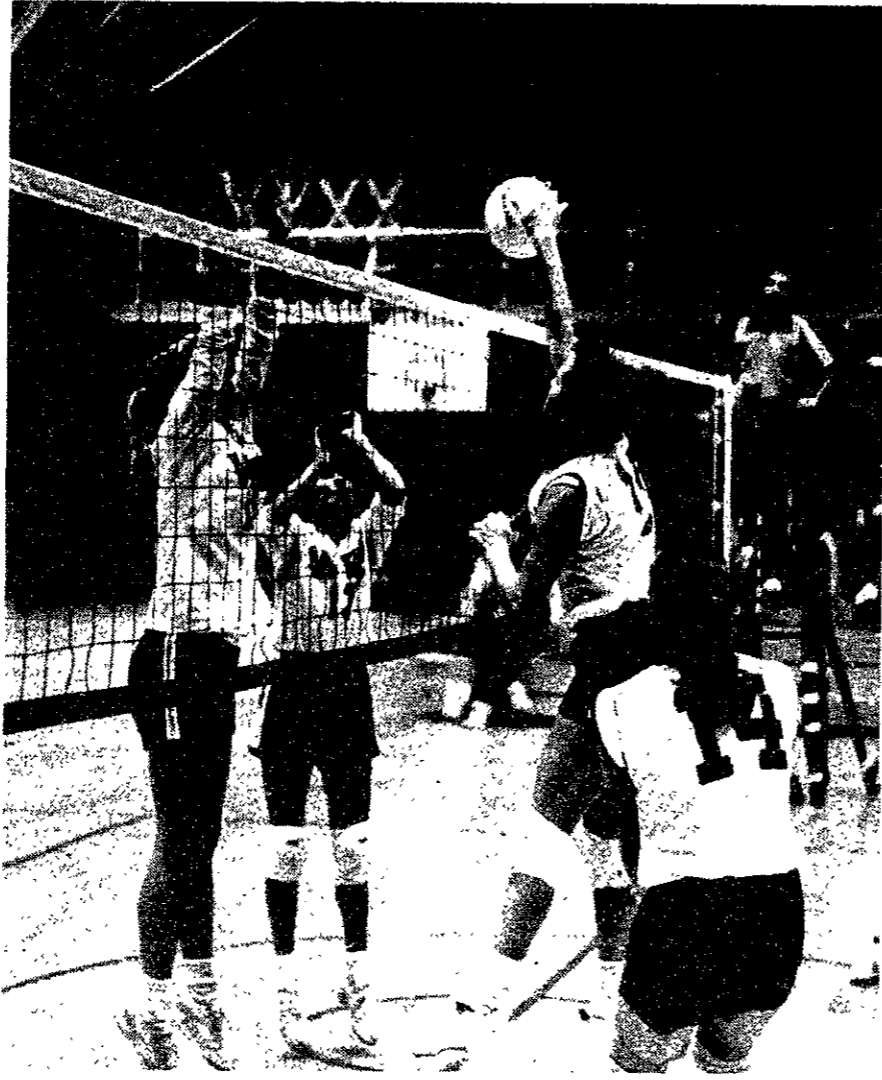
The Celtics did counter with Kevin Gamble, who I think will be the Celtics' secret weapon this year. Gamble had 21 points on 9-12 shooting. He continues to improve game by game. It was a big mistake for the Celtics last year to start Jim Paxson instead of him.

But as all Celtics fans know, the primary reason that the Celtics always lose to the Pistons is the play of Vinnie "the Microwave" Johnson, who did not play Tuesday night because of a contract dispute. Had he played, the outcome would have been different. His natural talent of "unconscious shooting" is rarely defended by anyone in the league. In addition, the Pistons' main defensive star, Dennis Rodman, did not play because of an injury.

* * * * *

The positive notes for the Celtics have to be the play of Gamble, Parrish, McHale and Shaw. McHale and Parrish are consistent and the new life brought in by the quick guards can only help the team.

To put things in perspective, the Celtics will have a tough year fighting for the division title because New York and Philadelphia continue to improve. It will be a close race and the winner will probably be decided late in the season. For the Celtics to win, they have to increase the tempo of their game and Larry Bird has to regain his deadly shooting form.



Douglas D. Keller/The Tech
Shawniqua Williams '94 (#15) spikes the ball on WPI during last night's volleyball game.

Head-of-the-Charles celebrates its 25th

By Becky Chang

Sunday marks the 25th anniversary of the Head-of-the-Charles Regatta. This year's rowing event promises to be bigger than ever before, with more than 925 boats and 3800 competitors set to participate.

MIT will be sending three crews to the event, including the women's club eight, which captured fourth place in 1989, and is predicted to excel again in this Sunday's race.

MIT has trained hard in preparation for the Head-of-the-Charles, which it takes very seriously. MIT crews have been training two hours a day, six days a week since Registration Day.

Their training program includes "intense workouts, weight

training, and rowing machines," according to Stu Schmill '86, the recently appointed director of MIT's crew program and the coach of the freshmen heavyweight crew and the graduate crew.

MIT's three crew teams, the men's heavyweight, men's lightweight and women's program, "are doing very well; they're very competitive," Schmill said.

Although those teams that Schmill calls "the best in the world" will be absent from this year's regatta in order to compete in a championship in Australia, the best American collegiate crew teams, which include Boston, Harvard, Northeastern, and Princeton Universities, will be racing as usual.

Volleyball bounces WPI from duPont

By Jordan J. Ditchek
and David Rothstein

The women's volleyball team unceremoniously bounced Worcester Polytechnic Institute out of duPont Gymnasium last night, defeating the visiting Engineers, 15-4, 15-1, 12-15, 15-3, to run MIT's record to 23-8 overall.

The win gives the women's volleyball team an undefeated record (6-0) in the New England Women's Eight Conference, and thus the top seed in the NEW8 tournament, which will be held Nov. 3 at Smith College. MIT defeated Smith in last year's NEW8 championship final.

MIT wasted little time in disposing of WPI; it was only head coach Karyn Altman '78's insistence on leaving a full complement of substitutes in the third game that allowed WPI to take a game from MIT.

A comfortable two game lead allowed Altman to give her substitutes some playing time. The players off the bench performed

well, but the momentum shifted as WPI capitalized on poor setting by MIT. Strong serves gave WPI a 11-4 lead, but Altman showed confidence in the second team by keeping it in the game.

"This was a good opportunity to play the subs," she said after the match. "There will be situations where we will need them, and they must get some experience."

MIT made the game close, as Kathleen LieuKieSong '93 served four consecutive points to close the gap at 13-12. The home team regained control of the game, but WPI managed to hang on, stealing game three, 15-12.

The fourth game featured a return of the MIT starting lineup, which picked up where it left off in the second game. Kills by juniors Cindy Parrish and Susie Gardner and excellent serving by An-Na Liu '91, enabled MIT to take an insurmountable, 10-1 lead. Five more sets by Debbie Rego '91, including the game

(Please turn to page 23)

In addition, men's and women's eights from the Republic of Lithuania, which in the past represented the Soviet Union at the Olympics, will be competing. These teams have been the champions of a number of regattas in America.

MIT part of EARC

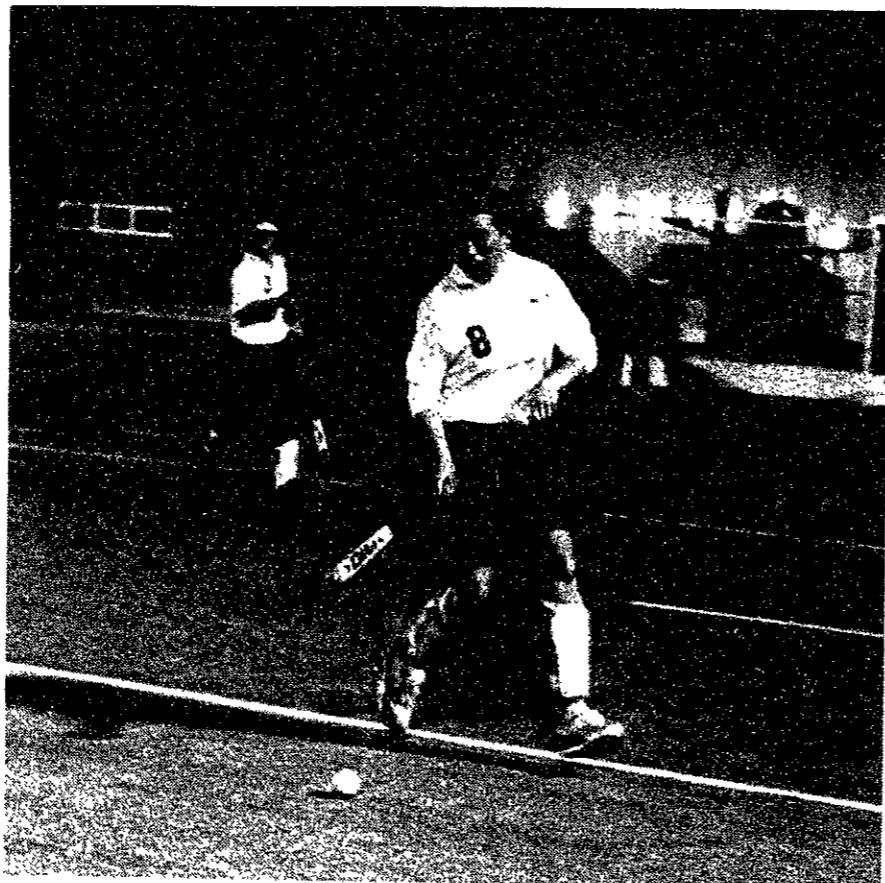
MIT is a member of the Eastern Association of Rowing Colleges (EARC), which is composed of 15 college teams. The EARC is the most competitive league in the United States, according to Schmill. The national collegiate champion team, which is determined by the Head-of-the-Charles, has emerged from the EARC each year since at least 1980.

In 1988, MIT's men's heavyweight varsity eight won the men's club eights division, and in Schmill's opinion, there is a chance they will win it again this year. Their toughest competitors are BU, Harvard and Northeastern, who are all very competitive in that division.

In women's crew, MIT faces the most competition from BU, Princeton, Radcliffe College, and possibly Yale University.

A total of six MIT crews will be sent to the Head-of-the-Charles. One of these, the lightweight men's varsity crew, whose members average 160 pounds, was just added last week to the list of crews that are to compete in the Head-of-the-Charles. It

(Please turn to page 23)



Anne Sammis/The Tech
Shannon Mohr '93 (#8) takes control of the ball in Tuesday's field hockey game against Elms. MIT lost, 1-0.

Elms College defeats field hockey team, 1-0

Sports Update

The field hockey team lost to Elms College, 1-0, on Tuesday. The Engineers' Saturday game against Worcester Polytechnic Institute was rained out, and will be played next Tuesday. . . . Wheaton College defeated the women's tennis team, 8-1, on

Wednesday. . . . The women's volleyball team defeated Babson College, 15-10, 15-5, 15-7, Tuesday evening. As usual, Cindy Parrish '92 and Susie Gardner '92 led the Engineers' attack, with 14 kills apiece, while setter Debbie Rego '91 had 28 assists.

Compiled by David Rothstein
and the Sports Information Office

Reds lead Series, 2-0

(AP) The Cincinnati Reds winged into the Bay Area confident that they can win the World Series over the vaunted Oakland Athletics. Reds victories in the opening two games of the best-of-seven showdown against Oakland's top pitchers have left the Athletics, in the words of Reds second baseman Ron Oester, "beatable."

World Series

The Series resumes tonight with a twilight game at the Oakland Coliseum, where the Reds send left-hander — and new father — Tom Browning to the mound. Browning bolted from last night's 5-4, 10-inning triumph with his wife, who later

gave birth to the couple's third child shortly after midnight, Cincinnati time. The Reds scored four runs off 27-game winner Bob Welch before beating relief ace Dennis Eckersley with three straight 10th-inning singles. In game one, Cincinnati ended Dave Stewart's six-game post-season winning streak. Right-hander Mike Moore will start for the A's tonight.

Billy Hatcher probably wants no break in the Series schedule. The Cincinnati outfielder has a World Series record seven straight hits and has reached base in all nine plate appearances against Oakland. During the streak, Hatcher has scored five runs, driven home two and walked twice.

Upcoming Home Events

Saturday, October 20

1:15 Golf vs. Vermont
TBA Men's Sailing at Oberg Trophy

Sunday, October 21

8:40 a Crew at Head-of-the-Charles Regatta
TBA Men's Sailing at MIT Invitational