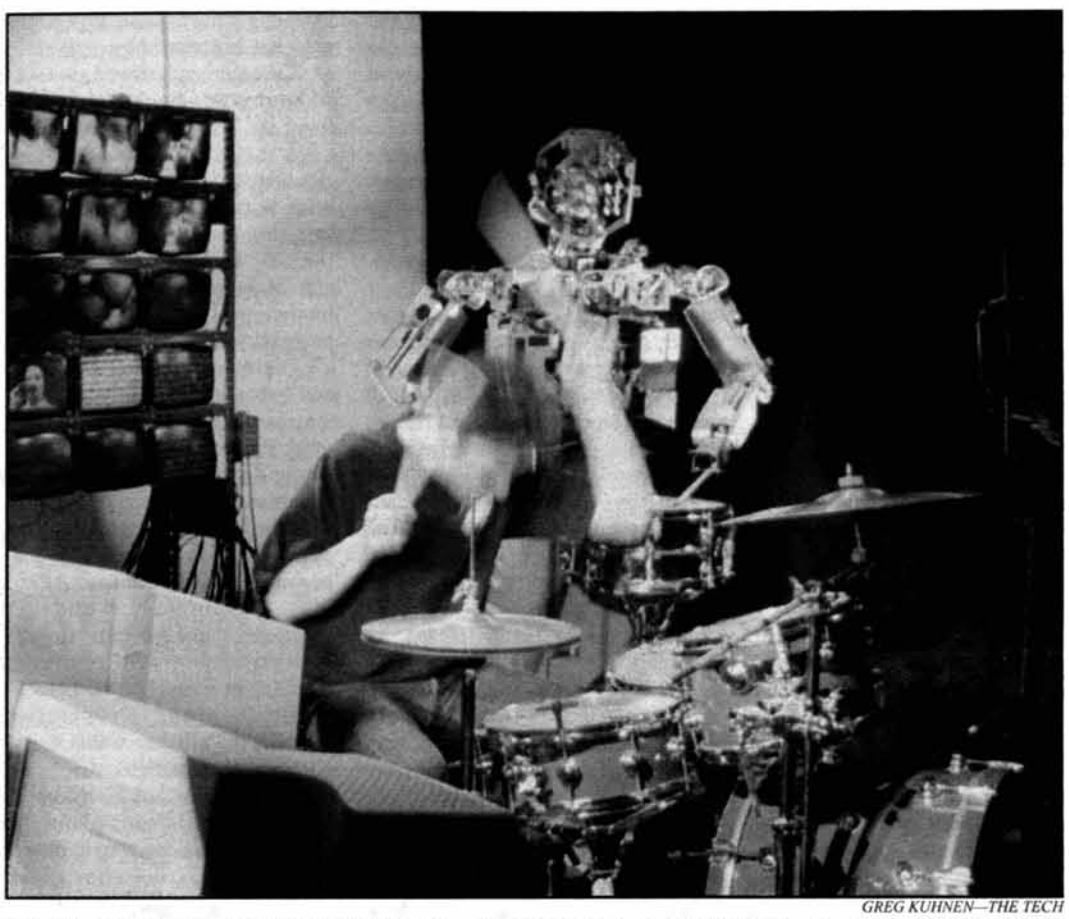
MIT's
Oldest and Largest
Newspaper

The Tech
Established 1881

The Weather
Today: Sunny, 56°F (13°C)
Tonight: Cloudy, 44°F (6°C)
Tomorrow: Partly sunny, 65°F (16°C)
Details, Page 2

Volume 119, Number 17 | Cambridge, Massachusetts 02139 | Tuesday, April 6, 1999



GREG KUHNEN—THE TECH

Dan Hickey of They Might Be Giants solos in a musical duel with COG, the AI Lab's Humanoid Robotics project. The Saturday afternoon jam session was filmed for a segment of an ABC documentary featuring technology to be aired this summer. See story on page 6.

Class of 2003 Most Selective in History

By Sanjay Basu
ASSOCIATE NEWS EDITOR

As MIT prepares to welcome prospective freshmen to the largest Campus Preview Weekend ever held at the Institute, the Admissions Office has also released figures for the number of students admitted to the class of 2003. The 1,740 admitted students were chosen from 8,786 applicants in comparison to the 1,890 students admitted from 8250 applicants last year.

The overall admit rate dropped by three percent this year . Of this year's admitted students, 47 percent are women and 18 percent are minority students.

"All the different populations in the pool have gotten stronger," said Director of Admissions Marilee Jones. "There are many more [applicants] in the pool that are very compelling and very easy to admit."

Of the admitted applicants, 40 percent are valedictorians and 90 percent rank in the top five percent of their high school class. The SAT-I verbal mean for the group is 714, and the math mean is 756.

This year, "recruitment has really become an institutional process," Jones said. In the past, alumni have reported to the admissions office the names of high school students they feel are a good fit for MIT. While admissions directors could not previously track all of these requests, Jones said that a new database system has allowed the office to send applications more effectively to

Admissions, Page 21

Contractor's Business Practices Scrutinized

By Zareena Hussain
EDITOR IN CHIEF

An MIT investigation into the businesses practices of Jeff Hurley of Safety Clean of New England is continuing. The Institute now states that Hurley is a legitimate businessman despite statements from members of several Fraternities Sororities and Independent Living Groups to the contrary. The investigation began after several fraternities alleged that Hurley had charged them up to $900 for kitchen hood cleaning services that he never performed.

According to Chief of Campus Police Anne P. Glavin, no complaints have been lodged against S.C.O.N.E. with the Massachusetts State Attorney General's Office or the Boston Better Business Bureau. "We have no evidence at this time of any scam," Glavin said.

According to Assistant Dean for Residence Life and Student Life Programs and Adviser to

Hurley, Page 22

Community Reacts to Kosovo Crisis

By Anna K. Benefiel and Karen E. Robinson
STAFF REPORTERS

The ongoing crisis in Kosovo has stirred intense emotions among members of the MIT community.

Serbian graduate students, expressed concern for their families and homes: "[I] hope that this bombing will stop immediately," said Jelena M. Popovic G.

Albanian MIT affiliate Iliriana Mushkolaj spoke of her relatives who have fled Kosovo: "the bombing is the right thing to do, it is long overdue."

Serbian students react

Popovic said "bombing will not solve any problem: not for Serbians, not for Albanians." The NATO bombing, "is destroying people's lives," as well as the infrastructure of Yugoslavia. Aleksandar Kojic G added that "what they call 'collateral damage' can be your family ... we don't know if we are ever going to hear from each other again." Kojic said, "It is very hard to do any work. You sit down and you just can't concentrate." The students wondered how people will live after the bombing has stopped.

Saying "we are all politically against Milosevic here" the students asserted that most Serbians do not support Milosevic, but said a nation must stand behind its army when attacked.

Ljubomir M. Ilic G spoke of his own return to Serbia and legal obligation to be a soldier. "I have to [serve]. I have no other option." For the Serbian students the reality of the situation is incredibly frightening. "People on the other side [of the world] really die," when a missile is fired. "It's not a game," he said.

Ethnic Albanians support strikes

Mushkolaj, a visiting scholar in the Special Program on Urban and Regional Studies at MIT, commented on the lack of awareness about Kosovo on the MIT campus. "Except me," she said, there are "no ethnic Albanian students" at MIT.

Meri Treska, a Research Associate in Materials Science and

Kosovo, Page 26

Omnifield Closed Pending Replacement Next Fall Term

By Kevin R. Lang
ASSOCIATE NEWS EDITOR

After years of failed repair attempts and complaints from student athletes at all competitive levels, the MIT Department of Athletics has closed the astroturf omnifield for all organized sporting events.

Director of Athletics Dr. Richard A. Hill said that the field was officially closed late last week after his department submitted their report to senior administrators. The report followed a meeting on March 23 with representatives from the Department of Facilities and student athletes from varsity, club, and intramural sports.

After years of trying to restore the field base, MIT will replace the field "absolutely" by the coming fall term, Hill said. The sand base underneath the field surface swelled and moved with weather changes, and this past winter deteriorated the field more than anticipated.

"In a short period of time, the repaired sections kept moving on us," Hill said. Currently, much of the highly worn field is scattered with sand that reached the surface.

Plans for replacing the field have already begun, and officials are currently evaluating the site and reviewing potential field surfaces, Hill said. "We want a high quality product on the field," he said.

Shortly after the proposal was presented to the administration, Chancellor Lawrence S. Bacow '72 and Provost Robert A. Brown "made a very strong decision to move quickly," Hill said.

With the omnifield closed, practices and games for varsity men's lacrosse, club sports, and intramurals will be displaced to Briggs

Turf, Page 27

GARRY MASKALY — THE TECH

TOUGH TURF—The Omnifield was closed after failed attempts to repair the many tears and other defects making the field dangerous.

FEATURES

The Tech surveys MIT's undergraduate Courses from I to XXIV.

Page 10

Comics
Page 8

Former UA president Michael Albert spoke on student activism as part of the democracy teach-in series.

Page 7

WORLD & NATION

Microsoft Recruits Professors From Leading Universities

THE WASHINGTON POST

REDMOND, WASH.

With cash, stock options and the promise of vast resources, Microsoft Corp. is luring faculty elites to its research center at a pace so fast that some campus departments say they're being picked clean.

Last month Microsoft hired Yale University mathematician Lazlo Lovasz, recent winner of his field's prestigious Wolf Prize. In June he will join, among others, Fields Medal-winning mathematician Michael Freedman from the University of California-San Diego and MacArthur fellow Jim Blinn, a computer graphics expert from the California Institute of Technology.

Microsoft Research, known as MSR, is aiming for 600 "faculty" by the end of next year. It already is among the world's biggest computer science laboratories, with 350 researchers. Microsoft Research is seeking big names in computer science foremost, but also leading thinkers in graphic arts, linguistics, biology and mathematics. While they may never write a piece of software, they could hatch ideas that the company's programmers one day might turn into big-selling products.

Wyoming Man Pleads Guilty To Killing Gay Student

THE WASHINGTON POST

LARAMIE, WYO.

On the eve of a trial in which he faced a possible death penalty, Russell Henderson Monday pleaded guilty to the kidnapping and murder of Matthew Shepard last October, and was sentenced to two consecutive life terms for killing the gay University of Wyoming student.

The plea agreement by Henderson, 21, the first of two defendants scheduled for trial in a case that galvanized support nationwide for tougher hate crimes legislation, was negotiated by Albany County prosecutor Cal Rerucha and defense attorney Wyatt Skaggs late last week. Despite pleas by Henderson, his grandmother and Skaggs, District Court Judge Jeffrey Donnell rejected arguments for concurrent sentences for what he called a "vile and senseless crime" by a defendant he said does not "really feel true remorse."

Under Wyoming law, only the governor can grant parole in first degree murder cases, and attorneys on both sides said Henderson will almost certainly spend the rest of his life in prison.

Kosovo Expenses Likely To Impact U.S. Budget Process

LOS ANGELES TIMES

WASHINGTON

The cost of the 2-week-old U.S. air campaign against Yugoslavia already has topped the $400 million mark and is likely to skyrocket if the mission continues to escalate, threatening to set off budgetary and political explosions on Capitol Hill.

Estimates by the nonpartisan Center for Strategic and Budgetary Assessments suggest that if the airstrikes proceed for even a few weeks longer, the price tag quickly could grow to between $2 billion and $4 billion, particularly as the administration expands the scope of the mission.

The center's calculations, widely accepted as the best available, mainly reflect the cost of cruise missiles fired from U.S. ships and planes. The Pentagon has not issued its own cost projections.

President Clinton promised Monday that the campaign would be "undiminished, unceasing and unrelenting" — and warned that it might not end quickly. "We are prepared to sustain this effort for the long haul," he said. "Our plan is to persist until we prevail."

NATO Deploys Helicopters, Airlifts Kosovo Refugees

By James Gerstenzang and Chris Kraul

LOS ANGELES TIMES

KOSOVO

Clearing skies over Belgrade allowed NATO to strike Yugoslavia's 1st Army headquarters, an ammunition plant and other targets Sunday, as the Pentagon announced plans to deploy Apache attack helicopters and ground-based missiles for the first time in the Kosovo theater.

Allied aircraft delivered strikes around the capital of Yugoslavia on Easter morning, and after nightfall to Pristina, the capital of Kosovo.

NATO and other European countries pressed forward with a plan to establish protective enclaves for hundreds of thousands of ethnic Albanian refugees in Albania, Macedonia and elsewhere in Eastern Europe.

Separately, nations in the Atlantic lliance agreed to accept nearly 100,000 refugees from the mbattled Serbian province. NATO said the United States would accept 20,000; Secretary of State Madeleine Albright said only that the U.S. would accept "several thousand."

The dispatch of the 24 AH-64 Apaches, the Army's main attack helicopter, could fuel the debate over the use of combat troops to bring the war directly to Yugoslav troops and Serbian police units on the ground in Kosovo. Using helicopters is riskier to U.S. forces than relying on cruise missiles and higher-flying warplanes.

The Pentagon presented the dispatch of the Apaches with their armor-killing capabilities as an expansion of the air war rather than a move toward the use of ground troops, although about 2,000 soldiers will be deployed to support the helicopter-mission.

The humanitarian crisis, meanwhile, grew unabated. A United Nations refugee official, Karen Koning AbuZayd, predicted that the number of Kosovo refugees could double to nearly 750,000 by Tuesday.

Refugees arriving Sunday in northern Albania from southern Kosovo said uniformed Serbian forces had been carrying out a house-to-house reign of terror.

One of the refugees, Illirana Zhubi, looked pleadingly into a stranger's eyes and sobbed in anguish: "You don't know what has happened here. You don't know what has happened here with us."

She said her husband, a jeweler, was among six men she saw lined up Thursday and shot in the back by uniformed Serbs. As she watched, they finished him off with a bullet to the head. She said they cut off his hands and set the house on fire. Her 14-year-old niece, hiding in the basement, also was probably killed by the fire, she said.

There was no way to independently confirm such reports, but it matched other refugee stories of atrocities as Serbian forces empty Kosovo towns of their ethnic Albanian populations.

The outlines of a temporary approach to the refugee crisis began to emerge Sunday. Albright, in Washington, and the European Union's commissioner for humanitarian affairs, Emma Bonino, in Brussels, said that, for political and operational reasons, the alliance wants to avoid a large-scale resettlement.

Despite the NATO countries' refugee resettlement plans, most of ethnic Albanians plan to return.

Libyan Officials Hand-Over Lockerbie Bombing Suspects

LOS ANGELES TIMES

NETHERLANDS

Clearing the way for a trial after years of defiance, Libya today handed over two suspects in the 1988 bombing of a Pan Am jet over Lockerbie, Scotland. Their arrival in the Netherlands triggered suspension of sanctions that isolated Libya from the West.

The surrender of alleged former-intelligence agents Abdel Basset Ali al-Megrahi and Lamen Khalifa Fhimah means the two men can be tried — under a complicated deal worked out in years of talks-- in the Netherlands under Scottish law on charges of planting the suitcase bomb that blew up Pan Am Flight 103.

The Dec. 21, 1988, bombing killed 270 people — 189 of them Americans — and prompted the United Nations to impose sanctions on Libya in 1992 and 1993.

The sanctions, including bans on international air travel and sales of weapons and oil industry equipment, were suspended today after U.N. Secretary-General Kofi Annan sent a letter to the Security Council saying the suspects had arrived in the Netherlands.

"This development marks a vital step forward in what has been a long ordeal for all involved, especially for the families of the victims, who have suffered an irreparable loss," Annan said.

The suspects surrendered after intense lobbying by South African President Nelson Mandela and Saudi Arabian and U.N. officials. Libya promised last month to turn over the men by Tuesday.

Accompanied by U.N. legal chief Hans Corell, who witnessed the handover in the Libyan capital, Tripoli, the pair arrived at the Valkenburg military airport in The Hague. They were to be held in a prison there or in the port city of Rotterdam pending proceedings to extradite them to British custody in the Netherlands.

Dutch authorities said the extradition process could be completed within a week to 10 days, but could take months if the suspects decide to fight it.

Once extradited, the suspects will be arraigned on charges of murder, conspiracy to commit murder and violations of international aviation laws.

WEATHER

April Showers? May Flowers?

By Véronique Bugnion and Greg Lawson

STAFF METEOROLOGISTS

The high pressure ridge which descended over Boston from Hudson's Bay yesterday brought us a clear and cool, some would say cold, night. The northerly winds weakened earlier this morning, allowing for a seasonably warm spring day today. This high should also shield us, at least until this afternoon, from the effect of the storm which wreaked havoc in the middle of the nation yesterday, spawning a tornado in Kansas and wind damage from the Plains to the Midwest. Luckily for us, this storm is weakening as its center drifts into Canada and the passage of the front should not bring more than cloudy skies and a moderate chance of rain showers tonight and into tomorrow morning. The skies will clear up Wednesday as the clouds are pushed offshore by a strong westerly current set up by the interaction of the Canadian low and a developing high pressure center southwest of us. Dry and pleasantly warm weather will prevail at least through Thursday.

Tuesday: Sunny with increasing cloudiness late afternoon. High of 56°F (13°C).

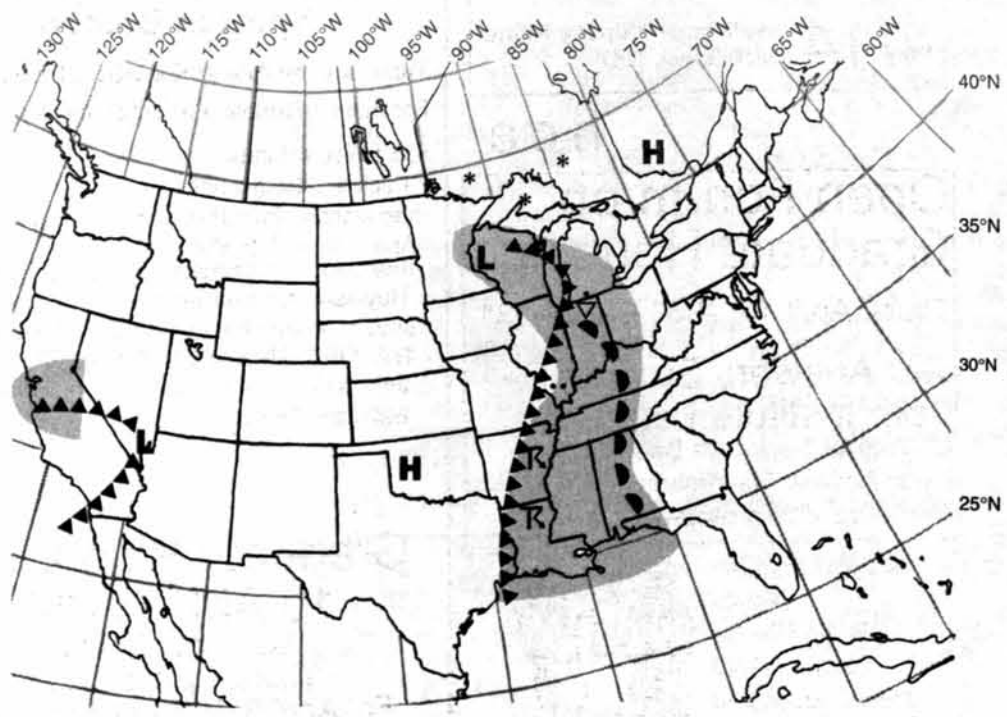
Tuesday night: Cloudy with a chance or rain. Low of 44°F (6°C).

Wednesday: Slight chance of a morning shower, then partly sunny but expect strong gusty winds. Mild temperatures with a high in the mid-60's (15-17°C)

Thursday: Fair weather. Temperature should stay in the 60s (13-18°C).

Weather Systems	Weather Fronts	Precipitation Symbols			Other Symbols
			Snow	Rain	
H High Pressure	Trough	Showers	*	▽	Fog
L Low Pressure	Warm Front	Light	*	•	Thunderstorm
§ Hurricane	Cold Front	Moderate	**	••	Haze
	Occluded Front	Heavy	***	•••	Compiled by MIT Meteorology Staff and *The Tech*

Situation for Noon Eastern Daylight Time, 6Xday, April 6, 1999



Clinton Urged to Ask Premier About China Fundraising Link

By Alan C. Miller
LOS ANGELES TIMES
WASHINGTON

Critics of President Clinton's handling of China urged him Monday to confront Chinese Prime Minister Zhu Rongji about new evidence that the chief of China's military intelligence illicitly funneled money into the United States to support Clinton's re-election in 1996.

Zhu arrives in Los Angeles Tuesday and will meet with Clinton in Washington on Thursday during an eight-day visit at a time of growing tensions between the United States and China.

In a letter to Clinton, Rep. Dan Burton, R-Ind., chairman of the House Government Reform and Oversight Committee, said the president should demand "complete and unconditional cooperation, both in the investigation into China's interference with our elections, and in the investigation into China's attempt to steal U.S. nuclear secrets."

Republican presidential aspirant Steve Forbes also said that Clinton should insist that Zhu explain the new evidence.

"If he (Clinton) were a truly innocent party, he would bring it up with outrage and conviction and make it clear there will be a price to pay," Forbes said in an interview. "The first step should be a suspension of U.S. armed forces cooperation with the Chinese military."

Burton and Forbes were among those responding to a story in the Los Angeles Times disclosing that former Democratic fund-raiser Johnny Chung has told federal investigators that China's military intelligence chief secretly directed funds from Beijing to help re-elect Clinton in 1996.

Chung said he met three times with Gen. Ji Shengde, who ordered $300,000 transferred into the Torrance, Calif., businessman's bank account to subsidize donations intended for Clinton, according to sources familiar with Chung's sealed statements to federal prosecutors.

An aide to Clinton declined Monday to say whether the president planned to ask Zhu about the matter.

"The president has always made clear his view that everyone should cooperate with investigations into these matters," said White House spokesman Jim Kennedy.

The White House has said that Clinton was unaware of the source of Chung's funds when Chung was making political contributions.

In Beijing, a government spokesman denied Monday that China provided clandestine donations.

Supreme Court Justices Support Policemen Who Search Vehicles

By David G. Savage
LOS ANGELES TIMES
WASHINGTON

A police officer who stops a car and has reason to suspect it contains illegal drugs or guns may search everything in the vehicle, including a passenger's purse, the Supreme Court ruled Monday.

The 6-3 decision continues the trend of giving police greater authority to search motorists and their cars.

For decades, the court has said that once people leave home and go onto the highways, they have a diminished right to privacy. To maintain safety on the roads, police have nearly unchecked power to stop and question motorists, the court has said.

But the scope of police power to search inside a stopped car has been fought out in a series of cases over the past 20 years.

The officer needs something beyond a mere traffic violation to justify a full-fledged search of the car, the court has said.

If, for example, the motorist appears to be drunk or on drugs, or is believed to be carrying a concealed weapon, the officer can search "every part of the vehicle and its contents," the court has said in the past.

Until Monday, however, it had been unclear whether this power to search extended to the personal belongings of a presumably innocent passenger.

The issue came before the court when state judges in Wyoming threw out the drug evidence found in the purse of a passenger in a car driven by a man who had a syringe sticking out of his front pocket. This search violated the Fourth Amendment, the Wyoming Supreme Court said, because police had no reason to suspect the passenger of wrongdoing.

Reversing that decision, the Supreme Court swept aside the distinction between motorists and their passengers.

"We hold that police officers with probable cause to search a car may inspect passengers' belongings found in the car that are capable of concealing the object of the search," wrote Justice Antonin Scalia for the court.

It would be confusing for the police and for local judges, Scalia said, if a national rule were set that allowed searches of some containers in cars, but not others, depending who claimed them.

Ear Emissions Shed Light On Female Sexuality

THE WASHINGTON POST
AUSTIN, TX

Scientists have found new evidence suggesting that homosexual and bisexual women differ in subtle biological ways from heterosexual women.

Everyone's inner ears produce imperceptible sounds called "spontaneous otoacoustic emissions," and scientists have long known that women's ears tend to produce somewhat louder emissions than men's.

By inserting tiny microphones into the ear canal, Dennis McFadden and Edward G. Pasanen of the University of Texas in Austin and colleagues compared the emissions of 60 homosexual and bisexual women with those of 57 heterosexual women. As a group, the homosexual and bisexual women's emissions were slightly more like that of men: less frequent and weaker than those of the heterosexual women, the researchers found.

One explanation could be that homosexual and bisexual women were exposed to slightly different levels of hormones when they were developing in the womb, causing subtle changes in their development, the researchers say.

"For us, the most plausible explanation is that the inner ears of the non-heterosexual women were partially masculinized at some time in development, possibly at the same time that whatever brain structures are responsible for sexual orientation were also masculinized," says McFadden, whose study is featured in the April issue of the Journal of the Acoustical Society of America.

Internet Middlemen Introduce "Infomediaries"

LOS ANGELES TIMES
SAN FRANCISCO

Amid a flurry of attacks on personal privacy on the Internet, new services called "infomediaries" may soon help consumers gain a degree of control over the circulation of their personal data in cyberspace, and even pay them cash dividends in the process.

Infomediaries would collect personal information voluntarily supplied by millions of consumers, protect that information with stringent privacy guards, then sell access to groups of those consumers to direct e-mail marketers and Web merchants based on users' interests.Such businesses offer a new model for solving the privacy dilemma — a third way between potentially chilling government regulation and the ineffectual self-policing that has promoted today's Wild West Web mentality.

Infomediaries say merchants would fulfill a marketer's dream: gaining intelligence on and access to potential buyers certified as interested in their wares. And consumers would benefit in several ways. They would be compensated — either in cash or special offers for use of their personal information. And by aggregating demographic data and product preferences of millions of Internet users, infomediaries will try to create powerful blocks of buyers who can demand better prices and more personalized, less indiscriminate marketing pitches. Users interested in sports utility vehicles would be sent e-mail ads and Web reports on SUVs, but not information on luxury sedans, let alone Viagra.

OPINION

Letters To The Editor

Conversion Therapy Does Do Harm

Karl Wirth's guest column ["A Different Perspective," March 30] offers a "different perspective" on the visit to MIT of a representative of Desert Stream Ministries. This visit was sponsored by the United Christian Fellowship and the Black Christian Fellowship, and the goal of this visitor's ministry is to transform gay and lesbian people into heterosexuals. Mr. Wirth set out to explain that this ministry is not hateful to gay and lesbian people but merely intended to offer hope to those gay and lesbian people who might, of their own free will, wish to change their sexual orientation. How could this possibly be hateful or harmful to those of us who are happy and gay?

Here's how. Ask yourself: Why would people want to change their sexual orientation? Have you ever heard of a program to help heterosexual people change their sexual orientation? I certainly haven't. If heterosexual people are presumed to be happy with their orientation, why would anyone be unhappy with a same-sex orientation? However Mr. Wirth or his guest might answer that question, I suspect the gist would be that gay and lesbian people are somehow inferior. That's an insult to me, and it's much more harmful to anyone who is less confident than I am.

Here's my answer: We live in a world where gay and lesbian people are subject to hatred and violence for no reason other than whom they love, and so they are afraid. This goes beyond insult, however. If, like me and every organization of mental health professionals, you believe that a same-sex orientation is part of the range of normal, healthy human variation, then it is inescapable that any attempt to change this must be unhealthy and injurious. It would seem that Desert Stream Ministries' business is to induce delusions in its client-victims. I think it's wrong to stand by silently and let them continue to harm people. If we lived in a world where people were truly free, where, for example, every gay or lesbian youth could discover their sexual orientation in an atmosphere of safety, love and acceptance, I would not argue with Wirth or his guest.

I would still believe that anyone in such conversion "therapy" is harming him or herself, but if he or she makes that foolish decision freely, it's none of my business. But we do not live in that world. We live in a world where the cruelest playground taunt is "faggot," a world in which high ranking politicians call same-sex orientation a disease, a world in which a lesbian mother can lose custody of her child to a convicted murderer. In this real world, Desert Stream Ministries is not a gentle healer or a harmless diversion. It is an insult to me and an assault on its victims.

John F. Olson
Postdoctoral fellow

Apocalypse Now

From my extensive efforts to listen to Busta Rhymes, I have learned that "a major disaster will be striking all levels of existence" as the year 2000 approaches. Busta cites the Presidential sex scandals, the death of Princess Diana, and the death of Versace as evidence of this cataclysmic event. We at MIT, however, have just been presented with the most convincing evidence of the approaching apocalypse.

I am referring, naturally, to the Car Talk guys. In past years, we've had the President of the United States, the Vice President, and the Secretary General of the United Nations speak. I'm not suggesting that I'd rather hear any of these three speakers over Click and Clack, but such a drop in our speakers' prestige is obviously a sign of the Extinction Level Event which Busta so lucidly predicts. I hope that MIT has a policy against causing the end of the world. To that end, I suggest that we invite Busta Rhymes to replace the Magliozzi brothers at commencement.

Philip D. Sarin G

In Gratitude to The Administration

Lately, the MIT Administration has been under fire for its actions on many issues affecting the Institute. It is only fair that actions which affect the MIT student population in a positive light be made public as well. We, the brothers of Sigma Nu, would like to take this opportunity to thank the administration for their support of our application to live at 28 the Fenway.

We approached Chancellor Lawrence S. Bacow '72, Rosalind H. Williams (dean for undergraduate education), Margaret R. Bates (dean for student life), and Sarah E. Gallop (co-director of the office of government and committee relations) over a month ago with our intentions to move to 28 The Fenway and requested MIT's support. After initial apprehension about the potential risks of the Institute publicly backing another fraternity's move to that particular house, they decided to support our application. Gallop, Bates, and Andrew M. Eisemann '70 (associate dean of residence and campus activities) were very helpful to us by assisting in the preparation of our speeches and by outlining what documents were necessary in our application.

In particular, Sarah Gallop took time out of her schedule to meet with us and personally revise and edit our speeches and letters to the Boston Licensing Board. Additionally, both Margaret Bates and Sarah Gallop appeared to speak on our behalf a couple weeks ago at a meeting of the Fenway Community Development Corporation. At the Boston Licensing Board hearing, both Sarah Gallop and Neal H. Dorow (assistant dean of residence and campus activities) showed up to provide support, and Dorow read a very thoughtful and supportive letter from MIT.

The administration's unreserved support of our application and their involvement in preparing our presentation helped assure that we would impress the Boston Licensing Board. Sigma Nu is very grateful that MIT was willing to stand up for and speak in favor of our application, despite the possible political risks it may have carried along with it. We hope that MIT's decisive stance in this instance is just one sign of an increased commitment on the part of MIT to work with its fraternities, sororities, and independent living groups to benefit both parties.

Justin M. Schmidt '01, President
David B. Berman '99, Vice President
Sigma Nu

Errata

An editing error in last Tuesday's issue of *The Tech* [Concert Tickets Sell Quickly on First Day, March 30, 1999] resulted in the incorrect statement that the Chinese Students' Club (CSC) had in part funded Spring Weekend activities. As a result, the article omitted the Graduate Student Council (GSC) from the list of event sponsors.

A layout error in last Friday's issue of *The Tech* [The Bart & Duck Misadventures Variety Show] resulted in the incorrect order of the top and bottom comic panels. The bottom two panels should have been read in sequence, followed by the the top two panels.

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Opinion Policy

Editorials are the official opinion of *The Tech*. They are written by the editorial board, which consists of the chairman, editor in chief, managing editor, news editors, and opinion editors.

Dissents are the opinions of the signed members of the editorial board choosing to publish their disagreement with the editorial.

Columns and **editorial cartoons** are written by individuals and represent the opinion of the author, not necessarily that of the newspaper.

Letters to the editor are welcome. Electronic submissions are encouraged and may be sent to letters@the-tech.mit.edu. Hard copy submissions may be addressed to *The Tech*, P.O. Box 397029, Cambridge, Mass. 02139-7029, or sent by interdepartmental mail to Room W20-483. All submissions are due by 4:30 p.m. two days before the date of publication.

Letters and **cartoons** must bear the authors' signatures, addresses, and phone numbers. Unsigned letters will not be accepted. No letter or cartoon will be printed anonymously without the express prior approval of *The Tech*. *The Tech* reserves the right to edit or condense letters; shorter letters will be given higher priority. Once submitted, all letters become property of *The Tech*, and will not be returned. *The Tech* makes no commitment to publish all the letters received.

To Reach Us

The Tech's telephone number is (617) 253-1541. E-mail is the easiest way to reach any member of our staff. If you are unsure who to contact, send mail to general@the-tech.mit.edu, and it will be directed to the appropriate person. *The Tech* can be found on the World-Wide Web at http://the-tech.mit.edu.

The Sound of Silence

Complacency of Students Leave Them Vulnerable to Whims of State

Eric J. Plosky

If you're thinking of celebrating your 21st birthday with a beer, don't plan to go to a Bruins or Celtics game. Unless you have a Massachusetts driver's license or liquor ID, the FleetCenter won't sell you a Sam until you're 25.

I found this out last week. A vendor refused me service after examining my perfectly legitimate New York driver's license. "It's state law," he explained, and he pointed to the officious-looking notice posted inauspiciously nearby. "State law, my foot!" said I; the state drinking age is well-known to be 21. The vendor responded curtly — "Next!"

Now, this is an interesting little thought exercise. My initial response to the situation was one of disbelief, that the state's policy made no sense. Doesn't the Commonwealth of Massachusetts trust the driver's licenses of other states? Does Massachusetts believe my New York license is somehow more easily forged than one issued by the Bay State? Of course not.

Then why the discrimination against out-of-staters? The answer, when you think about it just a bit, is quite simple: The Commonwealth wants you to pony up whatever fee is required to obtain a Massachusetts driver's license or liquor ID. The fee can be considerable — converting an out-of-state license costs a hefty $68.75.

Fine; Massachusetts wants your money. Nothing new about that. But why only the under-25s? Because the Commonwealth figures that out-of-staters over 25 who happen to be at the FleetCenter are visitors, working stiffs from New Hampshire or Connecticut, who will go home after the game; and there's no reason to deny them beer. Under-25s, however, are likely to be students, residents, and Massachusetts has a love-hate relationship with students that has never really been resolved.

Students, by some estimates, make up over 20 percent of the population of the Bay State. The education industry means big bucks for the Commonwealth, and the masses of students themselves generate loads of economic activity, purchasing billions of dollars' worth of local goods and services each year. The Boston area especially is in many respects a huge college town.

But students usually aren't *official* residents of Massachusetts. They're transients, remaining residents of their hometowns — and as such, they don't pay Bay State income taxes. Perhaps this is at the root of the Commonwealth's sometime hostility toward students. After all, if six percent of students' earnings went to Beacon Hill, Massachusetts might change its tune.

Or maybe the Bay State is hostile towards students because it perceives students as noisy troublemakers who too often dare to ruffle the Brahmin-groomed feathers of Puritan Boston. That, actually, is a rather polite interpretation; some critics have even gone so far as to charge that students are irresponsible juvenile delinquents who, through their stunts and escapades, attract unwanted attention and controversy and divert time and resources from other, more worthy local needs.

Whatever. If we accept an anti-student bias, how can we get rid of it? Michael Crowley, author of a *Boston Phoenix* article on this very topic and speaker at last week's Democracy Teach-Ins, speculated some time ago on the possibility of students registering to vote as Massachusetts residents and electing themselves to positions of power within the Commonwealth. The relevant statistics are intriguing, especially when one realizes that the number of students in Boston is far greater than the number of people who actually voted in the last mayoral election.

Theoretically, students could indeed topple Mumbles Menino. Students could turn Boston into a twenty-something paradise ruled not with an iron fist but with a hand full of hemp, and all the problems faced today by students would vanish forever. Students in charge would ensure that everything went swimmingly. Right?

Well, it depends. Actually, I'm quite skeptical. On Thursday I went to a Teach-In talk given by Michael Albert '69, former Undergraduate Association president booted from MIT for political reasons; he was an agitator and a radical who frequently starred in *The Tech*. Albert advocated a campus with open admissions and without grades or Defense Department research. He wasn't concerned with issues that seem tiny in comparison, such as the Aramark monopoly. Is that because the issues have changed over the past thirty years, or is it because students have changed? Are students capable these days of the visionary sort of leadership that creates firebrands and protesters like Michael Albert? Several notches down, would students even be capable of running Boston?

It's no wonder that Massachusetts can get away with disliking students. If students ever had any political might thirty years ago, they certainly have none now. At MIT, the UA is a joke, and student leadership is in shambles. Even big issues like undergraduate reform aren't enough to galvanize students into assuming campus leadership positions and rallying the troops. How can we even think about tackling politics outside our little slice of Cambridge if we can't even manage to hold our own against MIT administrators?

Times have changed since the 1960s. Students have become complacent, content to confine their interests to themselves, and have lost political power and respect as a result. Until a modicum of student leadership surfaces, nothing will change in Massachusetts; the love-hate relationship between the Bay State and its campuses will continue. And, needless to say, I don't expect to be able to buy a beer at the FleetCenter any time soon.

His Own Worst Enemy

Michael J. Ring

As the political winds whisper through the cornfields by Des Moines and Cedar Rapids, they bear to the close listener a quiet but discernible message: Bill Bradley's candidacy is growing stronger by the day. And in the Democratic power circles, for groups groomed for seven years now by Bill Clinton to ensure his vice president is nominated, the past few weeks have caused some very anxious moments.

Yes, Al Gore is still the favorite to win the Democratic nomination. And yes, the $8.9 million Gore's campaign committee raised in the first quarter was double that of Bradley. And yes, Gore received key endorsements from House Minority Leader Richard Gephardt (D–Mo.) and Senate Minority leader Thomas Daschle (D–S.D.). But still the vice president has made political mistakes, and the cracks in his candidacy are starting to appear.

Bradley has made significant inroads into Gore's lead during the month of March. The latest CNN/*Time* tracking poll shows Gore holding a 49-29 percent lead over Bradley among Democrats in the race for that party's nomination; at the beginning of March the poll found Gore with a commanding 34-point lead.

While Gore has been building up his fundraising lead, Bradley has hit the campaign trail, making frequent visits to Iowa and New Hampshire. The former New Jersey senator has tapped into the bitterness of Hawkeye State unions over Gore's policies. Given Gore's alleged soft support of labor, perhaps symbolized best by his support of the North American Free Trade Agreement and the General Agreement on Tariffs and Trade, many rank-and-file union members have found Bradley's voice a refreshing change. While Bradley is no firebrand liberal and not labor's ideal candidate, organized labor may just rally around him after feeling betrayed by the Clinton administration.

Bradley also has some legitimate credentials which position him to the left of Gore and more in tune with rank-and-file Democratic voters. Most notably and courageously, Bradley stood against the welfare "reform" act of 1996, the one piece of legislation which better than any others demonstrates this administration's desertion of basic Democratic principles by essentially destroying an already-gossamer safety net. And although Bradley did vote for NAFTA, in the Senate he advocated a moral trade policy, including pro visions demanding China guarantee human rights if it wanted most favored nation trade status.

While Bradley goes around the country, he's helped by another force acting against Al Gore: Al Gore himself. The vice-president is his own worst enemy, often looking aloof, vulnerable, and prone to making insanely stupid statements. Did you hear Al Gore invented the Internet? Well, in talking about his role in Congress in working to promote the Internet, he made that very claim. Instantly Al Gore has launched himself into the company of his predecessor, Dan Quayle, in the realm of vice-presidential idiots. And one of those whispers across the corn field, in the form of a passing mention in *Time* of Gore's habit to clap with fingers open and the need of his staff to tell him to clap with fingers closed, demonstrates just how socially pathetic he is.

But the Internet claim is child's play compared to some of the fundraising irregularities in Gore's past. Remember that in 1996 he attended a fundraiser at a Buddhist temple near Los Angeles, raising questions of whether he violated federal law. The vice president himself has admitted that his presence at the event was "inappropriate." Gore has also been accused of soliciting donations from his White House office, allegations which, if true, would amount to another violation of federal campaign finance law. For someone who talks about supporting clean government and campaign finance reform, Gore certainly has a lot of skeletons in his closet.

And Gore, in addition to sharing his boss's propensity for campaign-finance scandals, also shares his boss's tendency to waffle. Politicians waffle all the time, but in Gore's case his wavering on tobacco is particularly egregious. At the 1996 Democratic convention, Gore emotionally spoke of his sister's death from lung cancer, and since then has been one of the chief supporters of the administration's anti-smoking campaign. But two elections earlier, in 1988, then-presidential candidate Gore, told tobacco farmers, "Throughout most of my life, I raised tobacco. I want you to know that with my own hands, all of my life, I put it in the plant beds and transferred it. I've hoed it. I've chopped it. I've shredded it, spiked it, put it in the barn and stripped it and sold it." If Gore were to admit openly and publicly his change of opinion, then such conflicting positions would be forgivable. But by seeming to sweep his earlier position under the rug, never publicly confronting his change of heart, we have to question how earnest he is with either policy — and how honest he is with us.

While Gore is still the frontrunner, he is no longer invincible. Bradley has narrowed the gap and has started to energize the Democratic rank-and-file as Gore stumbles along. Unless Gore can capture some momentum and positive press quickly, and unless he can connect with primary voters, the race for the White House could become a dead heat.

Starting From the Ground Up

Elaine Wan

We need money. We need to build an undergraduate dormitory. We need to build a graduate dormitory. We need to dig a nice big pool so we can swim under the summer sun. We need to modernize our classrooms and keep ourselves well ahead in the race of novel technological discoveries. We need to fund student group activities and improve student life. Most importantly, we need lots of money to do all this.

Who doesn't need money? Many universities, like Harvard and Caltech, have started massive fund-raising campaigns to build new science centers and to improve their campus facilities. MIT is no exception. If you haven't noticed by now, there is a long list of construction projects and important programs that beckon for financial funding.

Many of the planned projects like student housing are truly mandatory for a satisfactory, study environment. Projects including building graduate housing have been delayed for years because the Institute does not have sufficient funds to allot to all of the proposed ideas. So, the Institute considers our priorities. In exchange for dormitories, we may not get an Olympic sized pool and exercise facility in 2001. The crew team may have to row the same shells for a few more years. And the MIT Kendo Club will keep getting whacked by the Harvard kendo players until we can afford our own armor to practice regularly.

We all want better facilities and an enriching campus life. The fact is that we won't get all the money we need to do this if we stay in our rooms, hoping the administration will garner enough money without hiking tuition next year. Alumni telethons are often poorly staffed, and corporate sponsors usually direct their funds to specific departments.

So, the Institute considers our priorities... The crew team may have to row the same shells for a few more years. And the MIT Kendo Club will keep getting whacked by... Harvard...

When the student activity groups, religious fellowships, community service groups, athletic teams, and dormitories with which you are affiliated need money, they hold bake sales, garage sales, marathons, raffles, advertisement campaigns and contests to raise enough money to meet their goals. So what's stopping you from buying a brownie mix, adding eggs and water to it, baking it for 32 minutes, and selling it to raise money for MIT?

We all have our own personal interests and specific demands to better our school, but we all want to make MIT "one cool place to be." Alumni give the Institute $125 million dollars each year but most of the funding is limited to specific groups, scholarships or purposes. The tendency for large established student activity groups to raise more funds, often inhibit the creation of small new groups. It is time for all of us to have work together on one central goal, to raise money to improve not one department, not one student group, but our school, our alma mater, MIT.

Student group leaders and members of the Undergraduate Association should take the initiative to organize with faculty and administration ways for all MIT students to ameliorate the financial burden of our school. A group effort in fund-raising can build a greater sense of community. When we use all our resources to reach alumni, corporate sponsors, members of the Boston and Cambridge community, and members of the science and technology community, we can reach more people at one time. Such a campus-wide campaign will only demonstrate better that when MIT decides to raise one billion within seven years, it is a group effort that propels our influence upon the state, the nation, and the scientific society.

MIT is an important resource to students, to researchers and to the world. To keep us on top, to achieve the many things that will improve student satisfaction, we need to be active from the ground up.

AI Lab's COG Plays Drums with TMBG

By Zareena Hussain
EDITOR IN CHIEF

What could *They Might Be Giants*, ABC's *Nightline*, and MIT's Artificial Intelligience Lab possibly all have in common? The COG robot turned drummer of course.

COG, a project dating back six years, represents an early foray into the realm of artificial intelligience. Principal Investigator and AI Lab director Rodney Brooks came up with the name for COG as a take off on both the cogs in machines and as an abbreviation for 'cognitive.'

For the past few weeks, researchers in the AI lab have been working to teach COG how to drum in preparation for a music video directed by John Flansberg, one half of the original TMBG duo, that will be aired in conjunction with a *Nightline*-affiliated documentary series on technology to be aired this summer. Flansberg came to campus this weekend to film COG for the video. The video included a sort of "drum-duel" between COG and TMBG drummer Dan Hickey.

"I can't tell you who won," Flansberg said, although he did say that the video will include a dialogue in which Flansberg and TMBG partner John Linnell disagree about the winner.

The video featuring COG is the second of five that the group will be writing for the documentary series tentatively titled "Brave New World." The series' producers have asked several music groups, including TMBG, to write songs for the documentaries in order to include an artist's or performer's, as opposed to a journalist's, take on subjects as diverse as human cloning and AI.

But even Flansberg admitted that it was difficult to capture what is interesting about COG in a such a general interest piece

"It's very difficult to illustrate visually," Flansberg said, and "might be predestined to be misunderstood."

About how it felt to jam with a robot, Hickey replied, "It's an experience like I never had before. It's really fun, it's interesting."

Drumming part of COG research

Teaching COG how to drum was an extension of existing research into expanding the realm of COG's capabilities.

Matthew M. Williamson G, has been working on developing the action of COG's arm in a way that exploits its natural dynamics in the same way the human arm exploits its own dynamics. Williams developed programs that control COG's arm modeled on two biological neurons that control the human arm. Acting as oscillators they can entrain themselves to synchronize with audio imput.

The researchers enabled COG to synchronize his drumming with simple audio input and attempted to program COG to create more complex rhythms.

"We started writing software to do a more extensive beat analysis," said Matthew J. Marjanovic G, who has been working with COG since he was an undergraduate at MIT, and "to use that as an input to the drumming oscillator. Although that part didn't exactly work."

COG is already able to perform some basic motor skills, such as reaching out to different points in space. COG also has primitive visual and auditory sensory capabilities.

Former UA President Albert Reflects on Activism, Dissent

By Naveen Sunkavally
OPINION EDITOR

Michael Albert, former Undergraduate Association president expelled from the Institute for political reasons months before Kent State broke out in 1970, spoke Friday to reflect on his activism and to encourage student dissent.

Albert started his speech by developing an "intellectual framework" through which he levied a scathing assault on the current capitalist system. "Nice guys finish last," he said. "I would argue in the United States [that] basically garbage rises. Look around...."

Examples of such garbage include elite institutions such as Harvard University, where, according to Albert, students basically learn who their friends are. "The more educated you are, the stupider you are," Albert said.

Albert repudiated traditional economics with the statement, "Most of what we're told by economists is total crap." He advocated a economic and social system in which members of society are rewarded for "effort and sacrifice," rather than on an individual's output.

Albert reflects on life of dissent

Albert spent a good portion of his discussing ways through which he had promoted revolutionary activity in his youth.

Albert said that in 1964, MIT was just as apolitical as it is now. "There were a group of students [from MIT] who would throw rocks at demonstrators [protesting the war]... The others [at MIT] didn't know there was a war," he said.

Albert's political interests were stirred his freshman year, when his brothers at Alpha Epsilon Pi informed him that they had wiretapped and bugged his room during rush to make sure he stayed. During rush in the following summer of 1966, he "sat on a car fender and started telling incoming freshmen what was going on," which ultimately led to his removal from the fraternity.

A few years later, Albert ran for UA president with a platform that included open admissions, the elimination of requirements and grades, the end of war research; he won, as a write-in candidate, despite a small debate over his status as a registered student.

Following his victory, Albert went on the offensive. Albert said he used his traditional UA address before the alumni to call them essentially the "scourge of the earth." He and a group he formed led demonstrations against the Institute during meeting to end war research, put up blank posters around campus to gather student input, and painted walls on the Infinite Corridor, which was then completely gray.

Albert said that in 1969 he was expelled for cooked-up charges such as "being at a demonstration where violence took place," despite a guarantee less than a year earlier from then-Provost Jerome Weisner that he would not be expelled from MIT. Albert said that even the Provost and a dean had been at this demonstration.

Albert now runs a leftist magazine called *Z Magazine* and is co-founder of South End Press.

Albert encourages dissent

Albert said that the main difference between the sixties and now is that now "nobody is surprised by anything." Movies like *Air America* and *No Way Out*, Albert said, would never have run in the 1950s, but now the messages of such movies have been ingrained in the public consciousness.

"Now, everyone know pain isn't personal. The thing that's preventing people from doing anything is hopelessness," Albert said.

Albert lamented that today's students often tend to just go their own way rather than pursuing social and moral goals. For example, in the question-and-answer period, Albert pointed to the crisis in Kosovo as a gross injustice on the part of the United States that has only escalated the conflict there.

"I truly believe we can win a better world," Albert said.

The Tech

COMICS FUN PAGES

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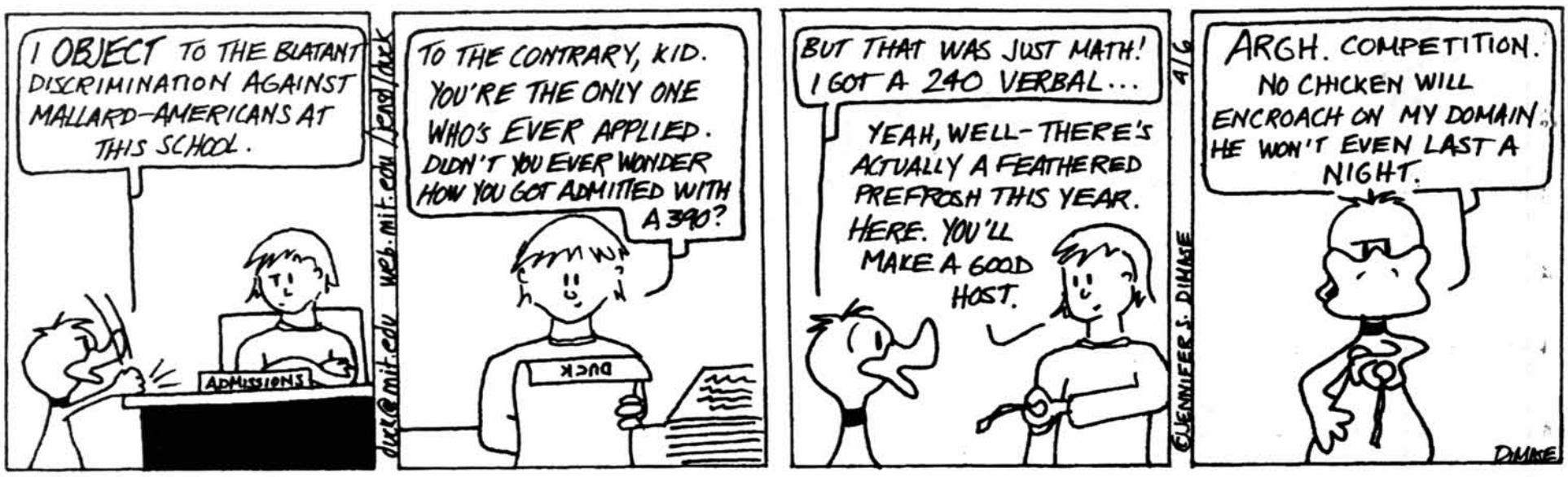
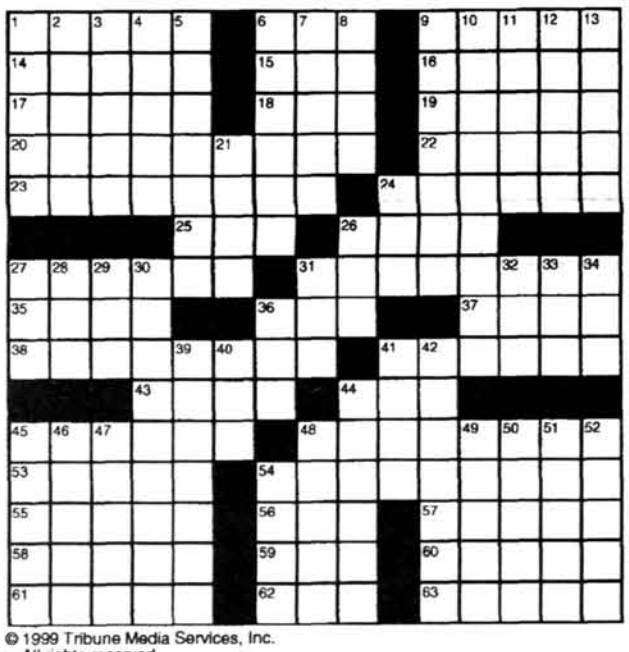
Down with Science

by Jennifer DiMase



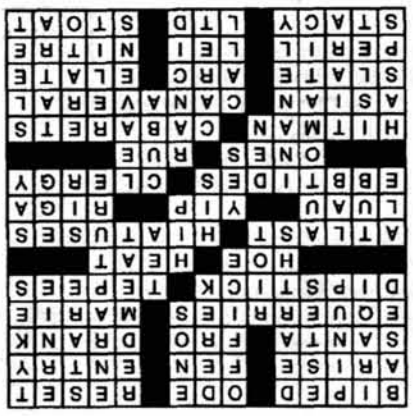
Crossword Puzzle



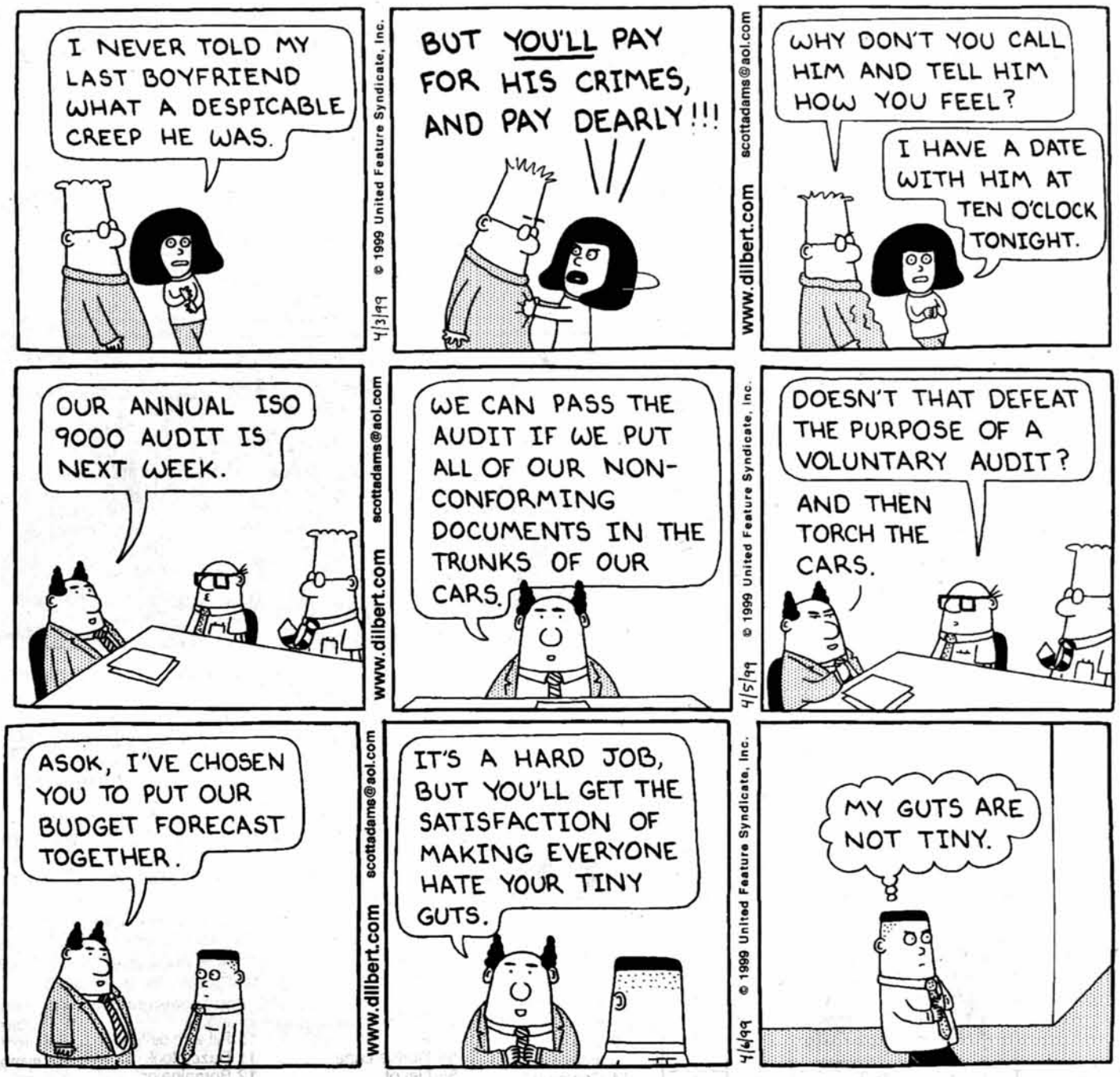
ACROSS
1 Two-footed animal
6 Poetry from Pindar
9 Change the alarm
14 Come up
15 Boggy lowland
16 Way in
17 __ Cruz, CA
18 Partner of to
19 Imbibed
20 British royal attendants
22 One Osmond
23 Oil-level checker
24 Conical dwellings
25 Tiller's tool
26 Miami team
27 Finally
31 Interruptions
35 Feast on Oahu
36 Puppy bark
37 Latvian capital
38 Outgoing flows
41 Priesthood
43 Washington bills
44 Regret
45 Hired killer
48 Nightclubs
53 Thai or Korean, e.g.
54 Florida cape
55 List of candidates
56 Javelin's path
57 Raise spirits
58 Jeopardy
59 Circle of flowers
60 Fireworks ingredient
61 "End of the Road" star Keach
62 British Inc.
63 Summer ermine

DOWN
1 Founded
2 Hussein, for one
3 Poster
4 Photorealist painter
5 Scarce supplies
6 Work room
7 Beautiful Bo
8 Son of Seth
9 Beef or venison, e.g.
10 Fill with delight
11 Dazed look
12 Borgnine or Kovacs
13 Youngsters
21 Mob melee
24 Herbal drink
26 Part of a pelvis
27 Ginger __
28 Vat
29 Sci. class
30 Self-regulating
31 That guy's
32 Military address
33 Easter item
34 For instance
36 Sure thing!
39 Senselessly
40 Hibernation chamber
41 Castro's country
42 Adds yeast
44 Repugnant
45 Metal fasteners
46 Small land mass
47 Pope's triple crown
48 Proofreader's symbol
49 Started the fire again
50 Poetic muse
51 Carpathian range
52 Ice fall
54 Summon

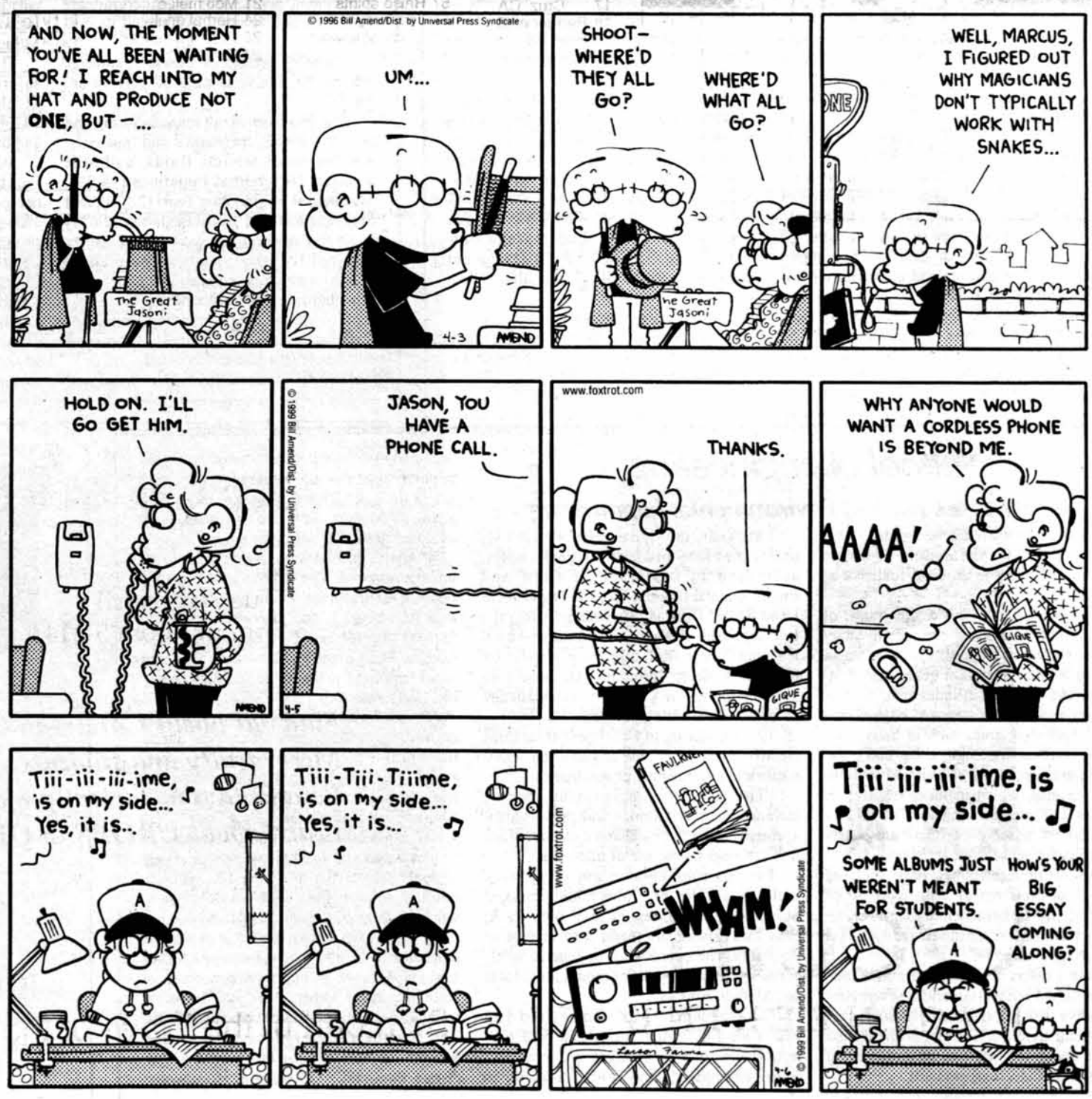
Today's Solution



Dilbert® — by Scott Adams



FoxTrot — by Bill Amend



FEATURES

From Civil Engineering to Philosophy

The Tech surveys the gamut of MIT's undergraduate Course offerings

KARLENE ROSERA—THE TECH

Elizabeth Maxwell '01 examines a sample in a scanning electron microscope as part of a learning module for Materials Structure Laboratory (3.081).

School of Engineering

Course III — Materials Science and Engineering

"In Materials Science you get to build stuff," says Nancy Herron, administrator in Course III. This "stuff" covers a range of subjects treated by Course III including physics, chemistry, and various types of engineering.

Nearly two thirds of the undergraduates in the major choose Course III-B, which substitutes two summer internships for the undergraduate thesis. Students work during the summers after their sophomore and junior years and submit papers at the summer's end.

Students with specific interests outside Course III may opt for the III-A program, an "opportunity to tailor-make your program," Herron said. This is recommended for students who have serious interest outside Course III, particularly those considering medical school." Course III-C, Archaeology and Materials, is another option that is new this year.

Class sizes in Course III range from about 15 to 40 people, said Professor of Material Science Ronald M. Latanision. The two required labs usually consist of 20 students each and are designed to complement UROP activity and internships. Most students have UROPs, he said. One student, Marc A. Sadler '00 has had no trouble finding projects: his freshman year he worked with the first professor he asked about a UROP.

Undergraduates in Course III are assigned an undergraduate adviser their sophomore year and stay with that adviser until graduation. There are two undergraduate advisers per MIT class, so each adviser has about 60 students.

Students with III-B internships have internship advisors as well as faculty advisors, and during the summers have an additional advisor on site, Herron said.

Most students go on to graduate school, but an increasing number take jobs immediately, Latanision said. Such jobs offer salaries generally between 42 and 55 thousand. An average salary for a PhD graduate in Course III would be $70,000, according to the office of career services.

The Society of Undergraduate Materials Scientists (SUMS), hosts speakers at monthly meetings, and plans to organize social activities as well, said Sadler, who is treasurer of SUMS. Sadler and Cheng-Han Chen '00, SUMS president, also hope to host picnics and other social events, and "extend outward," said Sadler. "We'll try to get more interaction with the faculty," Chen said.

Sadler urges students interested in Materials Science to go talk to professors who are very willing to answer questions. — *Karen Robinson*

KAREN ROBINSON — THE TECH

As part of a team in the US First competition, Ela Ben-Ur G mills a motor mount for her robot.

School of Engineering

Course II — Mechanical Engineering

The Mechanical Engineering department, famous for its televised 2.70 competition, is the second largest major, with 391 undergraduate students and about 350 graduate students.

Professor of Mechanical Engineering Ernest G. Cravalho said Course II has the "broadest and most general programs of engineering." As a result, the department has some additional requirements over other engineering majors.

Course II is a "hands-on department" where the 58 faculty work to make the courses fun, Cravalho said. Some lecturers are also hired directly from industry. The department emphasizes an undergraduate education and recently overhauled its curriculum.

About 40 percent of Course II students are female, the remaining 60 percent are male.

Students learn about manufacturing and design controls, mechanics and materials, and thermodynamics, fluids, and heat transfer. Differential Equations (18.03), Mechanical Engineering Tools (2.670), and Measurement and Instrumentation (2.671) are a few of the core classes. In 2.670, a required IAP class, students learn about using programs like Matlab and Pro/Engineer and build a stirling engine.

Overall, the core curriculum consists of three two-course sequences: statics and dynamics, systems and controls, and thermal fluids. Students then take design and manufacturing classes. In 2.009, for example, students take a project from concept to a working prototype and then present the product to an audience. Students in that class are graded based upon students, faculty, and guest evaluations. Students also take two elective classes from an extensive list, including graduate-level classes.

While some core classes are large, the department attempts to keep recitation sizes under 20 students, Cravalho said.

After graduation, about two-thirds of Course II majors will eventually earn a higher degree, with one-third entering graduate school immediately and the other third entering within five years. Of those returning to school, about half end up earning an MEng or PhD degree from the Institute.

The Career Services office reports that salaries for those with SB degrees in Mechanical Engineering range from $41,400 to $54,000, with an average of $48,000.

Students in Course II are assigned to a faculty adviser; the department also reviews academic performance of all undergraduates every term.

Almost all Course II professors offer UROP positions. About 15 percent of Course II students participate in UROP within the department.

The Pi Tau Sigma honor society administers course evaluations within the department, which are used in determining faculty promotion.—*Anna K. Benefiel*

School of Engineering

Course I — Civil and Environmental Engineering

Civil and Environmental Engineering, Course I, combines the muscle of bridge construction with the modern realities of toxic cleanups.

The course encompasses a wide range of study: from environmental cleanups to large-scale transportation projects. The department itself is split into three major groups: environmental systems, which includes areas such as hydrology and aquatic systems; engineering systems, including areas such as transportation and construction engineering and management; and mechanics of civil and environmental systems, which includes research in structures and geoenvironments. The 50 faculty members of the department are nearly equally divided between the three branches.

About 80 upperclassmen have declared Course I as their major with over 50 of those studying Environmental Engineering, Course I-E. The remainder study Civil Engineering, Course I-C.

Course I offers a six-subject minor program in Civil Engineering and a seven-subject minor program in Environmental Engineering Science. The department also includes about 160 Masters of Engineering students and 70 doctoral students.

Last year, the department revised its undergraduate program significantly, according to Professor of Civil and Environmental Engineering and Department Head Rafael L. Bras. Students pursuing the I-C degree now focus on "problem-based learning," Bras said, and are prepared for the M.Eng. degree program. All those with a 4.0 or higher GPA are now automatically accepted to the MEng program.

Those majoring in I-C choose from three elective tracks: systems engineering, environmental engineering, or mechanics.

The systems engineering course includes basic economics and project management, while the mechanics elective track focuses more on the use of materials.

The environmental engineering track includes classes in biology and ecology. Students can also design their own track, Bras said, giving the major a great deal of flexibility. The coursework in general incorporates extensive use of computational tools and Matlab, Bras said.

The I-E degree was also revised last year. Like I-C, it now includes a final project, which can be undertaken in a local firm or in government, Bras said. The major is designed to "make it easy to satisfy pre-med requirements and get a minor in Biology," Bras said. Like the I-C program, those with a 4.0 or higher GPA are automatically accepted to the I-C MEng program.

Course I provides strong support to its undergraduates. The department pays for UROPs for freshman wishing to explore an area of Course I, and provides support to faculty members for upperclassmen UROPs. "Our numbers allow for a very personal treatment... faculty are easily accessible," Bras said.

Course I also guarantees all majors in the department paid summer internships during the summers after their sophomore and junior years. The department has placed students in areas ranging from Italy to Puerto Rico and the United States, Bras said.

After graduation, over half of students in Course I proceed to graduate school. Many students, particularly in Course I-E, go on to medical school. For those who choose to work after graduation, the department is "very aggressive and successful in placing its graduates in excellent permanent jobs," Bras said. Most work in private engineering or consulting firms. Others work in information technology or management consulting firms. The starting salary ranges from around $35,000 to $60,000 for those with a S.B. degree, Bras said. — *Douglas E. Heimburger*

Sloan School of Management

Course XV — Management

Course XV is the only major that is closely tied to a graduate school: the MIT Sloan School of Management. Course XV majors take graduate Courses at the Sloan School in addition to required undergraduate mathematics and computer science Courses.

Management majors specialize in one of four areas: marketing, finance, operations research, and information technology. There are 105 requred units overall, 75 of which are mandatory electives.

The Institute first began to offer engineering management Courses in 1914. Under the auspices of Alfred P. Sloan (SB 1895), the curriculum grew into the MBA program that began in 1925.

Sloan is currently the ninth ranked business school (in the U.S. News and World Report rankings) in the country having fallen several spots in recent years. The school hosts speakers ranging from corporation heads to foreign dignitaries. It's distinguished faculty have included Robert B. Reich and the economist Lester C. Thurow. The Interim Dean is Professor Richard Schmalensee.

The Management department at MIT is primarily concerned with teaching students how to run businesses successfully and efficiently. Macroeconomics and microeconomics, as well as statistics, computer science, and accounting are crucial to the subject.

Graduates of Course XV go on to work for corporations of all sizes, including in-market analysis and financial consulting. Many start their own businesses or go to law school.

In 1998, 77 students graduated with a management degree. There are currently 209 students who have declared Course XV as their major of choice. About forty of these students are also Course VI, the most common second major for management students. One third of Course XV majors are female. Of the 54 tenured faculty, three are female and 51 are male.

The chief student organization for Course XV majors is the Sloan Undergraduate Management Association (SUMA), co-chaired by Sean C. Fabre '00 and Mykolos D. Rambus '00. SUMA organizes events that broaden its members' education, including a stock market simulation that will take place later this week.

Another opportunity for Sloan students is the annual $50K competition, which awards fifty thousand dollars to the team that plans the most convincing entrepreneurship plan. Both gradute and undergraduate students are involved in the competition.

Students agree that the greatest difference between Course XV and other majors is the Management Department's emphasis on people skills and social interaction. Kosanna Poon '01 noted an "emphasis on social skills and human behavior."

"It enhances interpersonal and communications skills," said Karen Horstmann '99, who is specializing in finance.

The Sloan School received national attention recently when Schmalensee appeared as witness in the ongoing anti-trust case against software giant Microsoft.

School of Science

Course XII — Earth, Atmospheric, and Planetary Sciences

From its headquarters located in the tallest building in the city of Cambridge, the Department of Earth, Atmospheric, and Planetary Sciences trains tomorrow's geologists, oceanographers, and astronomers — with a personal touch.

Course XII, informally known as EAPS, is separated into three subdivisions. Sophomores can choose to concentrate in geoscience, the physics of atmospheres and oceans, or planetary science and planetary astronomy.

Course XII is one of the smallest undergraduate majors at MIT, with just 30 students. If there is one defining feature of EAPS, it is the "intimacy and personal nature of the department," said Scott D. Sewell, academic administrator of EAPS.

With such a small undergraduate population, there is ample opportunity for personal interaction and one-on-one help, said Sewell, adding, "I hire tutors myself." In any class, there are only five or six students. With the large graduate student population of 170, there is usually someone willing to help with any subject, he said. The faculty outnumber the undergraduate population, being comprised of 30 professors, seven associate professors, and two assistant professors.

Although there are currently no organized EAPS-focused clubs, the major has its own lounge and an informal weekly luncheon, paid for by the department.

The small size of the department also helps students to get hands-on experience. "We offer quite an extensive" UROP program, with between 20 and 30 openings per year, Sewell said. Many of these are filled by non-Course XII majors, and "there's no reason why a student who wants" a UROP couldn't get one, Sewell said.

Most UROP projects are for pay, though some students work for credit or as volunteers. The majority of for-pay UROPs are funded through the department.

Each EAPS student spends at least one IAP doing required field work in his or her area of specialization. Students do field research in places as diverse as Kitt Peak and the Bahamas.

Because of the small sample size, there are few statistics available of Course XII students. The majority go on to attend graduate school, mostly at other institutions, although some remain at MIT.

Starting salaries can be as high as $60,000-$80,000 a year for geophysicists at the PhD level, but most graduates earn less. The many EAPS students who go into academia usually earn $30,000-$40,000 yearly for professorial-track positions, though this amount varies between institutions.

Sewell recommends that anyone interested in joining the department take one of the core classes: 12.001 for geology, 12.004 for the planetary sciences area, and 12.002 for physics of atmospheres and oceans. — *Krista L. Niece*

School of Science

Course IX — Brain and Cognitive Sciences

The Department of Brain and Cognitive Sciences, Course IX, is divided into four concentrations: Systems Neuroscience, Language, Experimental Cognitive Science, and Computation.

There are 60 undergraduate majors and 51 graduate students within the Department of Brain and Cognitive Sciences.

The average GPA is about 4.0 for course IX classes. Tutoring is available from the TAs or the professors themselves. Most higher level classes are small, with anywhere from 10 to 30 students.

The department consists of 27 faculty: 6 females and 21 males, with 18 tenured professors. Most faculty in the department offer UROPs, which are primarily funded through the UROP program, although some are funded by faculty themselves.

One requirement in Course IX is that every student in the major is required to do some sort of UROP for a grade. The department wants every student to have at least a semester of undergraduate research, although most students pursue longer research projects.

There is a reasonable balance between the graduate and undergraduate departments, as all faculty participate in undergraduate teaching, and most participate in graduate teaching. Both departments are strong, as this is the only department in the world that unites the 4 disciplines into core areas.

Undergraduate students are also encouraged to take graduate level courses. Flexibility within the major is valuable to students who know what aspects of the brain they like to study.

"Neuroscience is the hot topic for the 90s. A lot of new information is being found out right now and what can be more excited than studying how our brains work? It is simply fascinating," said Susanna B Mierau '00.

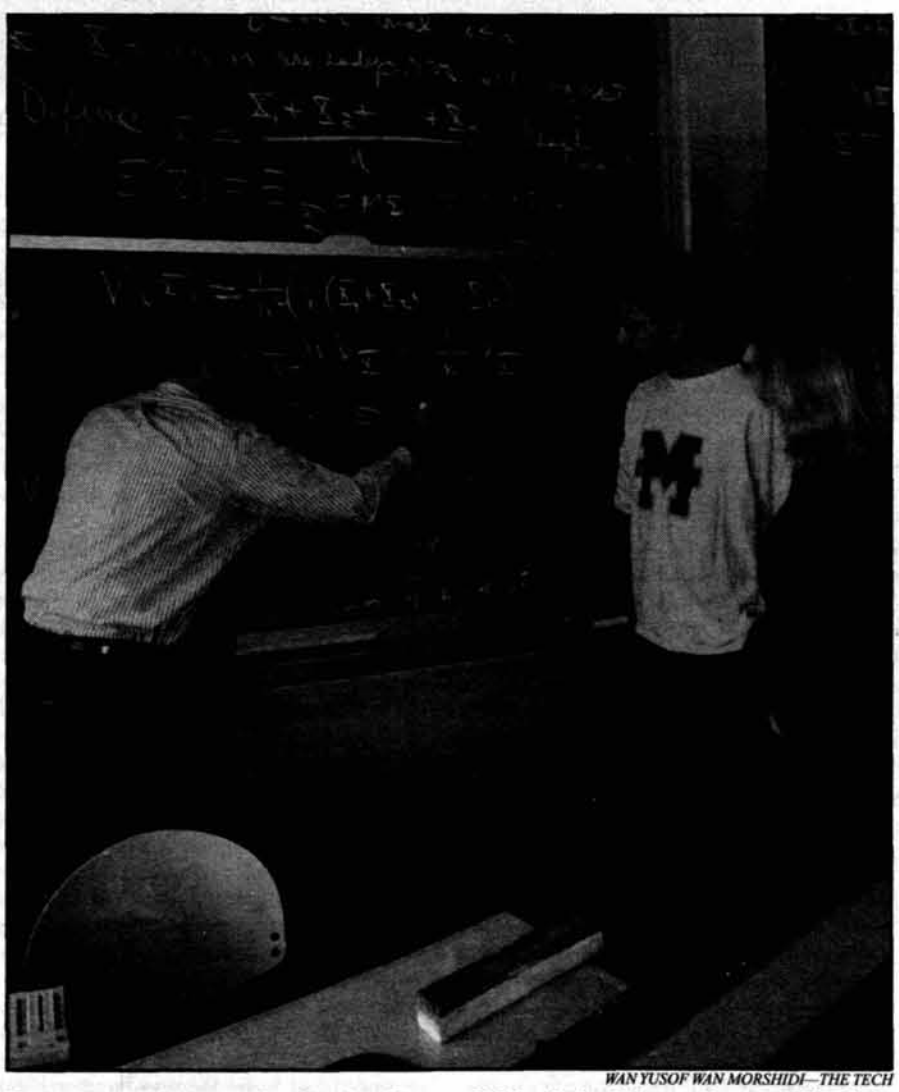
The department offered seven, 3-unit courses during the last IAP, including a class with different faculty presenting their research, as well as a class involving a sheep dissection. None of the IAP courses are required; they are geared more toward students interested in learning about something new and different which is not in the usual curriculum, and having fun doing so.

After graduation, most students move on to graduate school or medical school, while others pursue careers in disciplines as varied as research, financial analysis, or health care consulting.

An informed guess from the department concerning the average salary of students graduating with a S.B. is anywhere between $35,000 and $125,000, with the average falling around $50,000.

The department prides itself on the fact that every student who has applied to medical school has gotten into at least one within the past 15 years. Along with this 100% acceptance rate into medical school, they also have about a 90 percent acceptance rate for students applying to graduate school.

There are also 4 awards given to seniors within the major for notable contributions to research in brain science and cognitive science as well as academic accomplishment in these fields. — *Neena S. Kadaba*



WAN YUSOF WAN MORSHIDI—THE TECH

Professor of Mathematics Hartley Rogers fields students' questions on the finer points of probability.

School of Science

Course XVIII — Mathematics

With 18.01 and 18.02 already a part of the General Institute Requirements, most undergraduates at MIT are familiar with the math department.

"It's the diversity in the department. It's the strengths in all areas of mathematics" that make the MIT math department great, said Professor James R. Munkres.

The 236 additional undergraduate math majors can get their degrees in one of three areas: general, theoretical, or applied math. There is also a separate option, Course XVIII-C, for a degree in math with computer science.

A degree in applied or theoretical math differs slightly in the specific subject required. Course XVIII-C requires math majors to take 6.001 and other Course VI classes.

To get a minor in math, students must take six 12-unit subjects beyond the GIRs, including at least four advanced subjects.

Most math majors choose to pursue a degree in Course XVIII instead of XVIII-C; the graduating class has 86 math majors and ten math with computer science majors. Of this year's graduating math majors, 74 will get a degree in general math, with eleven in theoretical math and one in applied math.

The math department has now begun a tutoring program for upper-level classes on Tuesdays and Thursdays, so that math majors will have another place to go for help.

As for introductory classes, the math department also offers sessions Monday through Thursday, where older students are on hand to help students in those lower-level classes.

The math department also tries to support its undergraduates through the advising system; there are twenty-seven advisers in the math faculty.

Students rate the faculty in Course XVIII as one of the strengths of the department. "I like that the faculty seem pretty friendly and [are] willing to work with the students," said Edward F. Early '00.

There are 12 professors emeriti in the math department, 36 professors, five associate professors, 11, assistant professors, and 34 instructors.

The department also offers research positions for math majors. According to the UROP office, fourteen students had UROPs in the math department in the fall, and six currently have math UROPs this spring. Six of those twenty UROPs were for-credit positions, while the rest were for pay. The math department only funded two of the twenty UROP students; the rest got funding through the UROP office.

After graduation, most math majors get jobs, although a significant number go on to higher education. "Math is more flexible in terms of what people do afterwards," Munkres said.

According to Munkres, approximately seven of last year's 89 graduates went on to do graduate work in math. About eight pursued advanced degrees in other fields such as computer science, physics, and economics. Other graduates got jobs: "the most popular are software systems analysis and financial work," Munkres said.—Rima Arnaout

AARON ISAKSEN—THE TECH

In the Lippard Laboratory, Chemistry major Nisha Singh '00 examines an air sensitive cobalt compound synthesized under an inert atmosphere.

School of Science

Course V — Chemistry

MIT's Chemistry Department offers four areas of undergraduate study: Physical, Organic, Inorganic and Biological Chemistry.

Approximately 130 Undergraduates, and 160 graduate students are currently majoring in Course V.

A major in chemistry consists of 10 required subjects, including three lab courses, along with two restricted electives and five unrestricted electives.

The department offers in-house tutoring for the Fall session of Organic Chemistry I, (5.12.) For other courses, the Department collaborates with the OME/TSR in referring both students and tutors, as well as making resources available for the tutors.

"I enjoy the chemistry major for several reasons," said Victoria A. Gomez '00. "One of the best things about the chemistry major is that it's small enough that you get to know a lot of other people in the major, especially since you get to spend so much time in lab with them. Also, the department has made a commitment to excellence in teaching, as evidenced by the many teaching awards chemistry faculty have won and programs such as 5.12 peer tutoring."

The department has 34 full-time faculty members, four of which are women. Many students participate in UROPs within the department. The department currently sponsors 21 paid research projects, 16 projects for credit and 3 volunteer projects.

Approximately 60 percent of the funds for the paid projects have come from the UROP Office, with the remainder coming from a faculty member's own funds.

"I think that to understand nature at the molecular level is fascinating," said Songpon Deechongkit '99. "Chemistry is the science that describes nature at the molecular level. The breadth and depth of this subject really interests me. In particular, I am interested in how molecules interact. Chemistry has application to our everyday life, for example medicines, polymers, household products, etc."

The department offers several non-credit classes during IAP. It also offers Chemistry Laboratory Technique, 5.301 and Introduction to Experimental Chemistry, 5.302 which are lab classes for freshmen interested in getting lab experience and/or chemistry UROPs before their sophomore year.

About 80 percent of undergraduates go directly to graduate or professional study after graduation. The majority of these students either pursue a graduate degree in Chemistry or attend medical school.

Those who would like to pursue employment are able to find positions easily in pharmaceutical companies, computer corporations, and medical centers. Some also enter the financial consulting field.

ClubChem, the department's undergraduate organization, sponsors dinners with professors, study breaks, and Magic Shows which bring chemistry demonstrations to elementary schools in the area. The department also has an honor society, Alpha Chi Sigma which sponsors a number of different activities throughout the year. — *Neena S. Kadaba*

School of Science

Course VII — Biology

Biology is currently the third most popular major among undergraduate students at MIT, with numbers increasing rapidly each year.

The department prides itself on its many Nobel Laureates, eminent researchers, and excellent teaching faculty. In contrast to programs at other universities, the MIT Biology department has a strong focus on the molecular and cellular aspects of biology.

Currently, there are 57 faculty members in the biology department including those holding joint appointments with other institutions. Of these members, 39 are professors, seven are associate professors, and 11 are assistant professors. There are eleven women faculty members.

Many biology students decide to participate in UROPs for credit during the school year. The biology department itself only funds UROPs in the summer with grants from Howard Hughes Medical Institute; students are also funded by grants from professors either during the school year or in the summer.

For students who do not desire to pursue biological research or cannot fit all Course VII requirements into their schedule because of another major, the biology department offers a special program, VII-A. This program is identical to the course VII curriculum in all respects without the project laboratory requirement.

Biology students and faculty truly enjoying studying their major. Biochemistry (7.05) Professor Gene M. Brown likes not only "studying the chemistry of life," but also enjoys "teaching and dealing with students."

Tracy C. Huang '01 likes the major because there are "good professors and optional problem sets. There are awesome labs to work in."

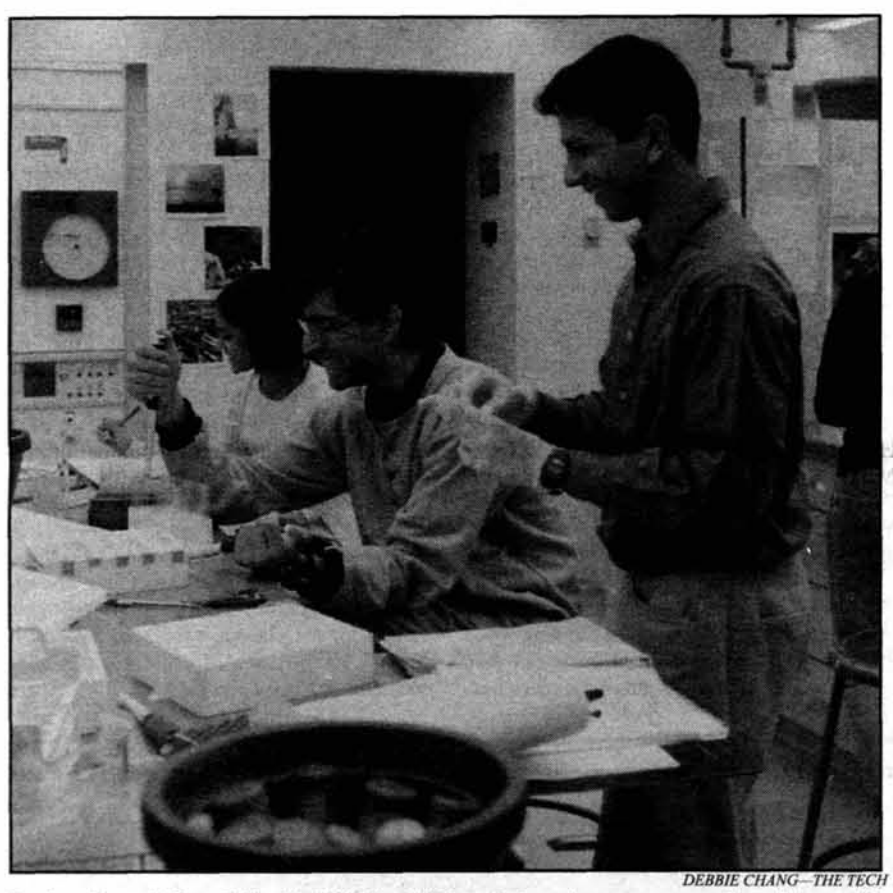
Biology students did express complaints about the large size of the department.

The Biology Undergraduate Student Association (BUSA) enables students to get help in core biology classes through its tutoring program.

In addition, BUSA sponsors many events including faculty student socials, lectures, and a student poster session over IAP. It also sponsors an annual Howard Hughes Lecture featuring a distinguished speaker at the forefront of his field.

Among the students who graduate with a degree in biology, roughly 80 percent pursue a higher degree by attending either medical or graduate schools.

Of those entering employment directly following graduation, popular jobs include research assistants as well as positions within the biotechnology industry. —*Jane Yoo*

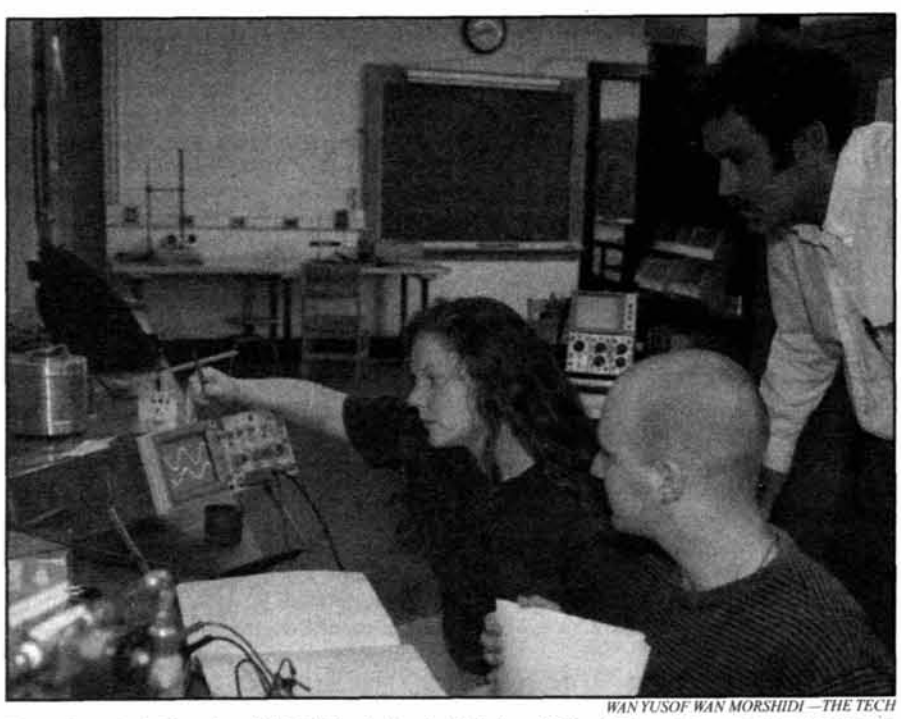


DEBBIE CHANG—THE TECH

Sanjay Basu '02 and Manhaj Siddiqui '01 collaborate on an experiment to purify a protein in their Introduction to Biology laboratory (7.02).

School of Science

Course VIII — Physics



WAN YUSOF WAN MORSHIDI —THE TECH

Experimental Physics II (8.14) students Kristen Vella '99 and Aaron Vandevender '00 work with technical instructor Guy Pollard on a superconductivity experiment.

"One of the best things about the Physics Department is that everyone truly loves what they do," said Virginia Esau, Physics Course Administrator.

The Physics department at MIT is world renowned for both its undergraduate and graduate education. In a recent report, the Physics PhD program at MIT was ranked second in the nation by US News and World Report.

A unique feature of MIT's physics program is that renowned professors will often teach introductory level courses. For example, famed cosmologist Alan H. Guth '68 taught 8.01, the introductory freshman physics course.

Physics majors have a wide variety of job opportunities available after graduation. Some graduates pursue openings available in research laboratories, while others choose to apply their extensive mathematical background to financial analyst positions.

The undergraduate curriculum in physics also offers excellent preparation for graduate work in a variety of different professional fields such as medicine, law, and management. "A physics major offers such strong analytical and reasoning skills that employers in virtually any line of work will hire someone with a physics degree," said Esau.

Approximately 70 percent of physics majors continue their education after graduation.

A physics major at MIT requires 138 units to be completed beyond the graduate institute requirements.

A number of the required courses are offered during IAP. These include 8.033, Introduction to Special Relativity; 8.21, Classical Mechanics II; and 8.122, Advanced Project Laboratory.

Opportunities and funding abound for UROPs within the physics department at MIT.

"UROPs are definitely available for freshmen and sophomores. In fact, the physics department encourages students to get involved early so that they can work on projects for three years or more," said Esau.

Funding for UROPs comes from a variety of different sources including the UROP office, the physics department, the Center for Materials Science and Engineering, and the Orloff Fund, a special endowment fund for physics UROP research.

The tutoring program within the physics department has recently undergone a number of changes. Many more graduate students have been hired as tutors and new tutoring rooms have been added this year to accommodate the greater influx of students.

Tutoring is required for students in freshman introductory physics courses. However, higher level tutoring is usually arranged on an individual basis between students and professors.

—By Kristen Landino

School of Humanities and Social Science

Course XIV — Economics

The economics department at MIT has by far the largest course enrollment in the School of Humanities and Social Sciences. Figures for the 1997-98 school year indicate there are 137 undergraduates and 122 graduate students enrolled in the program.

"I think MIT students like the major because it involves math and has clear practical applications," said Gerald D. King, course administrative assistant.

"Economics studies the fundamentals of the human world, providing powerful insights into the world around us," said Gary K. Li '00

Requirements for a major in Course XIV include the completion of 84 units beyond the general institute requirements. A thesis is not required; a student can choose instead to take an additional 12 unit elective subject in economics.

"The economics curriculum at MIT is great in that it allows for a flexible course of study to meet these different needs, allowing great depth and breadth. Economics is the closest thing to getting the exposure of a liberal arts education at a technical university," Li said.

After graduation, economics majors often take jobs as financial analysts, research assistants, economic forecasters, or securities analysts. Approximately 60 percent of SB candidates go on to some form of higher education within three years of graduating. The average salary for an SB graduate in economics is $45,000.

The faculty in the economics program at MIT is perhaps one of its biggest assets. Not only is it comprised of several Nobel Prize winners, but it also includes a number of professors who teach at the Sloan School of Management Sciences as well.

The economics department employs 33 faculty members, of whom six are women, one is black, one is Asian, and two are Hispanic.

The UROP program in the economics department is fairly extensive. Currently, 16 students are doing economics UROPs; five of which are for credit, and 11 of which are paid.

"There are openings for freshmen and sophomores, but some of the UROPs have class prerequisites, such as statistics or econometrics, that freshmen and sophomores do not yet have," King said. Funding for economics UROPs comes both from faculty and departmental funds as well as the UROP program.

Tutoring within the department is available for introductory courses such as Principles of Microeconomics (14.01) and Principles of Macroeconomics (14.02). However, it is usually not offered for upper-level classes taken by juniors and seniors. "Often students arrange for help with professors on an individual basis if necessary," said King.

The economics department has an selective internship program with the federal government in Washington, D.C. Three students each year are chosen through an application procedure for the positions.

The average GPA of an economics major is 4.4. — *Kristen Landino*

School of Humanities and Social Science

Course XVII — Political Science

When people think about MIT, political science isn't the first thing that comes to mind. MIT's political science department, however, is one of the strongest in the nation.

"The department has historically been known around the world for its strengths in securities studies, comparative politics (the politics of countries other than the United States), and political economy," said Associate Professor Charles Stewart III.

Within the department, the 37 undergraduates and 140 graduate students can focus in public policy, non-US or international politics, US politics, or political philosophy.

The political science department consists of 28 faculty members. Seven are professors emeriti and 11 are professors; there are also seven associate and eight assistant professors. The department "provides opportunities for students to work closely with faculty members, both in small classes and, when it comes to be senior year, on the thesis," Stewart said.

Traditionally, the political science department has focused more on its graduate rather than undergraduate education, but now the department is trying to make changes to offer more options to its undergraduates.

"We're not always concerned about getting a rounded curriculum" that undergraduates need more than grad students do, said Student Administrator Tobie F. Weiner of the political science department. "We try instead to get the top people" tenured at MIT.

"Unlike almost every other department at the Institute, we don't have a program that emphasizes fundamentals in introductory subjects and then builds from there," Stewart said.

The department is also putting more emphasis on the thesis experience by requiring a pre-thesis class to be taken in the spring of junior year rather than in the fall of senior year.

The political science department offers many outside opportunities to students interested in political science. At its undergraduate office, a student can pick up lists of internship opportunities, and Course XVII also runs the MIT-Washington internship programs for political science majors as well as for other MIT students.

The political science department also runs programs abroad for students of all majors to work in Germany, China, Japan, India, or Italy.

At MIT, students can get UROPs with senior members of the political science faculty. "Many of our undergraduates work in UROPs — it's easy to get one as a freshman or sophomore, and it's easy to keep it up all four years," Stewart said.

This spring, there are 10 students with UROPs in the political science department; nine of those are for pay, four from faculty grants and five from the UROP office. Political science UROPs usually consist of research or statistical analysis.

After graduation, about one third of Course XVII undergraduates go on to law school, and about an equal number go to graduate school, mostly in PhD programs, Stewart said. — *Rima Arnaout*

School of Humanities and Social Science

Course XXI — Humanities

Course XXI is divided into six majors: XXI–A (Anthropology), XXI–F (Foreign Languages and Literatures), XXI–H (History), XXI–L (Literature), XXI–M (Music and Theater Arts), and XXI–W (Program in Writing and Humanistic Studies). There are few students in each of the majors.

Anthropology

One of the smallest major on campus, there are currently three students in the Anthropology program, two of whom are joint majors. "Usually there are two or so" UROPs every term, according to Science, Technology, and Society Administrative Staff Assistant Phyllis R. Klein.

"Some [students] go on to further training in graduate school or law school or medical school," Klein said.

Foreign Languages and Literatures

FLL offers Chinese (Mandarin), English as a Second Language, French, German, Japanese, and Spanish. Literature classes in this department are offered both in English and the original language, according to Andrew B. Sweet, Administrative Assistant in FLL. There are two majors, two joint majors, and 71 minors currently in course XXI–F.

"This semester we have about nine UROPs," Sweet said, and the number of professors offering UROPs is usually between two and six. In general, tutors are assigned for each language; for students in classes without tutors, instructors also tutor students during office hours.

Of the 25 full and associate professors and lecturers, over half are female, and the professors come from diverse ethnic backgrounds. Also, "the department offers information on a full range of study abroad programs," Sweet said.

History

Three full majors, two joint majors, and one double major make up the students currently majoring in XXI-H. There are seven students currently working on UROPs in the department, according to Mabel Chin, administrative assistant in History.

"Our major is intentionally broad; it certainly leaves room for students if they wanted to concentrate in a certain field where they focus their classes on a certain area," Chin said. Classes look at the americas, Europe, Asia, and the Middle East; there are also classes in Africa, Latin America, and Comparative History.

Literature

There are currently five double majors, one triple major, eight full majors, and three joint majors in the Literature department, according to Senior Secretary Briony G. Keith. Although students who conduct a concentration in XXI–L are required to pick a specific discipline (for instance, poetry or American literature), major students are given more freedom. Of the fourteen full-time faculty members, about one-third are women.

"A good number" of XXI-L graduates go on to graduate school, according to Keith. While UROPs in the major have traditionally been nonexistent, this trend is "about to change," Keith said. This term there are about three UROPs.

Music and Theater Arts

Students in XXI–M have the option of either majoring in Music or Theater Arts. Although there aren't specific sub-majors — for instance, a piano or composition major — students are given the chance to focus on whatever they want, according to Mary K. Cabral, administrative assistant in Music and Theater Arts. Theater Arts students can focus on production, writing, or acting, depending on what they want to do.

There is usually a maximum of two to three UROP students per semester, according to Cabral. There is no formal set up for tutoring. Of the thirty full and associate professors and lecturers, about one-third are women.

Writing and Humanistic Studies

The approximately one dozen students majoring in Course XXI-W as full, joint, or double majors have the opportunity to study either creative or expository writing and scientific or technical communication, according to Nicholas Altenbernd, administrative secretary for the Program in Writing.

Tutoring is available through the Writing and Communication Center. There are "very few UROP opportunities," Altenbernd said.

Science, Technology, and Society

Although there are no sole majors in the program in Science, Technology, and Society, there are currently four joint majors in STS, and there is an option for double majoring.

"STS students... connect interest in social issues with their technical skills," said Klein. Specific examples involved a student who later worked for a consulting company involved in setting up irrigation systems in African nations, and other students who received policy-related jobs in Washington, D.C. — *Jennifer Chung*

School of Humanities and Social Science

Course XXIV — Linguistics and Philosophy

Despite the technological bent of MIT's student body, the Institute's philosophy department is well respected. Ranked tenth in the country, Course XXIV is divided into two majors that award different SB degrees: one is in Linguistics, and the other in Philosophy.

Philosophy majors take courses in traditional subjects like logic, ethics, and metaphysics, while linguistics majors focus on cognitive processes and language structures, two of MIT's strengths.

MIT graduated four Course XXIV majors in 1998, and there are currently seven students enrolled in the major. No second major is particularly common. Of the four philosophy majors who graduated last year, two went on to graduate school and two entered the work force. Of the seven undergraduates, one is female. There are fifteen tenured professors, four of whom are female. The philosophy department has 28 graduate students.

In the broadest sense, philosophy is divided into two areas of study. One is classical issues, like ethics, metaphysics (study of the nature of reality and existence) and epistemology (the study of knowledge). The other is more concerned with recent ideas: the philosophies of science and history, as well as mind studies.

Faculty members are quick to stress the relevance of philosophy to science and other aspects of modern life. "Areas of science can raise questions that the ordinary practices of the discipline cannot answer," said Prof. Ned Hall.

Dr. Hall studies philosophy of science, which includes some of the conundrums that arise in the quantum theory. They were also quick to stress the rigor of their discipline. "You can't get away with bullshit in philosophy," said graduate student Joshua F. Flaherty G.

Flaherty stressed that people come to philosophy from different directions. Anthropologists, writers, and mathematicians find that "philosophy is not that different from the fundamental parts of their field," he said. Philosophy also has alot of overlap with law.

Linguistics is more concerned with the structure of human languages and how the human mind gives rise to that structure. The most celebrated pioneer of modern linguistics is Institute Professor Noam A. Chomsky, who in 1955 introduced the idea that the human brain uses certain built in rules to actively acquire language. The linguistics department has 39 graduate students.

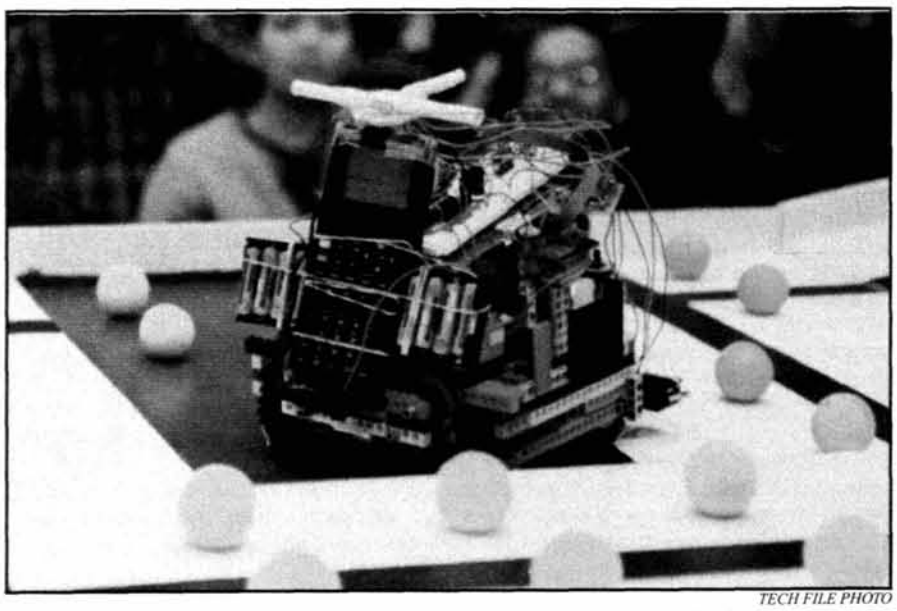
Although there were no UROP participants this semester, UROPs in the past have been funded by the Institute and by research interests.

Employment prospects, however, have always been rather bleak. "I like philosophy," said Mark Knobel '00, "but I wouldn't tell anyone to major in it... it's just too hard to get a job."

—*Steven Hoberman*

School of Engineering

Course VI — Electrical Engineering and Computer Science



TECH FILE PHOTO

David West '01, a true Sixer, built his 6.270 robot using the brains of his TI-96 calculator.

MIT's most popular major, Course VI, offers students a curriculum in Electrical Engineering and Computer Science.

Course VI students may choose one of three specializations, depending on whether their interests lie in computer science or electrical engineering. Course VI-1 is Electrical Science and Engineering; Course VI-2 is Electrical Engineering and Computer Science; and Course VI-3 is Computer Science and Engineering.

Although students in all three groups are required to take the "double-0" series (6.001, 6.002, 6.003, and 6.004), the bulk of classes taken by an EECS major will fall under one of the three choosen headings.

The department also has a 5-year Masters of Engineering program (MEng.), which currently includes 250 of the 850 Course VI graduate students.

"You need at least a B average for admission [to the program]," said course secretary Anne Hunter. "Students are admitted after the end of their junior year and must maintain a B average each term. The requirements are complex, but basically include six additional classes and a masters thesis."

In addition to the MEng. program, the department offers a Course VI-A internship program. This is similar to the MEng. in that it leads to a master's degree in five years.

However, students in the program work on their theses while employed at a company in industry. Students apply to the internship program during the spring of sophomore year.

In contrast to several other majors, Course VI has no required IAP classes. However, the 6.270 contest, an intensive month-long competition in autonomous robot design, is a popular and often oversubscribed IAP class. Fifty-five teams participated in this year's contest, entitled "Raiders of the Lost Parts".

Course VI also has highly active undergraduate associations. The MIT chapter of Eta Kappa Nu, a national Electrical Engineering and Computer Science honor society, accepts juniors who have placed in the top fourth of their Course VI class and seniors who have placed in the top third of their class.

Eta Kappa Nu coordinates a free tutoring program for core undergraduate Course VI classes and publishes the "Underground Guide to Course Six", which uses student input to rate numerous aspects of each Course VI class, including TA performance and difficulty level.

The department also has a student branch of the Institute of Electrical and Electronic Engineers. Members of this group are eledgible for scholarships and have access to a vast amount of publications and research findings.

Undergraduate research opportunities in Course VI are plentiful. The Media Lab and the Laboratory for Computer Science provide a large number of UROP positions, and many other departments will hire students with computer skills. — *Susan Buchman*

School of Engineering

Course XVI — Aeronautics and Astronautics

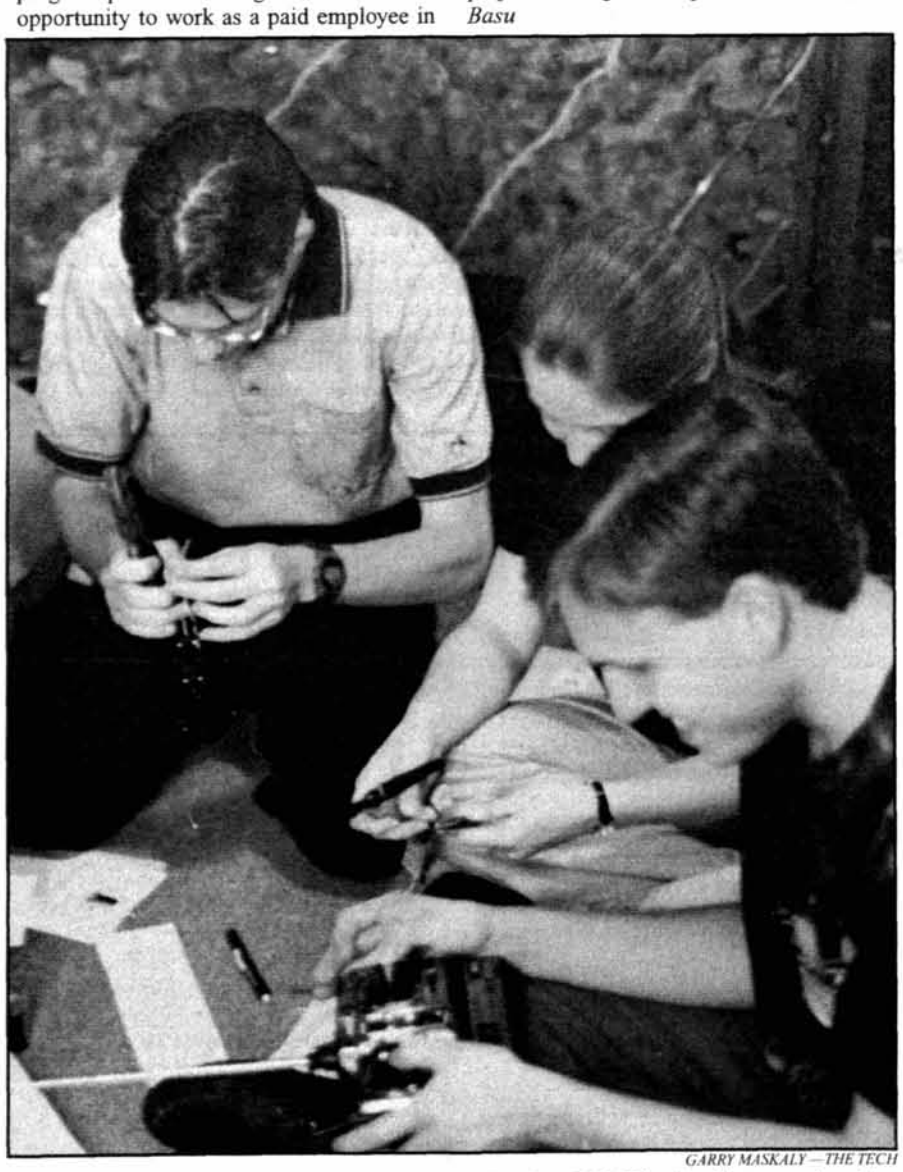
The Department of Aeronautics and Astronautics prepares engineers to design and implement aerospace and related engineering systems. The department offers bachelors, masters' of engineering, masters' of science and doctoral degrees.

In addition to General Institute Requirements, undergraduates in Course XVI must complete a departmental core consisting of several math and physics courses in addition to the infamous 48-unit Unified Engineering course. Course XVI majors also complete professional area subjects (pillar subjects) that detail the material presented in classes like Unified Engineering. Majors complete their requirements with "Capstone subjects" involving experimental work through project labs.

Course XVI provides its undergraduates with several opportunities to work at a professional level while completing an SM degree. The Course XVI–B cooperative program provides undergraduates with the opportunity to work as a paid employee in an aerospace firm for seven months before the final semester of their senior year. In addition, the department participates in the Engineering Internship Program (EIP), which is a joint SB–SM program that features periods of work at a participating company, alternating with periods of study at MIT.

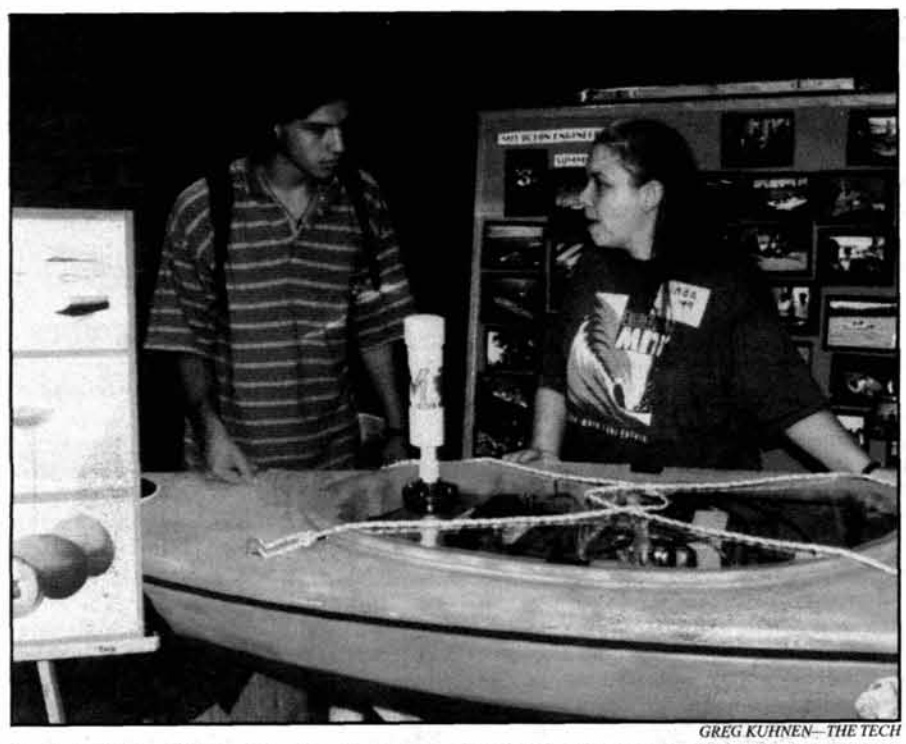
MIT's Department of Aeronautics and Astronautics also leads the Massachusetts Space Grant Consortium, which supports space education, especially for women and minority students. Undergraduates can participate in an optional year abroad program that sends students to host institutions in various European nations. Students take courses in the local language and obtain credit for corresponding MIT subjects.

Like other courses, Course XVI sponsors student UROPs through its 11 departmental laboratories. Currently, faculty and students are conducting over 200 research projects through the department. — *Sanjay Basu*



GARRY MASKALY—THE TECH

Students in Introduction to Aerospace and Design (16.00) plan the construction of their lighter-than-air vehicle for the annual competition to be held May 11.



GREG KUHNEN—THE TECH

Linda E. Kiley '99 shows off the Ocean Engineering department's shark tracking boat during an academic exposition.

School of Engineering

Course XIII — Ocean Engineering

Students in the Department of Ocean Engineering take core courses covering the broad fields such as structures, fluids, ocean acoustics, geophysical fluid dynamics, and ocean dynamics. Professor D. K. P. Yue compares Course 13 to Aero/Astro, "but our environment is water. We work on systems in the oceans." He said there is a "Strong emphasis on synthesis to make it all work, and a strong sense of a complex ocean design. It is a multidisciplinary field."

Ann Marie Polsenberg '01, an OE major, recommended the department to "anyone who is interested in taking aspects of mechanical engineering, electrical engineering, and physics, and applying them to aquatic environments. The department encompasses a wide variety of disciplines: acoustics, marine robotics, autonomous underwater vehicles and remotely operated vehicles, naval architecture, propulsion, waves, and more."

After students complete most of their core courses they work with their advisers to individually design a series of about four restricted electives. These four subjects are taken during junior and senior year and often include graduate level courses as well as the senior thesis, Yue said.

Yue said that there are many UROP opportunities. "That's the advantage of having such a large graduate program: a lot of labs, and a lot of research going on. There may be more UROPs per capita than in any other major." The department participates in the Engineering Internship program as well.

The small department size means that the primary source of support for undergraduates is the professors themselves. Yue said, "Some professors know every undergraduate personally Our biggest class is 13.00, with 18-20 people." Average class size is eight to fifteen.

Polsenberg agrees, saying, "The faculty is incredible, and really interested in helping undergraduates. My classes tend to have between four and twelve students, and the professors make themselves easily accessible outside of class. They are always willing to talk about their work."

There is one tenured female professor in the department and no underrepresented minorities, Yue said.

However, he added that the undergraduate population is quite diverse and is about half female or more.

After earning an SB, graduates usually enroll in both Ph.D. and masters' programs, Yue said.

Yue added, "Graduates don't have difficulty finding jobs because their broad training allows them to diversify." Graduates have gone into marine-related entrepreneurial careers, government, offshore industries, lots of ocean-related consulting, a lot go into risk analysis."

The department has a five-year program leading to a SM which undergraduates apply to in the spring of their junior year. There is also one M.Eng program in Ocean Systems Management. — *Laura McGrath Moulton*

School of Engineering

Course X — Chemical Engineering

Chemical Engineering spans the areas of chemistry, physics, biology, and mathematics and has wide application not only in chemical engineering but also in fields of biotechnology, semiconductor fabrication, consumer products, and environmental protection.

The Department of Chemical Engineering offers two undergraduate programs: Course X and Course X–C. Course X leads to a SB in chemical engineering. According to Professor of Chemical Engineering Michael C. Mohr, "our educational thrust is to develop a good understanding of principles of science and engineering science, an ability to apply these principles to real problems, and an ability to educate oneself about new technologies as they arise." A Course X degree requires 171 units of required subjects, plus 72 units of elective units, 24 of which are restricted. Including GIRs a total of 195 units are required.

The Course X–C program leads to a SB without specification and as a result requires fewer subjects and is not accredited. According to Mohr, "the X-C major allows much flexibility in the chemical engineering program. It is taken mostly by people going to medical school, who want some engineering background."

Ten to fifteen percent of Course X seniors participate in a five-year program in which a year is spent in the School of Chemical Engineering Practice. The SCEP includes one of two terms of graduate subjects and a term or summer at the industrial Practice School Stations.

Another notable feature of the Course X curriculum is a design course called Integrated Chemical Engineering (ICE). Recipient of last year's Big Screw, ICE is taken during the senior year by all Course X majors.

MIT's Chemical Engineering department consists of 30 faculty members, including four women and one African-American. Twenty-six of the 30 faculty members are tenured. At this time, there are 280 undergraduate and 250 graduate students in the department. The average undergraduate GPA is 4.3/50.

Many students of chemical engineering decide to pursue a UROP in biochemical or biomedical related areas either during the school year or during the summer. There are typically 100 UROP students during the term, 60 during the summer, and 10-20 during IAP. "Funding comes from either UROP or the research accounts of the professors," Mohr said.

The Chemical Engineering department offers important resources for its students. For core subjects, tutoring is available during the evenings. In addition, the student chapter of the professional society, American Institute of Chemical Engineers, sponsors student/faculty mixers and seminars during the year. The seminars focus in helping students to prepare for a career after they graduate from MIT.

Among graduates, 50 percent go to work in industry, 40 percent attend graduate school, and 10 percent pursue medical school. The average salary for is $44,000 for SB holders and $50,000 for those who graduate with a master's degree.

School of Engineering

Course XXII — Nuclear Engineering

Nuclear Engineering majors may choose one of two tracks within the course: Energy and Radiation in Medicine (RMI), as well as simply Energy. Students who graduate from the energy track generally go on to higher levels of education, eventually working in industry or research.

RMI students may also work in research oriented fields such as neuron detection (detection of bombs or oil, for instance) or radiation oncology. The RMI program is commonly used as a premedical track.

Of the department, Loreto P. Ansaldo '00 said, "If you want something and you have the initiative, you're more than likely to get it."

There are many available summer and long-term jobs. Professors often know people working in other labs around the country or world, and can get students summer positions in many geographic locations.

Upon graduation as well there are more positions for nuclear engineers at nuclear power plants than there are nuclear engineers to fill them, said Professor Kenneth R. Czerwynski.

Small department

There are currently 25 undergraduates majoring in nuclear engineering, so class sizes are rarely above 15. Classes are taught by one professor and one TA, and professors are approachable and friendly, Ansaldo said.

There is no explicit tutoring program, but students who need help can easily get tutoring from the class TA or professor, and there are informal evening review sessions.

Curriculum Concerns

A drawback to being a small department is that there are many gaps and overlaps in class curriculum.

"Especially at the very beginning of the major... professors assume we come in with a certain amount of knowledge that we don't have," Ansaldo said. Later some topics are repeated in multiple classes: "We've had the materials lecture at least 5 times," she said. "There's definitely potential to learn...a lot more than we have."

Students recently presented these facts to the Course XXII faculty, however, and much of the curriculum is being restructured.

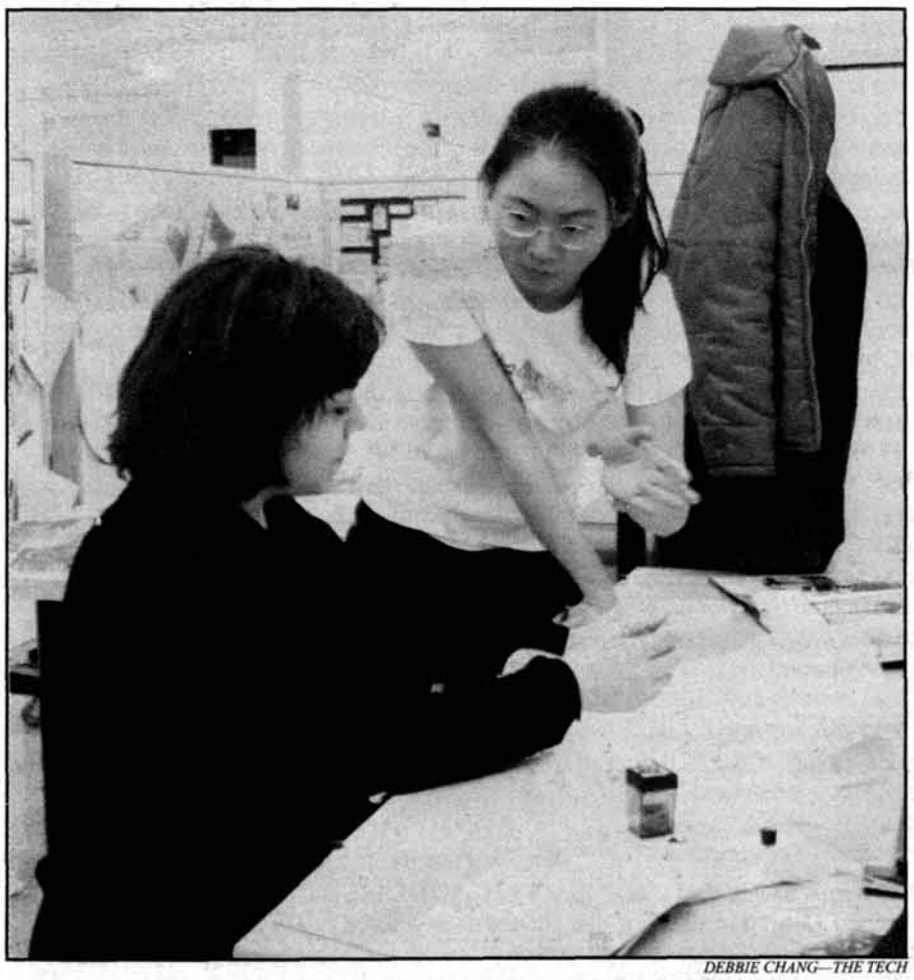
One of the unique assets of the nuclear engineering department is the versatility of the field. The course focuses on developing graduates with a variety of different skills applicable to many different fields. For instance the department is actively involved across the entire field of energy production.

For example in the nuclear engineering department, much emphasis is placed on reports and presentations, in addition to problem sets and tests.

Although Course XXII requires many classes in other majors, faculty and students seem to agree that this broadens their perspective and undergraduate experience.

Students may also opt to take Course XXII-A in which 12 thesis units are replaced with an internship.

— Karen Robinson & Kristen Landino



DEBBIE CHANG—THE TECH

Aslihan Demirtas G, teaching assistant for Level 1 Studio (4.125), works closely with architecture major Nina Yu '00.

School of Architecture and Planning

Course IV — Architecture

Course IV students focus on one of four discipline streams: architectural design, visual arts, building technology, or history, theory, and criticism of art and architecture.

Renee A. Caso, Course IV's administrator for academic programs, said that "95 percent of students choose architectural design," with building technology a distant second.

Opportunities for UROPs are limited in Course 4. "There are not a lot, unfortunately," Caso said, because of the nature of the field. Caso estimates that there are "a handful, maybe five or six, every term, most for credit."

During IAP, the department runs an architectural internship program for undergraduates who have taken at least one level-one studio course (mostly juniors and seniors). Caso said it's a "wonderful opportunity — it's something the department and career services work together on to find architectural firms in the area." About ten undergraduates take part in the program each year.

Academic support comes primarily in the form of the teaching assistants who work in the design studios where students spend a lot of their time working outside of class, but still on the premises. The department has a high TA to student ratio, and Caso said that TAs play a major role in working with students.

Brian Wilson '01 said, "The TAs are always there, usually working in studio themselves."

Of the faculty, seventeen are tenured, with eleven full professors and six associate professors. Caso said that some professors are "in practice," meaning that they teach part-time and are also practicing architects.

There are a total of about seventy to seventy-five undergraduates in the program, Caso said. "The department is graduate-driven in a sense," she said, since there are 250 graduate students in five programs, the Master of Architecture being the most popular. Caso said the MArch program is very competitive and is consistently ranked first or second in the nation.

About fifty percent of undergraduates go on to graduate school. With an SB degree, a graduate can work in architectural fields, though not as an official architect; an architect must have a Master's degree and a license. Some MIT SB graduates have also gone on to be network specialists for small firms or to find work in the construction field, Caso said, adding that "graduates have a lot of transferrable skills."

The American Institute of Architecture Students is a student-run organization on campus which is active some years and not others, Caso said. The organization is a national one with chapters in other architectural schools. The department offers money, resources and support for the group, but the initiative lies with the students. *—Laura Moulton*

School of Architecture and Planning

Course XI — Urban Studies and Planning

There are relatively few undergraduates in Course XI — 15 to be exact — but the department tries to "off-balance the small program with service to other undergraduates in the Institute," such as the two minor programs and a HASS concentration, said Course Secretary Sandra S. Wellford.

Within Course XI, there are two options: a purely Urban Studies track and a more technical track similar to the Environmental Engineering program offered in Course I. After graduation, many students take jobs concerning public policy issues. In addition, each year several students participate in DUSP's five-year masters' program. Students apply to the five-year program during their junior year and take the core masters requirements during their senior year, writing one thesis for both degrees.

In a program beginning last year, Course XI offers undergraduates several jobs with faculty members. These resemble UROPs but are available only to students in Course XI and are organized completely within the department. Additionally, "there are lots of contacts with internships," said Jonna B. Anderson '00, co-chair of the departmental student council.

The internship and job offers are a result of a student suggestion to course faculty, as is the annual departmental field trip. Two years ago, students visited Montreal during Spring Break; this IAP, 11 students traveled to London. "They learn about these cities in classes," Professor of Urban Studies and Planning Mark J. Schuster said, "then get to see the actual site."

Anderson refutes the "perception that Course XI is less quantitative" than other Courses, saying that she and her peers "balance these skills with interest in how they apply in the larger world... we're not just interested in economics, but how it applies."

Class sizes are small and comfortable: "A class with 25 students would be large by Course XI standards," Schuster said. Last semester he taught a class of six students, two of whom were undergraduates.

There are more female students in Course XI than male but the faculty is predominantly male.

Graduates vastly outnumber undergrads in the department, but "undergraduates are always invited... [graduate students] are not exclusive at all" Anderson said. *—Karen Robinson*

TechCalendar

TechCalendar appears in each issue of *The Tech* and features events for members of the MIT community. *The Tech* makes no guarantees as to the accuracy of this information, and *The Tech* shall not be held liable for any losses, including, but not limited to, damages resulting from attendance of an event. Contact information for all events is available from the TechCalendar web page.

Visit and add events to TechCalendar online at *http://tech-calendar.mit.edu*

Tuesday's Events

2:00 p.m. – **The Power of Vertical Integration.** Michael Dell, CEO, Dell Corporation. Sponsored by authors@mit. Refreshments at 1:45 p.m. Dell appears in the Laboratory for Computer Science's Distinguished Lecture Series. 2:00 pm, Rm 26-100.

3:00 p.m. – **Hybrid Atomistic-continuum Simulations of Fluid Flow.** Professor Sidney Yip, Massachusetts Institute of Technology. Sponsored by Physical Mathematics Seminar with MIT-Department of Mathematics. Refreshments will be served following the seminar in Room 2-349. Room 2-338.

4:00 p.m. – **Risk-Sensitive Stochastic Designs and Relationship with Nonlinear H-infinity Control.** Prof. Tamer Basar, University of Illinois. LIDS Colloquia. Reception will follow in 35-338. Room 35-225.

4:00 p.m. – **"High Crimes and Misdemeanors": Reflections on the Bonds between Past and Present.** Pauline Maier, 1998-1999 Killian Faculty Achievment Award Lecturer. 27th Annual Killian Faculty Achievement Award Lecture. Wong Auditorium - Building E51.

4:00 p.m. – **The Design of Low Phase Noise Oscillators.** Tom Lee, Stanford University. MTL VLSI Seminar Series. Refreshments in lobby of room 34-101 at 3:30 p.m. Room 34-101.

4: 30 p.m. – **Control of Flutter in Turbomachinery**. Ms. Jin Young Hong, MIT/GTL. Gas Turbine Seminar Series. Refreshments 4:15. Room 31-161.

6:30 p.m. – **Dresden: Redevelopment of a European City.** Hilmar von Lojewski, city planner, Dresden. Architecture Lecture Series.Room 10-250

Wednesday's Events

11:00 a.m. – **Interactive Video Holography.** Stephen Benton, MIT, Media Lab. EECS /RLE - Optics & Quantum Electronics Seminar Series. Room 34-Grier Room B.

12:00 p.m. – **The New Air Force.** Dr. Natalie Crawford, Project RAND. Sponsored by Security Studies Program. Room E38-615

12:10 p.m. – **Frontal geostrophic models of ocean fronts.** Richard Karsten, MIT. Room 54-915.

3:30 p.m. – **Lecture on Working in Groups: Group Dynamics.** Kirk Kolenbrander, MIT. Professional Development Series. Ashdown House, Sponsor: GSC.

4:00 p.m. – **Bioinformatics: Deciphering the Rosetta Stone of Biology.** Dr. Shankar Subramaniam, Department of Genetics, Harvard University Medical School. Problems and Methods in Bioinformatics. Room 56-114.

4:30 p.m. – **Contested Ethnographies.** Prof Diane Bell, George Washington University. Peoples and States: Ethnic Identity and Conflict. Room E38-714. Sponsor: Center for International Studies with the Anthropology Department.

5:00 p.m. – **Advanced Music Performance Recital: Youngmoo Kim G, voice.** Advanced Music Performance Recital: Youngmoo Kim G, voice. Killian Hall.

5:30 p.m. – **Japan and the Alliance for Global Sustainability.** David H. Marks, Director, Center for Environmental Initiatives. Room 4-231. Sponsor: MIT Japan Program with The Alliance for Global Sustainability at MIT.

5:30 p.m. – **The Uncertain Sciences**. Bruce Mazlish. Author speaks on his new book of the same title. Bldg. 14-Humanities Library. Sponsor:authors@mit.

7:00 p.m. – **Why People Believe Weird Things**. Dr. Michael Shermer, Director of Skeptics Society, Publisher of Skeptic Magazine. Room 10-250. Sponsor: Atheists, Agnostics, and Humanists with New England Skeptical Society.

7:30 p.m. – **Living in Two Languages Series—Esmeralda Santiago.** "Writing a Life/Escribir una Vida." Presentation by the author of *When I Was Puerto Rican*, and *Almost a Woman*. Followed by book signing. Killian Hall.

8:00 p.m. – **MIT Brass Ensemble.** Lawrence Isaacson, director. Kresge Auditorium.

Thursday's Events

12:00 p.m. – **MIT Chapel Concert: Glorianne Collver Jacobson, Robert Ward, Francisco Isaza, guitar.** Trio, duo and solo music for guitar from Latin America and Spain. Chapel.

4:00 p.m. – **Optimizing Strategic Airlift.** Richard Rosenthal, Professor and Chairman Operations Research Dept., Naval Postgraduate School. Sponsored by Operations Research Center. Refreshments to follow in Room E40-106. Room E40-298.

4:15 p.m. – **Cosmology Solved?** Prof. Michael Turner, University of Chicago and Fermilab. Physics Colloquium. Refreshments in Room 4-339 at 3:45 pm. Room 10-250.

7:00 p.m. – **Poetry@MIT: Elain Equi/Ange Mlinko.** Sponsored by the Program in Writing and Humanistic Studies and Literature faculty. Room 6-120.

7:30 p.m. – **RACE2000! Is BLACK Black.** How to Build Community with Diverse Populations: A Panel Discussion with Lani Guinier and members of the MIT community. Room 26-100. Sponsor: Committee for Campus Race Relations.

8:00 p.m. – **Next Act: "Guys and Dolls".** Musical Comedy performed and produced by residents of Next House. 500 Memorial Dr. Sponsor: Next Act.

Friday's Events

2:00 - 4:00 p.m. – **To Boldly Go: Practical Career Planning for Scientists and Engineers Workshop by Dr. Peter Fiske.** A two-hour career workshop for graduate students and post-docs in all fields of science. Room 6-120. Sponsor: OCSPA.

2:00 p.m. – **Modeling the Role of Social Interactions in the Emergence of Ethnic Conflict.** Prof. Timur Kuran, University of Southern California. A Ford Methodology Workshop. Room E38-714.

3:00 p.m. – **The Future of Print: From Printing Form to Printing Function.** Professor Joseph Jacobson, MIT Media Lab. Mechanical Engineering Spring Seminar Series. Refreshments to follow in Miller Room, 1-114. Room 3-270.

4:00 p.m. – **Migrating Planets.** Professor Norman Murray, University of Toronto, CITA. EAPS Department Lecture Series. Refreshments, 3:30 pm, Ida Green Lounge. Room 54-915.

4:15 p.m. – **Norm-graphs and Multicolor Ramsey Numbers.** Dr. Tibor Szabo, University of Illinois at Urbana-Champaign. Refreshments will be served at 3:30 p.m. in Room 2-349. Room 2-338. Sponsor: Combinatorics Seminar with MIT-Department of Mathematics.

7:00 p.m. – ***Enemy of the State.*** Starring Will Smith and Gene Hackman. 132 minutes, rated R, with DTS Digital Sound. Free for prefrosh. Admission 2.50. Room 26-100. Sponsor: LSC.

7:00 p.m. – **Games and Pizza.** Drop by the APO office for games and pizza! Student Center, Room 415. Sponsor: Alpha Phi Omega.

7:00 p.m. – **Mariachi Vocal Music.** Concert by 1997 List Foundation Fellowship Winner Isela Rodriguez '99. Killian Hall. Sponsor: Office of the Arts.

7:30 p.m. – ***Animal Crackers.*** Starring the Marx Brothers. 97 minutes, no MPAA rating. Cosponsored by the DeFlorez Funds. Free for prefrosh. Admission 2.50. 10-250. Sponsor: LSC.

8:00 p.m. – **A Funny Thing Happened on the Way to the Forum.** Musical Theatre Guild's production of Stephen Sondheim's award-winning musical. Admission $9, $8 MIT faculty/staff/sr citizens/non-MIT students, $6 MIT students. Kresge Little Theater.

8:00 p.m. – **SONOS Concert.** The "hands across the river" ensemble includes faculty from MIT (Prof Marcus Thompson, viola & Sr Lecturer David Deveau, piano) & BU (Bayla Keyes, violin & Michael Reynolds, cello). Kresge Auditorium.

8:00 p.m. – **Next Act: "Guys and Dolls".** Musical Comedy performed and produced by residents of Next House. 500 Memorial Dr.. Sponsor: Next Act.

8:00 - 10:00 p.m. – **Study Break.** Take a break from your busy schedule to join people of all sexual orientations for some light snacks and casual conversation. Visitors welcome! Student Center, Coffeehouse. Sponsor: Friendly Alliance of Queers and Straights.

10:00 p.m. – ***Enemy of the State.*** Starring Will Smith and Gene Hackman. 132 minutes, rated R, with DTS Digital Sound. Free for prefrosh. Admission 2.50. Room 26-100. Sponsor: LSC.

Saturday's Events

12:00 p.m. – **Sailing Regattas.** Sailing Team regattas held at local venues. MIT, BU, Harvard. Cheer on the Sailing Team or just enjoy a spring day by the river. MIT Sailing Pavilion. Sponsor: MIT Nautical Association.

2:30 p.m. – **The Scientific Challenge of the Quran.** Dr. Jamal Badawi, Saint Mary's University. The Quran: The Challenge of the Millennium. A one day seminar with Dr. Jamal Badawi. Room 1-190.

4:00 p.m. – ***A Bug's Life.*** A Disney animated film, featuring the voices of Dave Foley, Kevin Spacey, and Julia Louis-Dreyfus. 96 minutes, rated G, with DTS Digital Sound. Free for prefrosh. Admission 2.50. 26-100. Sponsor: LSC.

5:30 p.m. – **The Preservation of the Quran: Fact or Myth?** Dr. Jamal Badawi, Saint Mary's University. The Quran: The Challenge of the Millennium. A one day seminar with Dr. Jamal Badawi. Room 1-190.

7:00 p.m. – ***A Bug's Life.*** A Disney animated film, featuring the voices of Dave Foley, Kevin Spacey, and Julia Louis-Dreyfus. 96 minutes, rated G, with DTS Digital Sound. Free for prefrosh. Admission 2.50. 26-100. Sponsor: LSC.

8:00 p.m. – **New Discoveries & the Preservation of the Quran.** Dr. Jamal Badawi, Saint Mary's University. The Quran: The Challenge of the Millennium. A one day seminar with Dr. Jamal Badawi. Room 1-190.

8:00 p.m. – **A Funny Thing Happened on the Way to the Forum.** Musical Theatre Guild's production of Stephen Sondheim's award-winning musical. Admission $9, $8 MIT faculty/staff/sr citizens/non-MIT students, $6 MIT students. Kresge Little Theater.

8:00 p.m. – **Ustad Ali Akbar Khan, sarod; Swapan Chaudhuri, tabla.** MITHAS presents the great sarod maestro, known for his many recordings & past visits to this area. Tickets range from $10-30. Kresge Auditorium.

8:00 p.m. – **Next Act: "Guys and Dolls".** Musical Comedy performed and produced by residents of Next House. 500 Memorial Dr. Sponsor: Next Act.

10:00 p.m. – ***A Bug's Life.*** A Disney animated film, featuring the voices of Dave Foley, Kevin Spacey, and Julia Louis-Dreyfus. 96 minutes, rated G, with DTS Digital Sound. Free for prefrosh. Admission 2.50. 26-100. Sponsor: LSC.

10:00 p.m. – **Swing Dance.** It's the new craze on college campuses. Come for a beginner's lesson (10-10:30 p.m.) and stay for music, dancing, and fun! New House. Sponsor: New House.

Sunday's Events

9:30 a.m. – **Sailing Regattas.** Sailing Team regattas held at local venues. MIT, BU, Harvard. Cheer on the Sailing Team or just enjoy a spring day by the river. BU Sailing Dock. Sponsor: MIT Nautical Association.

4:00 p.m. – **MIT Affiliated Artist Concert: Tetyana Ryabchikova, piano.** Ms. Ryabchikova performs her own works: Sonata, cycle "Revelation", and Barcarolle. Killian Hall.

7:00 p.m. – ***Enemy of the State.*** Starring Will Smith and Gene Hackman. 132 minutes, rated R, with DTS Digital Sound. Free for prefrosh. Admission 2.50. 26-100. Sponsor: LSC.

8:00 p.m. – **A Funny Thing Happened on the Way to the Forum.** Musical Theatre Guild's production of Stephen Sondheim's award-winning musical. Admission $9, $8 MIT faculty/staff/sr citizens/non-MIT students, $6 students. Kresge Little Theater.

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Monday's Events

3:30 p.m. – **High-Energy Ion Implantation.** Dr. Kevin Wenzel, Eaton Corporation. Dept. of Nuclear Engineering/American Nuclear Society Seminars. Refreshments in Room NW12-222 at 3:00 pm. Room NW12-222.

4:15 p.m. – **The Statistics of Natural Images.** Professor David Mumford, Brown University. Sponsored by Applied Mathematics Colloquium with MIT-Department of Mathematics. Refreshments will be served at 3:45 p.m. in Room 2-349. Room 2-105.

4:15 p.m. – **The Statistics of Natural Images.** Professor David Mumford, Brown University. Room 2-105. Sponsor: Statistics Seminar with MIT-Department of Mathematics.

5:00 p.m. – **Advanced Music Performance Recital: Sandy Choi '99, violin.** Advanced Music Performance Recital: Sandy Choi (1999), violin. Killian Hall.

Missing Majors?

The numbers assigned to MIT's Courses have been anything but static over the years and the resultant shuffling has produced a number of defunct Courses as well as Course-less numbers.

For instance, freshmen in 1931 could have opted to major in Railroad Engineering, then Course I–A but now defunct. Textile Technology was Course II–T up until 1983. Other lost Courses include General Engineering and General Science (IX–A and B) as well as Interdisciplinary Science (once Course XXV) for those who just can't make up their mind.

In the shuffle to adapt majors several numerals were left without Courses: XIX, XX, and XXIII are currently associated with no undergraduate major. Course XIX was originally created as Metallurgy after the split of mining and metallurgy in 1936. Metallurgy returned to Course III after a few years when mining was dropped and the department evolved into the modern day Department of Materials Science and Engineering.

Course XX began life in 1944 as Food Technology, an offshoot of the department of Biology. It underwent several name changes but persisted as an undergraduate major until 1985. Course XX now exists only as a graduate Program in Applied Biological Sciences.

Modern languages were the foundation of Course XXIII which first offered a PhD in 1961. Course XXIII became the department of Modern Languages in 1965 and later the Department of Foreign Languages and Linguistics. The numeral XXIII lost association with any major when, in 1976, the content of the Course was moved to XXI–L and XXIV. —*Frank Dabek*

GREG KUHNEN—THE TECH

Dan Hickey tries to teach the AI Lab's COG some new tricks, with limited success.

CLASSIFIED ADVERTISING

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Information

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CPW Opened To All Admitted Students

Admissions, from Page 1

these recommended students.

In response to the high achievement of incoming students, Jones said that "our competitor schools are going after our kind of student now."

Students earn distinction

Of the admitted students, one-fourth have received distinction at the national level and 78 percent have received distinction at the state level in extracurricular. co-corricular or academic activities.

"This [incoming] class is very much like this particular year's freshman class," Jones said, "especially in terms of national-level distinction."

The Admissions Office has also been tracking the number of admitted students planning to major in Electrical Engineering or Computer Science or in Biology. Those reporting an interest in EECS accounted for 21 percent of admitted students, while 12 percent indicated an interest in Biology. The figures represent only a slight change from last year, when 22 percent indicated a planned major in EECS and 10 percent in Biology.

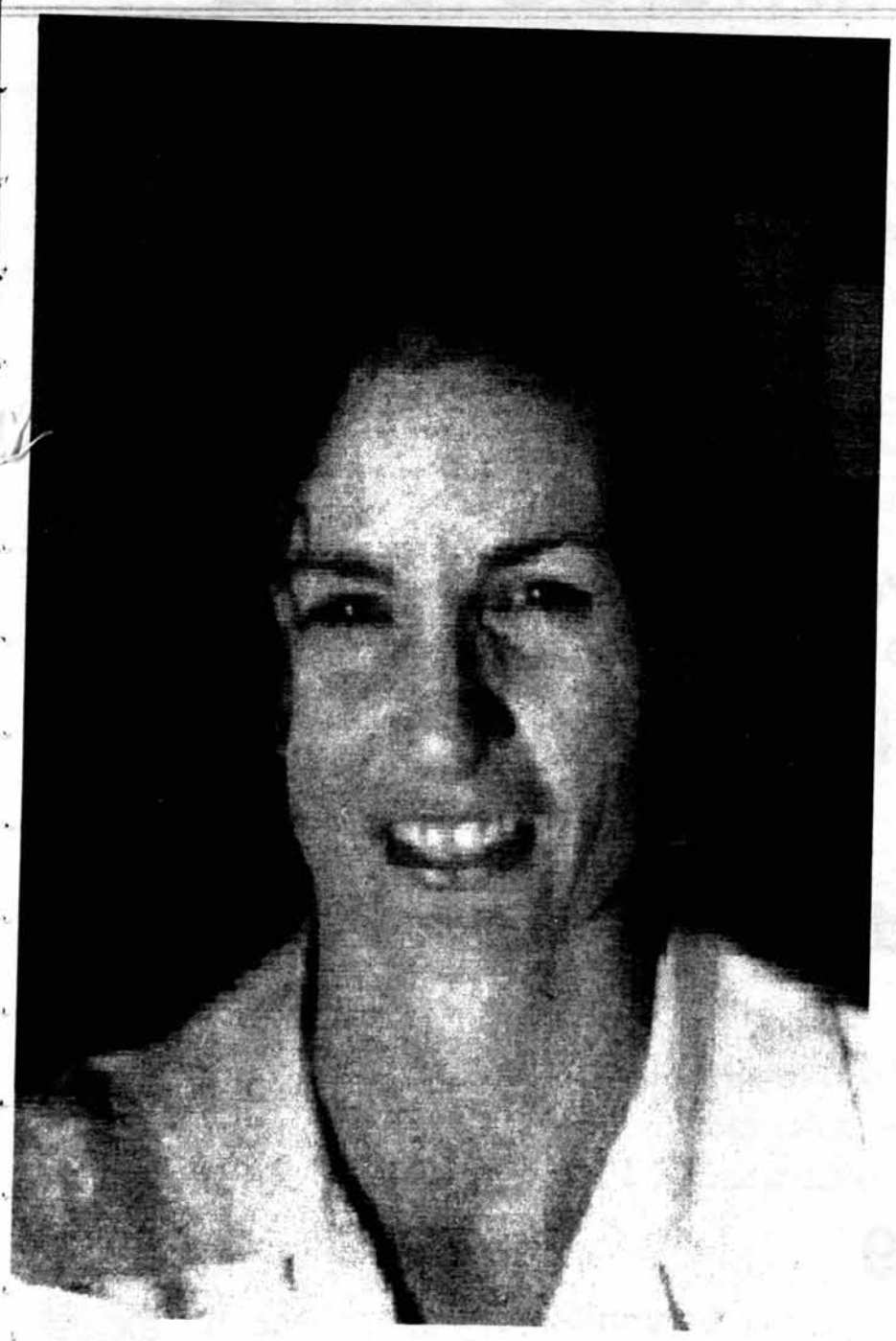
CPW broadened

Unlike previous years, all admitted students will be invited to the campus preview weekend event this year. Over 600 students, 300 parents, and 100 alumni will visit the Institute for four days.

Admissions officials report that a low number of males in dormitories are hosting students this year.

"We would really love to have more men," Jones said. According to Jones, there is a particular need for male students in dormitories to host prefrosh.

But Jones also believes that the office will be able to place many of the male prefrosh in ILGs and fraternities.



Hurley Threatens Legal Action against Tech, Dreger

Hurley, from Page 1

FSILGs Neal H. Dorow, Hurley also produced a certificate of insurance under the name AAA State Fire Marshal Restaurant Exhaust Systems Cleaning & Fan Repair Company. Hurley stated that he has joined AAA in a business partnership. S.C.O.N.E. itself does not appear in either Cambridge or Boston business listings, but Hurley's own number, advertised on S.C.O.N.E. stickers, does appear under the AAA listing.

Hurley threatens legal action

Hurley has threatened legal action against several fraternities and independent living groups. He has stated his intentions to sue Duane H. Dreger, who while acting as assistant to Dorow, sent an e-mail warning FSILGs that Hurley was overcharging for services. He has also stated his intentions to sue The Tech and reporters Frank Dabek and Anna K. Benefiel who first wrote about the allegations against Hurley in *The Tech.*

The Tech reported in an article on March 16 that Hurley said he talked to Dorow, even though Dorow was in Europe. Hurley has since clarified that he meant Dorow's office. MIT's varsity hockey coach also confirmed after the March 16 article that he did indeed know Hurley and had played hockey with him in the past.

A headline for the continuation of the March 16 article: "Imposter Posing as Cleaning Man Swindles FSILGs," was incorrect. Hurley does in fact have a cleaning business, and some of the FSILGs' allegations of wrongdoing by Hurley are in dispute. "I've never done anything wrong," Hurley said.

Several members of FSILGs reaffirmed previous statements that Hurley may have tried to cheat them out of money. In addition, more houses have come forward with accounts that Hurley attempted to and in some cases actually did charge them for services they say were never rendered.

Several fraternity members stated that Hurley came to their houses in early March and put S.C.O.N.E. stickers dated September or August of 1998. Members said that after visiting in March, Hurley told them that he had cleaned their kitchen hood six months earlier and that the houses owed him money for those services.

According to Aimee B. Angel '00, housemanager at the Women's Independent Living Group, Hurley came to the house March 12, and said that he was there to clean the ventilation system.

Angel said that Hurley was told to wait at the door but proceeded to WILG's kitchen while Eleanor R. Foltz '99 attempted to determine whether there was anyone at WILG who could verify that Hurley had been contacted to perform cleaning services.

Hurley said the hood needed to be cleaned and also "claimed all residences were required to have this cleaning every six months," Angel said.

"He never did anything except put up a sticker with his name on the [kitchen] hood," Angel said. According to Angel, Desiree L. Naten '00, WILG's treasurer, witnessed Hurley write a date of Aug 15, 1998, on the sticker when he put it up in March.

The previous *Tech* article had incorrectly stated that Hurley began to take down the ventilation filter to clean it and that he charged $450 for this cleaning. In fact, Hurley did not work on the filter; this charge was for the work Hurley said he performed in August.

After WILG was not able to verify Hurley's claim that he was contracted to clean WILG's kitchen hood, he was asked to leave by Naten. Angel said that Hurley telephoned her later that he would come Saturday to clean the hood. After telling Hurley that she didn't want him to return he stated that WILG "had an outstanding bill from when he had been in to clean in August," Angel said.

Hurley did not come to clean WILG's kitchen hood in August, according to Angel. Hurley states that he contracted that job to another service, which is currently searching for the invoice. Hurley also said that a sticker was posted at the time of service, but was taken down by WILG residents.

Others have similar claims

Some fraternities, such as Sigma Phi Epsilon, have reported no problems with Hurley. "We have nothing but good things to say about him... he does his work," said Sig Ep resident Alberto F. Viscarra '02.

However, other fraternities had claims similar to WILG. Nu Delta treasurer Robert W. Cox '01 also has alleged that Hurley charged the fraternity for services never rendered. According to Cox, Hurley claimed that he had come in September to clean the ventilation system.

When Hurley came in March, he replaced Nu Delta's three filters. He charged $150 for this service and in addition requested $450 for previous work.

Although there was a sticker on Nu Delta's kitchen hood dated September 15, "We aren't sure it was there before the beginning of March. To the best of our knowledge, it wasn't there before," Cox said.

Hurley obtained a personal check from one Nu Delta brother in the absence of anyone from the house's government.

"Apparently he wanted to be paid really badly and someone paid with their personal check to be reimbursed later" by the fraternity, Cox said.

In addition, Nu Delta's house president signed an invoice for both charges, but only because Hurley had stated he had already talked to the house manager, according to Cox.

Hurley says that he has signed invoices from "95 percent of the houses" that are disputing charges, and that he is locating the remainder. "I have all the invoices I need," Hurley said.

Theta Xi reaffirmed its account as stated in the previous *Tech* article, that Hurley charged them for services not rendered.

Hurley "has failed to produce a form that we have contracted or requested this service," said Christopher Drew, Theta Xi's resident adviser, who filed a complaint against Hurley with the Campus Police.

Drew said that when he wrote a check to Hurley for $900 he was unaware that there was any dispute over the services. The March 16 article incorrectly stated that the amount of this check was $450.

Hurley also said that contrary to the March 16 article, he did obtain payment of the check. Drew says that Theta Xi was in the process of stopping payment and is unaware whether the check has been paid.

Regulations require inspection

According to the National Fire Prevention Agency (NFPA) regulations applicable to Massachusetts, inspections of kitchen hoods are required every six months, but professional cleanings are only required if the hoods are found to be contaminate with grease deposits. A dated certificate of cleaning is only necessary when a professional service has been used.

In the fall and summer of 1997, Vanderwill Facility Advisors examined the safety of facilities related to the Office of Dean of Students and Undergraduate Education including FSILGs, according to Dorow. The consultants were asked by the Dean's Office to look at fire safety within the FSILG system.

According to Dorow, several of the fraternities were found to have unsafe kitchen hoods. S.C.O.N.E. was on a list of contractors sent to FSILGs advising them that many should have their hoods cleaned. S.C.O.N.E. and others were listed because their sticker advertisements were on the kitchen hoods in some fraternities, Dorow said.

Lieutenant Barry Lynde of the Cambridge Fire Department stated that FSILGs may clean accessible parts of hoods themselves. According to Lynde and the NFPA, the frequency with which hoods need to be cleaned depends upon how much grease is used and how much cooking is done.

The lowest cost for a hood cleaning is $200, according to Susan Staffieri of Clean Sweep, another hood cleaning company. Staffieri said that $450 would cover something like the hood in "a Chinese restaurant," with about 15 filters.

Jennifer Lane contributed to the reporting of this story.

THE QURAN

Challenge of the Millenium

A one day seminar, with

Dr. Jamal Badawi

Dr. Badawi is a well-known expositor of Islamic Issues in North America. He is a Professor at Saint Mary Univerity in Halifax, has authored several books and other literature, and has helped produce almost 350 TV segments on Islamic issues. He is also a member of the Islamic Society of North America (ISNA) Fiqh Council.

2:30 Scientific Challenge

5:30 Historical Challenge

This session will focus upon issues raised by the cover story of January 1999 issue of the Atlantic Monthly regarding the Quran's scriptural authenticity.

8:00 New Discoveries

Date: Sat. April 10, 1999

Location: MIT, Room 1-190

Sandwiches will be served to attendees.

Sponsored by MIT Muslim Student Association,
ISB Student Committee, and
Graduate Student Council

More Info: sfateen@mit.edu

http://web.mit.edu/christo/www/jesusweek/

April 4-April 10

Monday, April 5 Study Break with the Cross Products 10pm **Mezz Lounge**

Tuesday, April 6 Booth and "Prayer and a Hug" Student Center

Wednesday, April 7 "Darwinism and Intelligent Design" 7pm 2-190

Thursday, April 8 Prayer Booth
"The Bible and Archeology" with Sandra Richter, 7pm 6-120

"WHO IS JESUS?"
Friday, April 9
6-7pm E-120

Saturday, April 10
Outdoor Concert! 11am

Easter Sunday, April 4 Church, Jesus Film 2pm 20 Chimneys

Sponsored By
Asian Baptist Student Koinonia
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Hong Kong Student Bible Study
Korean Christian Fellowship
Impact Campus Fellowship
Lutheran Bible Fellowship
United Christian Fellowship

MIT Students Attend Protest In Support of NATO Response

Kosovo, from Page 1

Engineering, is the only other ethnic Albanian associated with MIT. Suggesting that this is "a reflection of how ethnic Albanians in Kosovo were discriminated against," Mushkolaj said. "I think NATO should continue to bomb" even though her family was expelled from their house which was subsequently burned. "Freedom has a price, and we certainly have to pay for it."

Treska said, "I feel so sad for my ethnic brothers in Kosovo, to suffer in that way. I would like to thank the US government for helping us with the airstrike and the support given to ethnic Albanians in Kosovo. I hope for the best, I hope we find the right solution for the Kosovo [conflict]. I'd like to see Kosovo a free country, an independent country."

"No simple solution" exists, Bogdanov said, "no matter what we come up with, something will be sacrificed. The hope is that with a more civilized approach, we'll not let whole nations be sacrificed."

Balkan students comment

Contributing another perspective on the crisis, Macedonian Andrej Bogdanov '00 said, "I think the world should do anything they can to stop the ethnic cleansing." He continued, "I know that [the bombing is] not fair to all the Serbs... but the Serbs control the government, which controls the military."

Bogdanov grew up 10 miles away from Kosovo border in Macedonia. "The cultures are very different, and that's always a problem... the problem is that the two communities live very separately," he said. "It's a real illusion that you can deal with these problems by force."

Students from other areas of the Balkans are concerned by the crisis as well. Tarik Alatovic '01, from Bosnia-Herzegovinia, said, "I'm thinking about it all the time... we don't know how many people are being slaughtered right now, as we speak."

Alatovic has become a more religious since the conflict started, as have many people from the former Yugoslavia, he said. They "start to identify as muslims or serbs," he said. Several years ago, he didn't know how to distinguish Serbian and Muslim names, but "you had to learn, [to distinguish]" he said.

Bogdanov said that "I used to identify [myself] as a Yugoslavian" not as a specific nationality before the war. "If you go far back enough in history" it's unclear what any specific nationality is, there's no "pure heritage." We are "all mixed," said Bogdanov.

Other students air opinions

Speaking at an International Student Study Break, one student said, "Not just the Balkans are affected. The entire European community is affected." International student Soloman Assefa '00 felt that it wasn't "correct, to go in and bomb a sovereign country... Considering the amount of time, energy, and money that it will take for a country to recover [from bombardment], it's not worth it."

Russia has condemned NATO for intervention in Kosovo. "I heard from people back home [in Moscow]... that people are very upset at the United States." said Natasha Iliouchina '00. Iliouchina feels that though the "US is making this too one-sided... in this conflict, there is no right or wrong. Everyone is to blame."

MIT students join protest

MIT students who are not from the Balkans also showed an interest in the crisis. Six students attended yesterday's protest at Copley Square. Fahad M. Desmukh '02 said he is bothered by the fact that thousands of people are being slaughtered and "right now nothing can be done."

At the protest in Copley Square, five TV cameras and 25 police officers looked on as students from other schools in Boston and community members expressed their support for the NATO action.

Damian Y. Kolodiy, an Emerson senior, called the protest "a wake-up call." We cannot, as students, continue to be "oblivious to" the crisis.

Nandini M. Mascarenhas. a Wellesley sophomore who helped organize the protest via Amnesty International, was concerned about the Albanian refugees. "The fact that they have nowhere to go" is the most alarming she said.

The President of Boston University's Albanian Student organization, Mentor Mustafa said that students should "Urge the US Congress, Senate and NATO to send as much aid as possible" to the refugees.

Field Utilized Despite Closure

Turf, from Page 1

field. "The field was unable to support our practice and competitive situation," Hill said.

To counter scheduling problems with Briggs, Hill met with officials from Facilities, the Planning Office, and Athletics to identify alternative sites for intramural sports, especially softball. Hill said that lights from the omnifield might be moved to Steinbrenner Stadium to allow longer hours of play. The omnifield was MIT's only lighted facility, allowing play from 7:30 to midnight each evening. Athletics officials are also looking into nearby off-campus facilities.

To handle the increased traffic, facilities will start more regular maintenance and upkeep of Briggs field.

Injuries motivate closure

Part of the motivation to close the omnifield was the high frequency of possibly turf-related injuries. Hill said that while trainers could not be certain that the damaged turf actually caused the injuries, a high number of ankle injuries and sprains did occur on the field. Kathy J. Davis, an Athletic Trainer, said that she "did happen to see two injuries myself this year that were directly attributable to the condition of the turf." Davis compiled a report on such injuries as part of the group's proposal, but did not have numbers available.

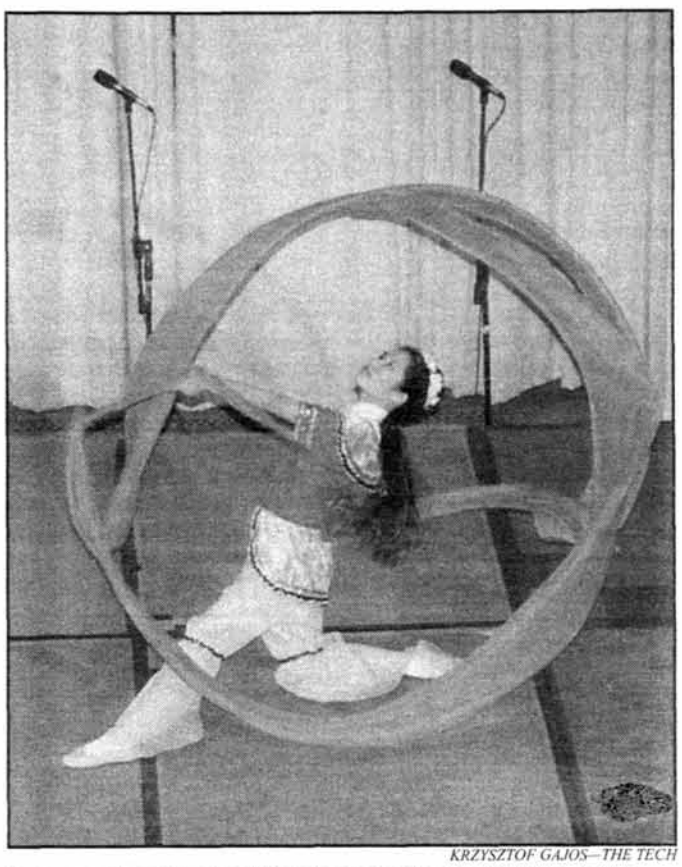
Although the field is closed to official use, it has not been physically blocked off due to the high amount of foot traffic going between West Campus and the athletic facilities and student center.

Students dissatisfied with field

Late Monday afternoon, the Omnifield was in use by the MIT Graduate Soccer Club. Alex C. Snoeren G, a club officer said that "the turf is horrible, everybody knows that. It's always been unsafe." The league Snoeren's team plays in deemed the omnifield unsafe last year, thus forcing the team to practice and play elsewhere. "It's been like this for so long," Snoeren said. "Officially we're in Johnson."

The men's varsity lacrosse team, which usually plays and practices on the omnifield, was pleased with the move to Briggs, said team member Timothy P. Nolan '01. Nolan said that playing on Briggs was "much better. Both fields are crappy, but the Omnifield is the worst field I've played on in my entire athletic career." Nolan did not know of any specific turf injuries, but said that "everyone scrapes their knees and it gets really slick" in wet weather.

"MIT's facilities in general are lacking, and it would be nice to see some more funding going to update and or maintain the fields," Nolan said.



KRZYSZTOF GAJOS—THE TECH

A dancer from the Traditional Chinese Dance Troupe of the American Chinese Art Society performs a traditional ribbon dance Sunday in *Grains of Rice*, an Asian cultural show held in Walker Memorial.

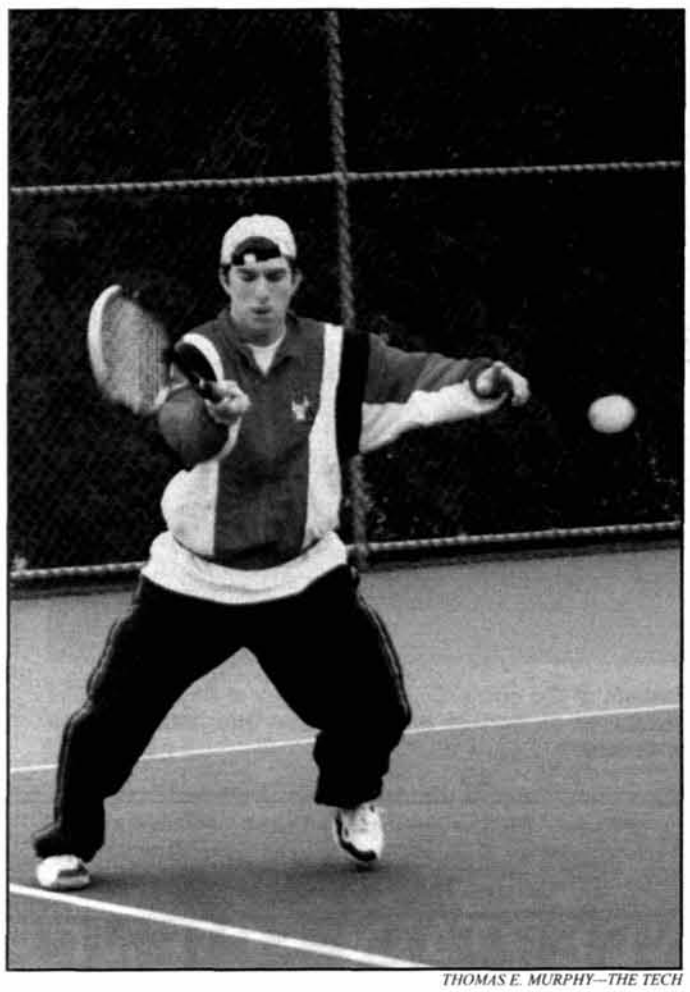
KRZYSZTOF GAJOS—THE TECH

Performers of the energetic Punjabi dance of Bhangra inspire the audience as part of *Grains of Rice*, the Asian cultural show Sunday.

GREG KUHNEN—THE TECH

The AI Lab's COG will be making its musical debut this summer with the airing of a They Might Be Giants video produced for an ABC documentary series.

SPORTS



THOMAS E. MURPHY—THE TECH

Benjamin Cooke '01 fires a forehand against a Clark University opponent in Saturday to win the match 7–0.

UPCOMING HOME EVENTS

Tuesday, April 6
Softball vs. Babson College, 3:30 p.m.
Baseball vs. Babson College, 3:30 p.m.
Men's Tennis vs. Tufts University, 3:30 p.m.
Women's Lacrosse vs. Colby-Sawyer Coolege. 7:00 p.m.

Thursday, April 8
Men's Tennis vs. Connecticut College, 4:00 p.m.

Varsity Crew Drops First Race Of Spring Season to Columbia

By Karl Richter
TEAM CAPTAIN

In the opening race of the spring season the favored varsity heavyweight crew lost a close race for the Alumni Cup to a less-experienced Columbia crew in New York City Saturday. Despite the loss by the varsity squad, MIT won spirited freshmen and junior varsity races.

Racing at slack tide on the Harlem River, the varsity team covered the 2,000m course in 5:54.3 while Columbia finished in 5:49.7. The Engineers never found their rhythm, and were unable to make up the slight lead that Columbia established early in the race with an aggressive start.

The varsity team had been ranked 14th of Division I crews in the US Rowing Preseason Coaches Poll. Columbia was not ranked.

In the junior varsity race, MIT and Columbia battled side-by-side for the first 1000 meters, with oars almost clashing. Columbia appeared to be working harder to stay even. In the second half of the race, the more composed Engineers were able to gradually draw ahead. MIT finished in 5:33.1 with Columbia following in 5:37.6 with a tail current.

The freshmen contest proceeded similarly with the two first freshmen boats racing neck-in-neck and grinding each other down, before MIT pulled ahead decisively in the last 600 meters for the victory. MIT's first freshmen finished in 5:42.4, followed by Columbia in 5:45.3, again with a tail current.

Andrew Lamb '02 said, "There are many technical things that we can and will improve on in this coming week and the next in preparation for the Harvard-Princeton double header. I think that it speaks highly of our potential that we could row so poorly on our first race, and still beat a crew with two EARC race experiences."

MIT's second freshmen (6:00.1) competed in the same race as the first freshmen and Columbia. Assistant Freshmen Coach Brian Smith '98 was pleased with the performance of his second freshmen crew. "The guys raced well and hung in there. I'm proud of them for finishing so close to the first boat and to Columbia," Smith commented.

The heavyweights race next on April 10 in Worcester, MA, where MIT will take on Williams College, Worcester Polytechnic Institute, and Connecticut College.

Ellefson Returns From Nationals With Trio of All-American Honors

By Roger Crosley
DIRECTOR OF SPORTS INFORMATION

Sport Shorts

Gymnast Sonja Ellefson '01 returned from the recent National Collegiate Gymnastics Association Championship meet with a trio of All-America honors. Ellefson finished fourth in the all-around competition with a score of 37.2/40. In the individual event finals, Ellefson finished fourth in the vault competition, and was sixth on the uneven bars.

Women's Basketball

Vicky Best '99 has recently received a number of honors for her play during the 1998-99 women's basketball season. Best has been named to the GTE College Sports Information Directors of America Academic All-America second team. Best, an architecture major, averaged 16.9 points and 5.2 rebounds this season. Best was also named to the New England Women's & Men's Athletic Conference (NEWMAC) All-Conference team. Best led the conference in scoring and was second in steals. Additionally, the New England Women's Basketball Association (NEWBA) honored Best with second team All-New England status, and she was a third team Eastern College Athletic Conference Division III All-New England selection. Best and teammate Katie Spayde '99 were each selected to play in the NEWBA Division III Senior All-Star game which was recently held at Brandeis University. Best finished her career with 1,425 points which places her sixth on the all-time MIT scoring list for both men and women. She is the women's leading career point scorer. In a late season game against Pine Manor College, Spayde became the fifth MIT women to score 1,000 career points. She finished her four years with 1,089 points which ranks her 15th on the all-time MIT list and fourth on the women's list.

Fencing

The women's fencing team finished 18th in the NCAA Division I National Championships held at Brandeis University, while the men's team finished 19th. MIT's best finisher in the meet was senior epeeist Nora Szasz. Szasz defeated the 1998 defending champion on her way to 14th place in the meet, while team captain Aimee Wiltz '99 finished 23rd in women's foil. For the men, Brian Bower '99 took 19th place in the men's sabre event, and epeeist Matt DuPlessie '99 placed 24th.

This is the most fencers that MIT has sent to the nationals in over ten years. Three of the four fencers — Szasz, Wiltz, and DuPlessie - began their fencing careers with head coach Jarek Koniusz.

GTE Awards

Three Engineers have been named to the GTE College Sports Information Directors of America Academic All-District. Cross country runner Debbie Won '00 and field hockey player Tracy Sadowski '99 have been named to the first team, while swimmer Deirdre Dunn '99 has been named to the second team for the second consecutive year. Won was a Division III All-America in cross country. Sadowski was named to the National Field Hockey Coaches Association All-America team for her play in 1998. Both Won and Sadowski will now appear on the national Academic All-America ballot. J.C. Olsson '00 was selected to the all-district team for gymnastics. Olsson holds the MIT record in the all-around. His name will also appear on the national Academic All-America ballot.

Men's Basketball

Basketball player Zach Inman '01 was named a NEWMAC All-Star. Inman was the leading scorer and rebounder for the men's basketball team with 18.1 points and 7.7 rebounds per game. He was the NEWMAC's second leading scorer and rebounder.

Pistol

At a recent reception in the duPont Athletic Center Shooting Range, former pistol coach Pat Melaragno was honored by having the national individual collegiate champion trophy in women's air pistol named for him. The Melaragno Trophy was designed and created by current coach John Holland, and will reside at the headquarters of the National Rifle Association in Washington, DC. Melaragno coached at MIT for 19 years and led the Engineers to several national championships including the first ever air pistol national championship for women.

Volleyball

Men's volleyball coach Ton Klemas '93 has been selected by the National Collegiate Athletic Association (NCAA) to partake in the NCAA Youth Education Through Sports (YES) Volleyball Clinic scheduled in conjunction with the NCAA Men's Division I National Championship. Klemas will serve as a clinician for youths ranging in age from 10-18. Klemas is the second MIT coach to participate in the YES program. Women's gymnastics mentor Eduardo Ovalle has worked with the program for two years at the gymnastics championships.

Spring break training

Last week's Spring Break sent spring sport coaches and athletes to warmer climates. Florida was the destination for baseball (Miami area), women's lacrosse (Panama City), softball (Fort Meyers), and men's track & field (Tallahassee) training. The men's lacrosse team made its annual trip to California, the women's tennis team practiced and played in Bermuda, and the women's track & field team spent the week in Atlanta, Georgia.

Engineers Start Regular Season With Three Wins

By Ahren Lembke-Windler
TEAM MEMBER

The baseball team returned from its annual spring training trip this week, armed and ready for the upcoming season. During the team's Florida jaunt, the Engineers stumbled to a 1–4 record, but managed to work out some kinks in preparation for conference play.

The season began with a high-scoring affair against Wesleyan College. The Engineers dropped the game 17–11 despite a solid performance at the plate by Kevin McKenney '00, who ripped two doubles and solidified his position as the third batter in the lineup.

After losing the second game 8–0 to Palm Beach Atlantic College, the MIT squad battled hard in a 7–5 loss to Northwood College. Jeff Billing '01, pitched several quality innings, and Ryan Balter '99 provided a spark at the top of the order, but it wasn't quite enough as the Seahawks rallied from an early deficit.

The Engineers then rebounded from a 14–8 drubbing by Williams College to slaughter Bowdoin College 9–0, and pickup their first victory. Pitcher Zach Jenkins '01 went the distance and picked up the shut-out victory. Captain Jaymee Johnson '99 provided some timely hitting, and shortstop Dave Piho '00 performed flawlessly on the field.

MIT then headed home to face Bates College in a doubleheader on Saturday. The Engineers started the regular season off in fine fashion, winning 4–3 and 13–6. Tyler Pope '99 and Billing each picked up victories, and the lineup continued to manufacture runs by playing Coach Mac Singleton's patented aggressive style baseball.

In their first conference game the squad topped Worcester Polytechnic Institute 5–1. Jenkins again pitched well, racking up 10 strikeouts and allowing no walks. Captain Joel Morales Jr. '99 went 2 for 2 with a homer and a double to lead the offensive assault.

The winning streak came to an end against Clark College last Tuesday. Propelled by a five run second inning, Clark defeated the Engineers 8–5. The Engineers look to get back on track this week as they face Babson College on Tuesday.

Women's Tennis Finishes Training at Hilton Head, Drops First Match

By Yi-Ning Cheng
TEAM MEMBER

The women's tennis team, having returned from their spring training trip to Hilton Head, North Carolina, raised their competitive spirits and match play to a new level Saturday. The Engineers played against Vassar College, losing only by a few points. Unexpected rain conditions prolonged the duels to six and a half hours in the tennis bubble.

At first doubles, Mealani Nakamura '00 and Kelly Koskelin '02 won 8–4. Second doubles, Jessica Hall '02 and Team Captain Nisha Singh '00, lost 9–8 (7–0) after leading most of the set. Priscilla Cheung '02 and Leela Ramnath '02 lost 8–2 and Yi–Ning Cheng '02 and Yue Zhang '01 lost 8–3 at third and fourth doubles respectively.

At first singles, Nakamura dominated her opponent 6–1, 6–2. Koskelin played hard at second singles but dropped a tough three setter 6–0, 1–6, 6–3. Third singles Hall quickly triumphed 6–4, 6–1. Singh and Cheng at fourth and fifth singles lost 6–3, 6–1 and 6–2, 6–0. At sixth singles, Cheung fought for every point in a tight match and won in three sets, 6–4, 3–6, 7–6 (7–1). This is the first point Cheunghas scored for MIT. Ramnath at seventh singles lost 6–3, 4–6, 7–5. Zhang lost 6–4, 6–1 at eighth singles.

"I was very proud of the way the team played. It was a really hard fought match whose outcome was decided by a few points," Singh said.

The team will travel to Vermont Friday for the Middlebury Tournament.

Congratulations to Andrew Kim '01 for placing first out of 63 participants in our 1999 NCAA Men's Basketball National Championships pool!