

Volume XCV, Number 19

Pasadena, California



The fourth annual Tribute to African-American History Through the Arts drew many visitors to Dabney Hall on Sunday Afternoon.

It's Part of Our Past: whose fault is it?

by Edray Goins

Note: This is ninth in a series of vignettes, to be published throughout the term, on the history of Caltech's under-represented students. This week's article is the second of two parts.

Both communities were at fault in 1978. While Caltech did not offer much support to Lee Browne, the Director of Secondary School Relations, as well as advisor and friend of the Institute's minority students, many Black, Hispanic, and Native American high school students did not apply. Although there was an office on campus to deal with minority issues, there were many problems with cultural acceptance and harassment by security. Although there is a lot of evidence by which to conclude that admissions policies at Caltech were a little backwards (such as not allowing Browne to sit on the admissions committee), clearly 20% of the population, the percentage of minorities in the country, did not

apply. There seemed to be a lack of concern about these problems in both communities.

Ever since 1978, the minority community has never been the same. The number of Native American undergraduate applicants may have grown steadily, because it is now at 15 a year. However, the number of Black applicants may have decreased, because the number of students in freshman class has decreased on average from 10 in 1972 to 2 in 1992. Hispanic freshmen, on the other hand, have increased on average from 6 in 1972 to 12 in 1992. Even Lee Browne's title changed when "Director of Special Student Programs" was added to his previous title "Director of Secondary School Relations."

We now seem to have the same scenario as we did in 1978. Our minority community looks somewhat appealing to applying minority students. We have societies of Black and Latino engineers, as well as a graduate social organization to celebrate Latin cultures. Of the 60 Black, Hispanic, and Native American undergraduates, 10 are women. However, these students still face the same problems as before. Even though the retention rate is better than what it was, under-represented students continue to drop out and have culture shock. The admissions office still faces the same problems as well. Last year,

the Institute received nearly 2000 applications, where almost 130 were from Latinos, 30 from African-Americans, and 20 Native Americans. That is, 9% were received from minorities. Even now, minorities are not applying to the Institute in the proportions they should.

The scenario now is much more similar than we may believe. From 1989 to 1992, about 6 Blacks and 14 Hispanics entered each year. However, in 1993, only 2 Blacks, and 8 Hispanics enrolled.

There are ways to prevent the same problems we experienced before. Caltech can increase its recruitment for under-represented minorities. For the last ten years, there has been almost no active recruitment for Black, Hispanic, and Native American students here in California, and none in the predominantly Black and Chicano sections of Los Angeles and Pasadena. Caltech can increase its retention efforts. The minority students that are failing their classes, since they are so few in number, should receive more attention than a letter in the mail asking them to talk to the deans. Often, the problems range beyond academic shock, and into culture shock. Social gatherings of minority students alleviate the alienation of being the only minority in a sea of foreign faces. Caltech can increase its conscioussee FAULT, page 4

Dervan cops Nichols Medal

by Caltech Public Relations

Peter Dervan will receive the 1994 William H. Nichols Medal from the New York Section of the American Chemical Society in a ceremony April 8, 1994, in White Plains, New York. The New York Section has awarded the Nichols Medal every year since 1903 for excellence in chemistry. In the past 90 years, three other professors from the Caltech have received this prize: Linus Pauling in 1941, John D. Roberts in 1972, and John D. Baldeschwieler in 1990.

Dervan, the Bren Professor of Chemistry at Caltech, will receive the medal "for outstanding contributions in the field of bio-organic chemistry." Specifically, the award committee is honoring the many ways in which Dervan, through his studies directed toward understanding the chemical principles for recognizing specific sequences of double-helical DNA, has been



Dr. Peter Dervan

largely responsible for moving bioorganic chemistry into a new era.

Dervan, who was trained as an organic chemist, has brought synthesis and design to the field of biopolymers, and the methodologies of nucleic acids to the field of molecular recognition. Recent see DERVAN ACTION, page 11

C House now Avery Centre

by Zackary Dov Berger

Construction of Avery Centre, Caltech's much-discussed eighth house (or first dorm), will begin in April, 1995, according to Mike McCallan, Physical Plant's manager of engineering and estimating. The project will be ready for occupancy in August, 1996; financing for the \$15-million project is secured, being a mixture of donations and Institute funding.

These dates hinge on the decision of Pasadena's planning com-

mission and final approval by the city. However, says McCallan, "we're done with the early programming stages"-design of the building's main components-"and within the next two to three weeks will enter into the early schematic stages," where decisions are made as to the actual location of rooms, bathrooms, and the planned lounges and laundry. Despite the switch in emphasis by the planners, all figures that follow are subject to some change.

see AVERY CENTRE, page 4

Hackers break into CCO

by Laurent Stadler

A few minutes before nine on Monday morning, a hacker broke into one of the servers for Caltech's CCO computer cluster and started to destroy the filesystem. Fortunately, the cluster was scheduled to be brought down for preventive maintenance at 9:00 A.M. When CCO employees were preparing to shut the cluster down, they noticed the hacker and stopped the destruction of the filesystem. User files were untouched, and, according to CCO, the system files which were removed were replaceable.

Hours earlier, the hackers had had an altercation with a Caltech undergrad, Heath Hunnicut, after Heath tracked them to their point of origin. A week earlier Heath used Internet Relay Chat (IRC), a program which allows people to participate in electronic group discussions, to talk with some hackers about the systems which they had see HACKERS, page 4

Moore Lab Groundbreaking is Tuesday

A groundbreaking ceremony for the future Gordon and Betty Moore Laboratory of Engineering will be held Tuesday, March 8, at 3:15 г.м., east of Beckman Auditorium. All faculty and students are invited.

Following the cermenony, there will be a panel discussion entitled "Caltech and Entrepreneurship: Where Are We Headed and Where Should We Be Headed?", held in Ramo Auditorium from 4:30-6:30. It will be moderated by Caltech trustees Ronald Linde and Arthur Rock.

Wanted: Executive Committee Chairman The ASCIT Executive Committee interprets the ASCIT Bylaws, determines the validity of protests, reschedules invalidated elections, appoints temporary B.O.D. replacements, investigates Corporation concerns and problems, and assists the President. Although the Executive Committee has not played a key role in the past few years, this could very well change. Any ASCIT member who is interested in being the Chairman or being on the Committee (appointed by the Chairman) should talk to Angie Bealko, ASCIT President, before the end of the term-stop by Page 210, or call x1400 or x6757.

California Tech	
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Jam room has Honor System troubles

I've been one of the two Jam Room Managers for a full year now, including this past summer. In that time, I saw six microphones disappear. We aren't talking about pennies per slice for a couple of slices of bread or dimes per scoop of detergent, we're talking about one hundred and ten dollars per microphone.

I consider each theft to be another death of the Honor Code. Each microphone we own (I'm not counting the ones stolen from students) has heavily etched into its metal body "Jam Room" or "Jam Room Property." Whoever took a mic gets treated to the reminder every time he uses that mic. It tells him that he's a thief and worse, that he's a Caltech thief.

How do I know it's a Techer? Unlike the open kitchens and the laundry room of the South Houses, access to the Jam Room is limited to Caltech students and staff by both key and combination lock. The key lock is a non-duplicable Sargent and was re-keyed within two years ago. The combination is changed every term to enforce payment of dues.

Somehow, all sorts of non-Jam Room members get the combo from JR members that sign a form saying that they won't hand out the combo. Mike Zeineh and I are probably the only two members that have never handed out a combo to a non-member—of course, we're the managers. Still, some Techer had to provide the key by which the thieves get in. It makes me wonder what the hell's up with the Honor Code.

I recently saw three heavy-duty outdoor extension cords and a halogen flood light that belongs to my band walk off with the JR crate they were in. At least fifty bucks gone down the tubes. And then there's the countless (and I really mean *countless*) guitar cables (\$10– \$20 each) and microphone cables (\$10-\$30 each) that have disappeared over the past year thanks to some wonderful people.

And most, if not all, things were labeled. I'm sure there's a lot of private stuff that's been stolen that I haven't been told about. All of the JR stuff that gets taken has to add up to around \$750 at least. That's how much we get from ASCIT for three terms. If it wasn't for the Student Investment Fund (Thanks Bob & the SIF!) the Jam Room would be dead. All in one year. I haven't been able to repair a damn thing for the lack of funds. And I'll go stuff myself before I ever store any more personal stuff down there.

That's one case of a lack of trust on a campus where trust is heralded as our life's blood.

> Trylæn (Dennis Chang) Jam Room Manager

Collins letter biased

This letter is in response to the February 25 letter to the *Tech* by Mr. Austin Collins.

I must say that I was quite impressed by Mr. Collins' letter. Seldom have I seen such a wellthought-out and well-executed example of bias and spite. I'd like to respond to his comments just as he attacked Mr. Roopnarine's: in order.

First of all, Mr. Collins throws back again and again the phrase "unique journalistic style" as if Mr. Roopnarine had used it to glorify himself. I would like to note that Austin has pulled this out of the editors' note at the end of the article, not from anything Anil wrote.

Second, when using the phrase "of unknown talent" to describe Matt Metz as a sabreur, Anil meant (surprisingly enough) that *he didn't know Metz' talent as a sabreur*. Boy, now isn't that just a bolt out of the blue? Who could have guessed

Would you like to know more about ASCIT? Do you want to hear the issues discussed by the BOD? Are you yearning for a say in how your money is spent? Then come to the ASCIT BOD meeting on Tuesday, March 8, at 10:30 P.M. in the ASCIT Office, SAC 64, or visit Angie Bealko, the ASCIT President, during her office hours:

12:30–1:30 р.м. Tuesday, March 8 11:30 л.м.–12:30 г.м. Wednesday–Friday, March 9–11 it? O.K.—I guess we'll have to excuse Mr. Collins for being confused by this subtle point.

Let me mention that most of Mr. Roopnarine's information on the skill of the fencers came from me. I gave him my opinions of each of the Caltech fencing team members. I was unable to rate Mr. Metz as I had never seen him fence sabre before. Nor, for that matter, had almost anyone else. Metz had, at the time of the match, a total of two hours of sabre experience. Granted, when I asked Austin about this, he seemed to believe that he could make a foilist into a sabreur in two hours. Of course, he has been known to let his ego overpower his better judgement.

My next contention is with the lines, "I have no doubt that Mr. Roopnarine is familiar with the mating habits of polar birds, but I doubt that anyone would be happy to be described in such a fashion [as resembling a penguin in heat]. Except maybe π Qan." What the *hell* did I do to deserve *that*?

Mr. Roopnarine's reference to Keith Seitz as the fencing team captain is an error straight out of the team's official roster. Mr. Seitz is actually the team manager.

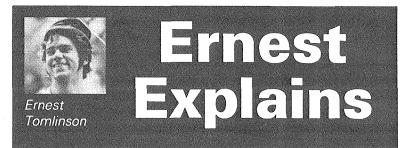
On to omissions: Mr. Collins whines about Mr. Roopnarine not mentioning Metz' hurt ankle and Collins' torn hamstring. *Perhaps* this occurred because Austin didn't mention them *either*. He was (as usual) supremely confident of his victory beforehand. The excuses didn't come about until *after* the loss. You can ask any team member just how common an event this is.

I am glad to hear that Mr. Collins is so interested in having the *Tech* report on the fencing team's competitions. Westerns are this weekend. I look forward to reading his article.

Eric "π Qan" Uhrhane

Please send letters to the editor to *The California Tech*, Caltech 40–58, Pasadena, CA 91125, or by e-mail to editors@tech.caltech.edu. *The Tech* reserves the right to edit all letters for brevity or otherwise, and to refuse to print any letter for any reason.





Dear Ernest,

I am somewhat mystified and displeased by the results of this year's Grammy Awards. Just who votes on the awards, and what criteria do they use in selecting the winners?

-Music Lover in Crellin

Dear Music Lover,

You are wrong in assuming that the Grammy winners are decided by a vote. The actual award procedure is much more interesting.

The day before the Grammy Awards show, all of the nominees gather in a large field behind the offices of the Academy of Recording Arts and Sciences. The nominees compete in a variety of athletic events, including a three-legged race and an egg toss. There is a short break for a picnic lunch, during which points are tallied for each nominee's victories.

After lunch, the point totals are revealed. If a nominee has done particularly well, he or she has two choices: participate in the afternoon's events, or accept one of the minor Grammys. This leads to some interesting winners—for example, after the Edge got sick in the pie eating contest, U2 decided to accept the Best Alternative Album award, rather than risk further nausea.

The afternoon's events are more skill-oriented, and include whittling, fire-starting, and canoeing. Once the events are done, the participants are sent home to await the Awards Show the following day.

Dear Ernest,

While you're on the subject of award shows, how did "Rocky" win the 1976 Oscar for Best Picture, beating such superior competitors as "Network," "Taxi Driver," and "All the President's Men"? —Armchair Critic in Lauritsen

Dear Critic,

People often forget that the 1976 Academy Awards were marred by controversy and turmoil, and that in the end, "Rocky" was the Academy's only choice for Best Picture.

First, only one week before the Awards, it was discovered that "Network" had been released in late December of 1975 for three sneak previews in New York, making it ineligible for an award. Rather than embarrass the producer, the Academy decided to hush up the whole affair.

Then, four days later, "All the President's Men" director John Hughes was caught in an F.B.I. sting providing cocaine to Academy members at a Beverly Hills party. The film was disqualified the next day, despite widespread pro-Hughes sentiment.

Lastly, after several months of furor over "Taxi Driver" by several militant lobbies, including the Manhattan Independent Carriage Drivers' Association and the Italian-American Anti-Defamation League, one of the Academy's Board of Directors was kidnapped by a psychotic Los Angeles cab driver named Gordon Hubble on the night of the awards. Hubble held him hostage for the entire night, and threatened to kill him if "Taxi Driver" won Best Picture. Following the recommendations of the police, Best Picture was given to "Rocky," and disaster was avoided.



If these are inconvenient, you can stop by her room, Page 210, or call x6757 or x1400. Set office hours and meeting times for third term will be advertised during the first week of the term.

TONIGHT'S ASCIT MOVIE

THE FUGITIVE

STARRING HARRISON FORD AND TOMMY LEE JONES

Friday, March 4 Baxter Lecture Hall 7:30 & 10:00 P.M.

\$1.50 for ASCIT members \$2 for all others

Next week's movie: TOP GUN

Michael "Plate o' Shrimp" Benedetti Chris "Hermit Crab" DuPuis Michael "Lobster" Radford

BUSINESS MANAGER Chris "Sand Dollar" Echols

EVENTS AND NOTICES EDITOR Wendy Melvoin

> PHOTOGRAPHER Lisa Coleman

CIRCULATION Rebekah "Man O' War" Mills Wei "Abalone" Lin Gypsy "Tiger Prawn" Achong Tobias "King Crab" Bartels Margaret "Calimari" Belska Zack "None for me, thanks" Berger Connie "Sea Monkey" Chang Jeff "Quahog" Denniston Jeff "Barnacle" Goldsmith Wei-Hwa "Mussel" Huang Monwhea "Raw Oyster" Jeng Michael "Red Octopus" Kantner Laurent "Anemone" Stadler Adam "Conch" Villani

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The California Tech

Algeria

Muslim extremist group leader Mourad Si Ahmed died along with nine of his followers during an assault on a building in Algiers.

Bosnia

U.S. planes attacked six Serbian aircraft to enforce a UN-decreed "no-fly" zone over Bosnia. This is NATO's first offensive action ever.

Israel

The Israeli government will detain extremist Jewish leaders in the West bank in response to

last week's slaughter of forty-eight Palestinians. Israeli extremists paid tribute to the killer in Jerusalem.

Israeli military imposed a curfew on residents in the occupied territories to prevent Palestinian unrest following the slayings in Hebron.

The PLO debated whether or

not it will continue in its quest for a peace with Israel. The organization doesn't believe Israel is doing enough to discipline Israeli extremists. Both Israel and the PLO asked

a Catholic church on Sunday.

Russia

Russia expelled a senior American diplomat on Monday, respond-

ing to Washington's similar expulsion of Alexander Lysenko.

Friday

South Africa

Right-wing separatists demand that they be allowed to create an independent state.

Sri Lanka

Sri Lanka held elections for the first time in a decade.

the U.S. for help.

In an effort to persuade the PLO to resume peace efforts, the Israeli government freed 570 Palestinian prisoners on Tuesday.

Lebanon

Nine were killed and sixty were injured when a bomb exploded in **United States**

The Bosnian government and the Croatian separatists signed a peace agreement in Washington D.C. to form a federated state. The United States is hopeful that this will be a big step towards ending the bloody conflict in Bosnia-Herzegovina.

383 Words Griping About Caltech

by Michael Benedetti

I got a call from Graphic Arts last week. Someone there had read my rant about junk mail, and wanted to let me know that colored paper is recyclable. There is a bin behind Graphic Arts where you can put your colored trash.

Unfortunately, there don't seem to be colored paper bins in Lloyd or Page (the two Houses by the mailboxes), at least not where I can find them. Dabney has something that looks like a colored paper bin, but it has a notice saying that it is for white paper only. It seems like someone is trying to discourage the students from recycling colored paper. I could call someone,

There are some good things

wanted to go to one of these since I was a frosh, but it always seemed like I had a lab on Wednesday or I was just too busy.

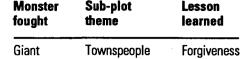
Well, after a hard day of dropping classes, I was ready for a little music. The concert was very interesting-Boyk discussed the piece he was playing at some length, but never got too technical. The playing was fine, of course. Just the thing for a lazy afternoon.

Please respond to the Tech survey. We've been trying to get a reasonable number of votes since last term, and we still aren't there. We'd like to run some votes next week, so turn in your forms. You can mail them to 40-58, or e-mail

together, and special thanks to the faculty who were willing to hang out with all us whiners.

My final complaint is about board food. In particular, these ribs they keep serving. Now I grew up in Oklahoma, and I know that ribs are not the most meat-packed dinner, but board ribs are essentially bones and sauce. I don't want to pay seven bucks to gnaw on a bone. I need meat. (I already told my food rep, Momo, about this, and he gave me absolution, so I feel better now.)

> Hall tells us the scoop Mike sits hungry, glaring More bacon pizza



Ranger Round-Up

Saturday	Cyclops	trapped in Dark Dimension	i orgiveness
Monda y Tuesday	Giant Drammel Monster	Parents trapped in Dark Dimension	Self- sacrifice
Wednesday	Giant	Origin of the	Obedience
	Henchman	Power Rangers	to Zordon
Thursday	Giant	Kimberly has a	Gender
	Samurai	bad hair day/	relation-
	Fan-Man	is hot for Tommy	ships

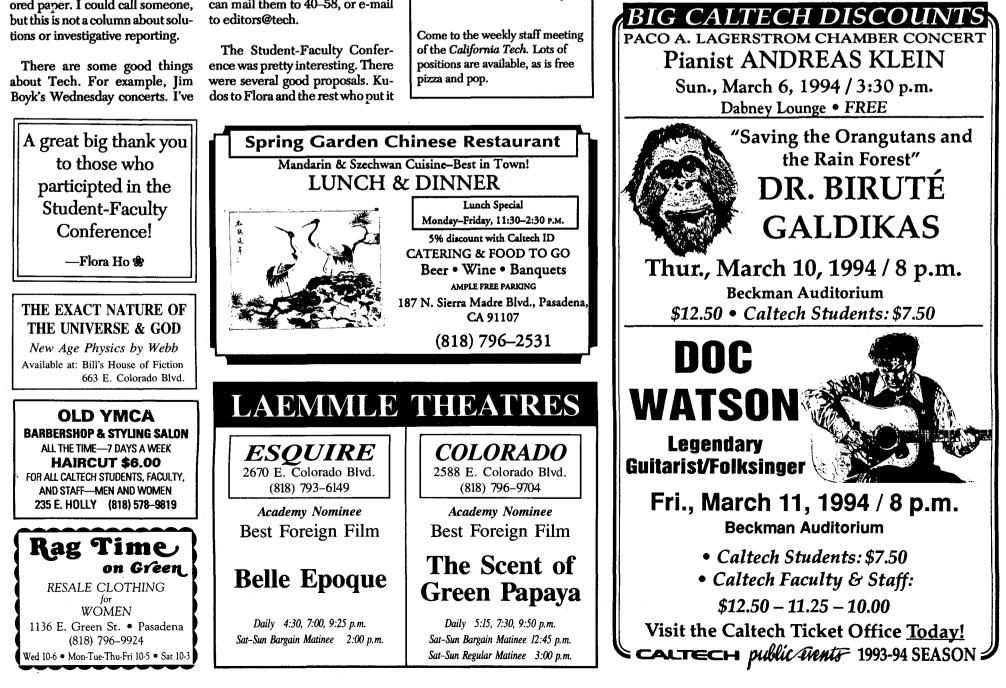
ynews

by Sam Webb

This week, the big news is broomball! Yep, Boffo Bonecrusher XIV is here in a new and semi-improved format. Due to time constraints, the games are down to fifteen minutes each, but to accommodate the great volume of folks who want to see pain on the ice, we've added another night. Yes sir, the action will occur at the Pasadena Ice Center both Friday and Saturday, so show up and watch the fun.

As always, we tutor on Tuesdays and Thursdays, so if you have spare time, show up and help someone out. We also help cosponsor mountain bike trips with Caltech Velo each Wednesday. If you're interested in going to the L.A. Philharmonic, we have tickets available for March 6th. Hurry and stop by the Y before they're all gone. Since the end of the term is rapidly approaching, that means it's time for Decompression once again. All the fun and excitement will happen on March 12th and 13th, so sign up to help out soon to get your T-Shirt and favorite spot.

For all you undergrads out there, it's time to start thinking about the Studenski Award. This is the Studenski's 20th year, and will be awarded to a student in good academic standing, who needs time away from Caltech to travel and figure out their plans for future. The award will be for \$3000. A written proposal which describes the intent and includes an estimate of travel plans and expenses is due at the Caltech Y at 5 P.M., Thursday, March 31. If you have any questions, feel free to call Chris at the Y, x6163.





New engineering library to be built at Caltech

by Caltech Public Relations

The Sherman Fairchild Foundation has contributed \$9.63 million to the Campaign for Caltech for the construction of the Sherman Fairchild Engineering and Applied Science Library.

The Fairchild Library, which will resemble the Spanish-style buildings of the early campus, will be built on the site of the steam plant located directly east of Dabney Gardens, between the Thomas and Spalding laboratories. Work on the structure, starting with the demolition of the steam plant, is scheduled to begin in the spring of this year and to be completed by 1996. The five-story building will consist of three above-ground and two below-ground floors, with the lowest floor, or sub-basement, housing facilities for Caltech's program in chemical engineering.

Caltech currently has seven different libraries devoted to holding collections for various fields in engineering and applied science. Once the Fairchild Library is completed, these collections will be moved and housed together in the new building, making it easier for students and faculty to share information across disciplines and to carry out interdisciplinary research. After their collections are moved, the branch libraries will be converted to reading rooms.

The library's design is also meant to foster face-to-face communication and discussion, featuring a public central space on each floor, numerous meeting rooms, lounge seating, and multimedia hookups. This versatile setting, say its planners, to make the Sherman Fairchild Library a central place in carrying out the research and education mission of Caltech.

continued from page 1 Hackers

cracked. Heath tricked the hackers into revealing the names of the systems at Caltech which were compromised. Heath then notified the system administrators of those systems, who then removed the accounts which were being used by the hackers. The hackers became suspicious and when they ran into Heath again on Monday, finally accused Heath of being an informant for the FBI. Heath denied this and an argument ensued. The culmination of the argument came when the hackers threatened to "take Heath down." Minutes later, they logged into CCO, gained super-user privileges, and deleted all of Heath's files. According to Heath, the hackers took over the Ruddock alley phone from which he was making the calls to system administrators, thereby preventing him from completing his calls. The hackers were also able to steal his calling card number.

These two incidents were the latest in a series of break-ins of Caltech computers, mostly on Sun workstations. Some hackers initially gained access to Caltech computers through an unknown method, probably by guessing passwords. With access to a normal user's account, the hackers ex-

ploited bugs in Sun's version of the UNIX operating system to become super-users. With the super-user privilege, the hackers were able to re-configure the computer's network interface so that they could read all traffic going across that branch of the network. Currently, all traffic flows across the network without being encrypted, so the hackers could read the passwords of all users connecting into or out of that branch of the network, and thereby gain footholds onto many other systems from which they could repeat the above procedure.

Although long-term solutions to the campus security problem are still being worked out by CCO, a short-term solution has been settled on. The CCO network (net 48, which consists of the CCO Suns, NeXTs and Intels) and the Student House network (net 6) will be connected to the rest of the campus network through machines called firewalls. A firewall is a machine which is designed to sit between two networks and pass only certain types of communications between the two. Maintaining the integrity of the firewall is of utmost importance since it is the keystone of security for the networks which it connects. The CCO firewalls will initially be set up to pass news and mail both incoming and outgoing, but will pass only outgoing telnet, ftp and X-Windows connections.

Loan reform pilot program comes to Tech

by Jeff Denniston

Tired of having to go through lots of paperwork and hassle in order to get loans? Then, you should be happy that Caltech is one of 105 schools nationwide which were selected to participate in a new loan program, the Federal Direct Student Loan Program. Caltech Director of Financial Aid David Levy said that Caltech felt fortunate to be selected for the program, given the large number of schools that applied and the

continued from page 1

Fault

ness of diversity issues. Some organizations have made progress in this area; the Caltech Y, for instance, holds events that deal with not only African-American, Latino, and Native American issues, but women's issues as well. Even if we realize that some find it degrading to read a security bulletin that states

continued from page 1

Avery Centre

The Centre is designed to house 135 students, graduate students, and faculty: this approximate figure comprises 51 singles (of which 4 have an attached bathroom), 36 doubles, three triples, and five faculty apartments. All rooms will have sinks. In the current plan, the faculty apartments are located on the corners of the squarish structure.

The 37,000-square-foot Centre includes 12,000 square feet of common areas, also called "commons": small number selected.

Under the new program, loans will be made directly by the Department of Education through the academic institution involved to the student. Loans are currently made by banks or other lending institutions, which charge a fee for their services, and guaranteed by the federal government. The new program will reduce costs (and save taxpayers' money) and enable more payment plan options and lower interest rates—the money for direct loans will come from securi-

only the ethnicity of a suspect, we help create a hospitable atmosphere for minorities.

The true test of whether we will repeat 1978 is still on the way. Pre-Frosh weekend is the best indicator of how many minority students will enroll as freshmen for next year. Many under-represented high school students take one look Caltech's students, and are discouraged by the lack of familiar faces. Over the last two years, oth-

this includes a kitchen and "servery"; a dining room seating about 155; a furnished patio seating 70; and a casual cafe, capacity 26, which is designed to be a transition between the lounge and dining room. Besides the one large lounge to be located on the first floor, separate, smaller lounges are planned for throughout the Centre.

The basement of the undergradgrad-faculty commune, according to McCallan, will house utility rooms, storage for students, and 50 parking spaces. Also located below ground will, of course, be Avery's utility tunnel, to be connected with that of the new Moore Engineering Laboratory. Such conties sold by the Treasury Department. Students will also not have to find a lender and getting loans will be simplified. There will be an origination fee of 4%.

This pilot program for the 1994– 95 school year will cover 5% of the total of new student loans, as required bylaw, but that figure jumps to 40% in the 1995–96 school year, and will be at least 60% by 1998– 99. This 5% is estimated to be more than \$1 billion, according to the Department of Education. Prosee LOANS, page 5

ers have felt comfortable at events sponsored by the Office of Minority Student Affairs, but also felt that they were not enough. If these students decide not to attend, we may not have any students attend next year. Considering how low our numbers have been over the last two years, we will be worse off now than in 1978. If we repeat the mistakes of the past, then we have learned nothing, and achieved even less.

nection, says McCallan, accommodates Caltech's envisioned eastwest axis; in this conception, the new east-west tunnel will eventually meet the north-south Central Plant tunnel.

The architecture of Avery (to be located on Holliston and Del Mar), featuring colonnades and courtyards, is meant to evoke that of Kerckoff, the South Houses, and other older Caltech buildings. Nevertheless, it's not clear that Avery's future instantiation (and exemption of its freshmen from Rotation) will not lead to the demise of Caltech's house system. Avery Center's social construction is still in the programming stages.

One Day Only...Friday, March 11

QUARTERDECK OFFICE SYSTEMS, co-founded by a Caltech alumnus, is an industry leader in multitasking memory management & personal efficiency software for DOS-based PC's.



QUARTERDECK will be on campus meeting with Caltech's hottest programmers, software engineers, and development wizards.

MENTOR	BARBER SH 3 Expert Barbe		
	Regular Hair	cut	\$7
	Caltech stud Discount no		
19 S. Mento Pasadena (818) 578–93		Saturday	8 a.m. – 7 p.m. 8 a.m. – 6 p.m. 9 a.m. – 3 p.m.
		$\sim \sim \sim \sim$	
1/	PRICE	ST	UDENT
1/2	PRICE SKI LI	ST FT	UDENT FICKET
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Bridge Without Sam

by Jeff Goldsmith

Goals

Someone once said that one should not try to obtain the best possible result, but instead, to try for the best result possible. Two hands came up the other day in which setting a goal early allowed me to choose a winning option.

Playing IMP pairs in a mixed field, I deal and pick up:

▲3 ♡KQ[84 ◊104 **▲**]10875

Both are vulnerable. I could open this hand $2\heartsuit$ in our style, but I choose not to do so. I pass as does my LHO and partner. RHO opens $1\diamondsuit$, and it is time to set a goal. They can make $4\clubsuit$, almost certainly, but they may or may not bid it on their own. If they do, I want to know if I should save (I'm probably going to). My highest priority should be to try to prevent them from bidding game, though. My options at this point are to bid 2NT or 1NT unusual or to bid some number of hearts. I suspect that regardless of what I bid, LHO will bid the next number of spades. RHO will raise him. So $3\heartsuit$ and 2NT are out because that will drive them to $4\clubsuit$. $4\heartsuit$ might be best; I'll buy it doubled, but I'm not willing to take a -500 just yet. And $4\heartsuit$ could be a disaster. I'm going to bid a boring $1\heartsuit$. I expect them to bid up to $2\clubsuit$; hopefully we can prevent a game try from happening by bidding $3\heartsuit$.

The bidding proceeds as I expect:

Me	LHO	Partner	RHO
Pass	Pass	Pass	1◊
1♡ ?	14	2♡	2♠

Continuing with my plan, I bid 3♡. Momentum carries them to 3♠ and the bidding ends there. Not surprisingly, they make an overtrick. We only gain 2 IMPs, but we have averted a disaster. On the very next board, they are vulnerable and we are not and

I pick up in 4th seat:

▲A2 ♡A874 ◇A1032 **▲**1083

LHO deals and opens $1 \oplus$, partner bids $2\heartsuit$ (weak), and RHO competes to $3\oplus$. What is my goal on this hand? I think I'd most like to defend $5\oplus$ doubled. That'll certainly go down and might get hammered. Barring that, I want to play $4\heartsuit$, which might make. Most of the bids I have now show heart support and let partner back into the auction. Only one bid bars partner, and since I want to be sure that I can play $5\oplus$ doubled, I choose to pick that one, which is $4\heartsuit$. LHO "saves" in $5\oplus$, as hoped and I get to double it. The play goes our way and we net 800 from the carnage. It looks as if $4\heartsuit$ was making, but it wasn't a sure thing.

The Caltech Bridge Club meets every Monday night at 7:15 in Winnett Lounge. Everybody is welcome; call Jeff Goldsmith at x2818 for details.

Monday, March 7, the Bridge Club will host a Sectional Tournament at Clubs. It will be a normal club game, but we award those elusive silver points.

continued from page 4

Loans

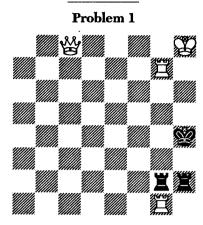
gram regulations will be determined by negotiated rule making between the Department of Education and affected institutions for the 1995–96 school year. Due to time constraints, regulations were issued by the Department of Edusubsidized Stafford Loan Program, the Federal Direct PLUS Loan Program, and the Federal Direct Consolidation Loan Program. It is worth noting that there have been no Stafford Loans at Caltech since 1985–86.

The new program is the result of President Clinton's proposal, passed as the Student Loan Reform Act of 1993. It has been criticized by the lending institutions which originate loans under the current system. They feel that the Department of Education will be unable to administer the program.



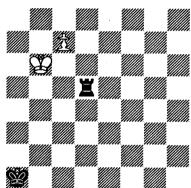
Games and Puzzles: More chess answers

by Wei-Hwa Huang



And the move is Q-QB2. The remaining is left as an exercise.

Problem 3

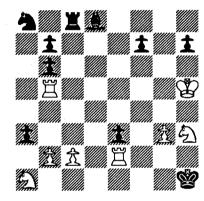


Black must check on Q3; anything else and White either queens the pawn, takes the rook, or perhaps both. After the check, if White moves to the rook file, R–QB3 guarantees black the pawn, and if White moves to the seventh rank, R–Q2 pins and wins the pawn. Of more interest is K–B5. In that case Black does R–Q8, and if White queens the pawn, R–QB8 check actually

gives Black a win! (Of course, if White doesn't queen the pawn, R-QB8 takes the pawn anyway. This means White must keep his King on the knight file, so the only move is K-N5. Black must continue to check, so R-Q5ch. Then K-N4, and the white king and black rook move down their respective files until R-Q6ch. White then does K-B2, and R-Q8 is no longer an option for Black. It look as though queening the pawn is inevitable. But Black has one more trick up his sleeve: R-Q5! This way, if White queens the pawn, R-QB5 check forces QxR stalemate! If you hadn't considered this before, pause here and try to finish the problem.

The correct continuation is P-B8, but promoting to a rook! Now the stalemate option for Black is gone. Although K+R vs. K+R is usually a draw, here White is threatening R-QR8 mate. Black must do R-QR4, and White follows with K-N4, threatening R-B1 mate or a rook capture. Black is now doomed.

"Excelsior!"



White to mate in 5. Sam Loyd, America's "Puzzle King," composed this problem in 1858 and gave the following comment: "It was quite an impromptu to catch old Dennis Julien, the problemist, with. He used to wager that he could analyze and position, so as to tell which piece the principal mate was accomplished with. So I offered to make a problem, which he was to analyze and tell which piece did not give the mate. He at once selected the queen's knight pawn as the most improbable piece, but the solution will show you which of us paid for the dinner."

White almost has a mate in two with R-Q5 or KB5, followed by R-Q1 or KB1 mate. Unfortunately, if White tries this, Black moves R-B4, pinning White's rook and forcing White to move RxR; this is followed by PxP, and White cannot mate Black before he gets a new queen. So White moves P-**ON4**, eliminating Black's chances of getting a queen and making that two-move mate a real threat. If Black does RxP, White does NxR, and Black cannot stop the rook threat. So Black employs the only other option: R-QB4 check. PxR threatens R-N1 mate, so Black must move P-R7 to close that square. White blatantly marches his pawn down to B6, opening up the rook threat again. Black's only way to stop it is B-B2, hoping to block White's rook on B5 next move or on K1 in two moves. Now the rook threat is useless; even though it does work, it leads to a mate in see GAMES, page 11



cation for the 1994–95 school year. At Caltech, direct loans will be available through four programs: the Federal Direct Stafford Loan Program, the Federal Direct Un-

ALT D



Orders to Go

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Cuisine Lunches from \$4.95 Sereved until 4 р.м. Dinners from \$6.95

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Laura Wilson Ravine, Soprano

Dean Elzinga, Bass

Kathlyn Grabenstein, Organist

Friday March 4, 1994 8:00 PM in Caltech's Dabney Lounge

Admission \$5.00

Minutes of the ASCIT BOD meeting, Tuesday, March 1

by David Derkits

Present: BOD, Laura Verhoff, Gavin Claypool, Karen Shih, Asif Hassan, Kevin Kraft, David Simpson, Anil Roopnarine, Betsy Marvit, Karen Bruner, Steven Skovran, Laurent Stadler, π Qan, and Adam Villani.

New Business

• Coffeehouse picks up its check. Page picks up their \$100 second term non-alcoholic money for a movie night.

• Karen Shih presents the Big Tcontract for official approval. Contract approved (8-0-0).

 The BOD discusses its procedure for voting on motions. Motion to default to hand vote for all motions passes (6-2-0)

• CHUG, where did it go last year? Some students are looking into reviving it in some form or another. No details yet.

BOC Bylaws Petition

• Steve Skovran presents the petition to the new BOD. Basically, the petition seeks to amend the bylaws to allow all undergraduates to vote on BOC-related issues. While many on the BOD agree with the intent, concerns are raised that the approach taken in the petition is not the best way to go about the change. There are suggestions that other alternatives should be considered along with this one. Asif offers to draft an alternate proposal, one which would try to separate the BOCrelated bylaws from the ASCIT bylaws. Eric argues that all undergraduates, not just ASCIT members, should decide on how the bylaws are separated, and this would be possible only if the petition was approved beforehand. Others believe that only the ASCIT members can decide on a major change to its bylaws, and after the initial separation, the BOC bylaws could be refined by vote of the

entire undergraduate body. Motion to table discussion on this issue passes (6-2-0).

• The BOD decides to look at and discuss other proposals at the next meeting, on March 8. Anyone who would like to contribute to the discussion may attend. Due to bylaw restrictions, no bylaw amendment can be brought to election this term. However, there is hope that a final version of the amendment can be completed soon.

Athletic Manager

Laura wants to look into the controversy regarding who can be on House athletic lists. The BOD agrees she has the right to convene the Athletic Committee even though no at-large members have been appointed.

Upperclass Director at Large

Someone kicked the copier—no real damage. If there's a problem, don't kick the copier, just go see Penny. By the way, it's O.K. if you open the copier to fix paper jams, but please don't start taking out screws and internal components.

Director for Social Activities

Chris is looking into moving the Formal from the Ath to a cruise ship. Benefits are that it would be less expensive than the Ath; problems center around getting people there and bringing them back. He wants input, so contact Chris Marsh if you have any comments.

Director for Academic Affairs

• The Student-Faculty Conference went well. The dinner on the Olive Walk was a really good idea; we may look into some sort of campus picnic in the future.

• The CLUE review requests are coming out soon.

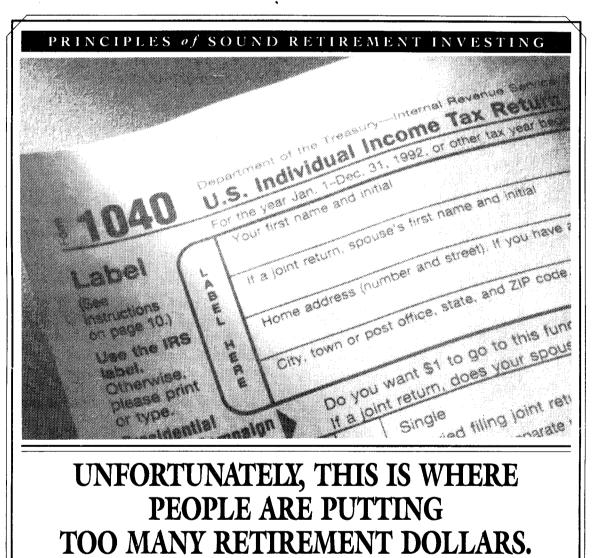
IHC Chairman

The old student phone fund-raising program, which was cancelled last year in favor of a company, is being reintroduced (in a different format) because alumni complained that students had been removed from the process.

Treasurer

Anyone who has a check written by the old BOD should cash it as soon as possible, as the old signatures will expire.

Secretary • There are two new newsgroups: caltech.ascit and caltech.house.ihc.



Very year, a lot of people make a money you don't send to Washington

ASCIT and IHC minutes will be posted there, as will announcements.

 Perhaps there should be an ASCIT Newsletter. This publication would likely include the BOD minutes, announcements, issues before the BOD, and other items of interest to the student body. Concerns about distribution are brought up, and an alternative forum-an "ASCIT Page" in the Tech—is discussed.

 Motion to close the sign-up period for Tech Business Manager passes (8-0-0). Interviews will be held on March 8.

 Sign-ups for the remaining appointed offices will open on March 8 and close on April 6, after spring break. These offices include the Election Chairman, the Movies Chairman, and the rest of the publications offices. The closing date is approved (6-1-1) as an amendment to the original motion to open the sign-ups, which passes (7-1-0).

Vice-President

Chris Bryant plans to have office hours, beginning next term.

President

• Angie's office hours (in the ASCIT Office, SAC 64) for next week are: Tuesday, March 8, 12:30 P.M.-1:30 P.M. and Wednesday-Friday, March 9–11, 11:30 A.M.– 12:30 P.M. Anyone may come to discuss their concerns personally with Angie.

• The BOD agrees to continue holding its meetings in the ASCIT Office. Larger locations had been explored.

 Angle is looking for an Executive Committee Chairman. The chairman heads the Executive Committee, which is responsible for interpreting the bylaws and determining the validity of protests. If you are interested, you should contact Angie. She will make the selection, subject to confirmation by the BOD.

see ASCIT, page 11



L'huge mistake on their taxes. They don't take advantage of tax deferral and wind up sending Uncle Sam money they could be saving for retirement.

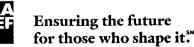
Fortunately, that's a mistake you can easily avoid with TIAA-CREF SRAs. SRAs not only ease your current taxbite, they offer a remarkably easy way to build retirement income-especially for the "extras" that your regular pension and Social Security benefits may not cover. Because your contributions are made in before-tax dollars, you pay less taxes now. And since all earnings on your SRA are tax-deferred as well, the

works even harder for you. Down the road, that can make a dramatic difference in your quality of life.

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Magazine **Coming up in** March Recent grads tell what they gave up for their dream jobs • Experts shatter traditional college myths **Does life imitate art? Those** favoring tougher entertainment regulations think so

- Just how "healthy" are college health care facilities?
- **Reality Bites** screenwriter **Helen Childress on Gen X**

Wrath of fish—a Journalistic Peano Curve

by Laurent Stadler

Early Tuesday morning the fish god, Sushicleas, was angered by the riotous celebration of National Kidney month by a group of high priests of Nephronite, God of Kidneys. According to reports by an undergraduate crustacean who wishes not to be identified, Sushicleas spent the morning brooding and plotting revenge. By mid-afternoon, the deity had decided to wreak his vengeance by showering the campus of the California Institute of Technology and surrounding area with fish, both vertebrate and spineless. The Los Angeles county sheriff's department reported that the first fish sighting, as well as the first fish injury was attributed to a Ms. Esmerelda McClees, 34, of San Marino. Ms. McClees was admitted to Huntington Memorial Hospital for carbon monoxide inhalation, believed to be caused by a malfunction of her station wagon's emmision system caused by a stray soft shell crab entering her exhaust pipe. She is now in good condition and released the statement, "Well, at least it was fresh!" to the local news media.

By 3:00 P.M. the fish storm was raging and I was woken up by the sound of fish pounding on the window of my room. Both as Dabney Hovse Crustacean Rep and as Tech Natural Disaster Reporter, I felt that I should either join Clinton's national service corps or grab the

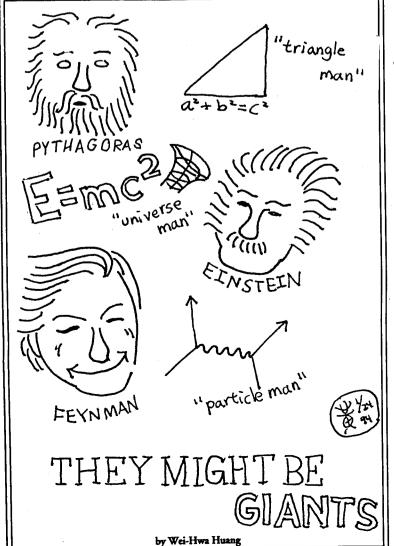
Since I've had bad experiences with spoiled meat and ineffective medicine, I grabbed a sledgehammer from the studentshop, A BoC rep and a bike chain to be safe, and went over to the ASCIT van person's door and knocked it down. After grabbing the keys, I got Rich and we called The Dean to see if we could take the van out into a natural disaster. He said,"What the hell! Go for three. And we'll subsidize it! We've got a little extra money in the budget.". "Huh?", I replied. He clarified his previous comment by stating, "Now I have a Ph.D.: and the 'P' is for Party!" Taking this as a yes, we ran to our rooms, grabbed some warm clothes and Shandy then bolted to the van. Rich revved it up and it started humming like a hot rod momma with 'lectric cello in the engine block. Like penguins in heat, we raced to the 210 freeway, got on the freeway and suddenly realized that we were a scant half-hour away from the printing deadline and still had major white space to fill. Plot and style went out the window and were immediately picked up by Bette Midler who yelled somthing at us about Woodsy the Owl. Again we had come to a node in our decision tree, we could either go to Far Fosters or we could take the path of the Nothing fill the rest of the space with cheap shots at administrators. Or we could end this right now with a large whale having completely run out of time.

van and find the source of the fish.

Proto Matter

by Homer Hyungwaring

Dont let them stop me the goventment i mean theyre really out to get my brain and purify it its dirty you know but they wont be able to tap it not with my pancreas on the job anyway theyve known about aliens since 1923 when the brillo pad was first invented thats what line 3b means on the 1040ez thats communist you know ez is russian for alien subversion or perversion not in my car they dont.



the inside world



The completion of the Holliston parking structure caused an unplanned gateway to hell in its sub-basement. The demon pictured here was enraged to find that all of the spots had already been reserved for faculty members.

February 20Anti-Necrotic sentimentBOCon the rise nationwideby Irvmore Cdeadfully with their living n

Minutes

by Danny Millward

Present: The Board, a myserious horse-like creature

Meeting conviened at 8pm, in the secret BOC meeting area deep beneath Beckman BB labs.

Minutes of the last meeting are destroyed.

A hypothetical case was brought up my provide the intercompucase of the intercompucase of the intercompucase of the intercompucase of the intercompubreaking the intercompovided that the rat was dropped from the roof of intercompowards. Intercompowards was thrown bodily from the room for being a antiper and not actually entropy.

A bike chain was brought into the room by **Depart Manual**, who proceeded to flay the skin from an see BOC Minutes, page 13

"We've kept Grandpa in our basement for several years, and, until now, there had been no problems," said Harold Gilmour, whose home was recently vandalized by a gang of anti-Necrotic skinheads. "This used to be a nice, peaceful neighborhood to be dead in, but now we feel that the amount of prejudice here is beginning to endanger us, so we plan to move someplace more tolerant."

The Gilmours aren't the only ones whose late relatives have been threatened with destruction. All across the nation, the existentially challenged meet with bigotry and oppression whenever they try to rot peacefully with their living neighbors. According to Dr. Mort S. Rigor, throughout history, postcorporeal individuals have met with universal oppresion, as can be seen in the appallingly common slang terms used to describe these people, such as "stiffs", "zombies", and "the departed". "Just because a person has died doesn't mean that they are somehow inferior," remarks Rigor. "I recently read an article in a national magazine, which claimed that the unliving are genetically inferior to the living, and that it is this genetic inferiority which has led to their oppressed state. This has to be the most blatantly lifist assertion I've ever heard."

see ANTI-NECROTISM, page 13



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DabniCorp will be on campus today from 1:30–4:45. Bring your résumé and find out about the future you could have with the Corporation.

Come hear the fluid tunes of Stale Urine at noon today at the Royal Albert Hall of London. Watch as Blind Lime Benedetti, Mike "Boston Boy Lizard" Radford, B.B. DuPuis, the Rev. Kurt Revis, and Howlin' Dog Villani tear the roof off the sucker with such powerful songs as "The Lobster", "The Wax Man", "Angels Soaring Past (I Realize it Now)", and "Horse in a Smelter". This historic performance is brought to you by the Caltech Y.

Ricketts House

Hi. This is my first Inside World, so please be gentle. Still, there's been a real dearth of IW's from Ricketts House, and I figure, "Hey! I've got lot's of free time! Surely I can come up with something at least vaguely amusing, right?" Then I ponder things a bit more, and think, "Well, no, not really." Oh well, lame though I may be, I'm at least going to give it a shot.

Hmm...An actual idea is creeping its way into my little brain. What an odd sensation.

So, even though I'm still here, and not packing my bags to leave anytime soon, I'd like to present a thinly vieled attempt at humor, namely:

The Will Keith Would Leave If He Flamed Again

- I, Keith Counsell, being of moderately sound body (meaning, legally, that I'm not dead) and moreor-less sound mind (no comment), do hereby leave the following people the following stuff:
- 1. Toby-Strawberries and a life-sized crucifix.
- 2. Sarah—Hair from Krypton that can't be cut except with little fragments from the spaceship that the baby Superman crashed to Earth in.
- 3. Scott B.—Microsloth Windoze to play Minesweeper on, day and night.
- 4. Kevin B.—A watch that's 20 minutes fast, a week without me pacing before dinner, and a clean library which I was somehow involved with.
- 5. Ward—The SuperWheelchair from Hell, complete with nitrous-oxide injection and racing stripes.
- 6. JJ—A large chicken (not named Boo) to eat in Matias's dreams.
- 7. Clarkus Maximus Imperator Rex-A shorter name, someone who actualy remembers how to keep his mind in the gutter, and all of the Jewel Box high scores.
- 8. Frances—Bandaids, chocolate, Kool Aid, and heavy metal.
- 9. Kai Wai—People who know how to find the car when they give her a ride.
- 10. Art-Country music. Lots of it. And loud, too. 39. Rebekah-Mazel with springs on all four of his 59. Penny-Lions and tigers and photo-

Also lots of small children.

- 11. Yani-#include <random item.h>.
- 12. Jenny—Strange messages on the whiteboard.
- 13. Keith-That's me. I'd like to take this opportunity to apologize to all the people I'm going to miss in this. I'd also like to apologize to all the people I'm including in this.
- 14. Uri-Beer. We'll always have Paris.
- 15. Scott D.—Long hair and MS-DOS.
- 16. Anne—Rhubarb,
- 17. Fred—Some nice fuzzy physics problems to keep him occupied.
- 18. Dan E.—Rock music. Lots of it. And loud, too.
- 19. Matias—More roompicks. But the microwave 4 in Cherry works!
- 20. Jarah—A movie where the Nazis play the good-guys, as opposed to the evil bastards they really were.
- 21. Tad—A golf course that isn't flooded half of the time.
- 22. Edray-Someone who doesn't wake them up to say "You have a phone call."
- 23. David H.—Musicals until his head exploads.
- 24. Jason H.—A stack he doesn't know is coming, a chainsaw, an apple, a bowling ball, a knife, and a burning bean bag.
- 25. You know, this list looked a lot shorter when I started.
- 26. Myke—Lots of artistic stuff.
- 27. Wei-Hwa—An unsolvable puzzle, and the Warner Brothers (and the Warner sister, too).
- 28. Andrew H.—A free trip to the Naval Academy. I hear the weather has been lovely out there lately.
- 29. Roman—A moped.
- 30. I mean, a LOT shorter.
- 31. Neil—The Dave Perlman look-alike prize.
- 32. Royden—Anime in the morning, anime in the afternoon, anime in the night, anime all day long.
- 33. Sham—Guess. Personally, I think it's obvious.
- 34. Mihoko—Flightless waterfowl.
- 35. Tom—Something really tall, with appropriately placed handholds.
- 36. Thinh—The correct items at dinner.
- 37. Leslie—The new and improved Melo! Slim, trim, friendly, and purple.
- 38. Erika—I really wish I could come up with something funny. I dunno. A nice day?

THE INSIDE WORLD

feet, so he can jump up on her couch.

- 40. Johanna-Cute undecapitated teddy bears.
- 41. Kevin N.—More chemistry than he can shake a stick at.
- 42. Pauline—LOOOOOOOOPS!!! Or maybe just the straw.
- 43. Scott N.—A faster hard drive, and a nap.
- 44. Jane—A Ford F150 with mag wheels and
 - California emissions! All yours, but only if you win the "Price

Ι

S

46. Dave P.—A

real stereo.

400 Wins: P Right" 5 Cecita-Where's Snake again?Oh well. room oncampus.



- 47. Krista—More After Harhats, chocolate, accomtinsel, and birththe nish. plished feat, PHS Athday stuff.
- letic Director 48. Peo—Linux and Mike Hayden announced it to foursquare.
- the crowd and 49. Jed—Four more Harnish given a standyears as CCO rep, and ing ovation. A concrete chips in his poem hair from crawling around in hyperspace.
- 50. feel old.
- 51. Not really.
- 52. Jim Q.—Checkered pants mark. so he can play golf like a pro.
- 53. Priya—A large stuffed fish named Bob.
- 54. Gisela—A tolerance for alcohol. Old joke? Yes. Funny? No.
- 55. Roto-Roto.
- 56. Heather—The ability to sleep in. 57. Marco-Wouldn't want to ruin the would suprise, now we?
- ball at the time bunch of good Gardner. The bench and rel Muahhaahahahahaaha-hahahaah. Harnish 8 58. Jim S.—Three hamburgers, three glasses of red stuff, and fries.

In this week's edition of The Inside World, the editors take print journalism into an uncharted realm-the world of jazz. Never has America's native art form been expressed in such a foreign way, or to such an effect. From the sax of John Coltraine to the keyboards of Kenny Kirkland to the guitar of Linty Murrell, all of jazz is represented here, expressed in the inimicable voices of this week's authors. The Inside World has not been coming out on a regular basis this term, continuing a sporadic publication schedule that began in the spring of 1992. This schedule is controlled solely by the number of submissions-if you submit, it will be published. There will be a new editorial team by the next Inside World, so we can promise nothing about the IW's new content and flavor. But rest assured that $i \dagger$ will still be cool.

Policy

All Inside Worlds must include the author's name. Inside Worlds can only be written by current underThis week's *Inside World* was written by:

in order of appearance



in his honor also was presente Harnish becomes only the volleyball coach in West

- school history to t
- Former Parkersbi coach Pat Hardin was Harnish has accomplishe high 12 seasons, making hir
 - to reach the milestone. When Harnish 100 years ago, he was ju
 - waiting on a baskel waiting on a baskel open. He had know coaching the spr Harnish recaller "I remember didn't know any

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	Ricketts	1	0	- , 1
5 2 2 2 2 2 2 2	Ruddock	0	0	
	ត្ ទ			

copiers, oh my!

60. Jesse-Really expensive shoe.

- 61. David S.—JezzBalls that just can't be stopped.
- 62. Patrick—A two ton heavy thing. Haven't I used

thisone before?

wledge, using several learned from Gardner

ally important to coach

entals. He learned a lot

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And he from the picked up ideas from the picked and

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hish has compiled a record of

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BUILS Class AAA slate champer Ship. He has coached three other

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each owns three wins.

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rnd ucleated in last year s state une game — six times this season and each owne three wine

leams have won the

63. Zeus—Arrows shaped like lightning bolts.

64. Phil—Flaming carrots.

65. I think I should meet more of the frosh.

66. Kevin T.—EE? Heeheehee. 67. Yes, I know this is getting lamer as I go.

68. Dirk—A Doom-(verboten!)style goo-o-matic.

69. Andrew T.—AMa95 in all of its stunning beauty.

70. Brian—Horsepower.

71. Ted—Real classes next term, as baseball players must now take an additional 9,406,137 units to 33 winning percentage. His last graduate. West e leans have won un prost ginia Class AAA state champi-

72. Adam—Senior photos years in advance. This season, PHS has compiled a

73. Jamie—What-This season, rns has complexe a record of 25-3, including a thetic. nark in the Mountain State Athletic ever it is, it'll be mark in the MUMIKam Share Autour Conference. The Big Reds have met archerival Ratheureville - the team conference. The Big Keas nave met arch-rival Barboursville — the team BUE defeated in last means a state title wild. arcn-rival Barboursville — the leam arch-rival Barboursville — the leam PHS defeated in last year's state title pame — eix times this season and

74. Wart-Compromising picwill uwills unree wills. The Big Reds play at Patkersburg outh Thursday in a best three-cuittures of Barney LINE DIK ACUS VIAY OL & ALANAVISCUB South Thursday in a best three-out-of five motch and Depeche Mode fornicating on the White House lawn. 75. Jason W . – Moonies to talk reday (JV 6 P. to. 76. Micky—

> Paid housebills. 77. Lyndie—A truly talented parrot that knows how to say "Yak

78. Xeno—A last name. Maybe some beer.

HS at South

- 79. Richard—That TRS-80 he's been lusting after. Wait, that's not right! I meant of course, an Apple][e.
- 80. Simon-Lounge wars that actually give him a chance to exercise his karate skills.
- 81. Saiful—Edible food from TFM.
- 82. So by rights, I should be done. But noooooooo,

B-C House

Ahh, yes. "Back in the old days", the story begins, there were cool inside worlds, and they were written by flems. And they were Attitude. And they were Funny. And now they are No More.

Until now! Now there is the reconstituted Top Ten fleming list, which, just like reconstituted orange juice, is Not the Real Thing. I'm not even a flem! Any more, that is. Which might give you a hint of the flavor of words to come:

Top Ten Reasons Why Fleming is the House for You*:

(not necessarily in this order)

10) It's polite

The hall phones always get answered. Bare-footed people do not get haggled. Flems are not proud of how the Fleming waiters used to break glass in the south-house kitchen in front of Darb waiters. Waiters are so understanding when, for one night, you don't want to get floated.

9) It's considerate

Sure someone beheaded my sunflowers with a frisbee while I was watching and did not apologize, and sure someone else stacked my bricks up in the courtyard to make the Eiffel tower, and sure someone else threw oranges at the structure to knock it down while others practiced karate kicks to the base, but "they're only plants", and "I only broke like ten of them." And besides, boys will be boys, you know?

8) It's athletic

Yeah, they just felt sorry for Dabney, and it was their good heart that forced them to let Dabney win the Disco trophy from them. And who wants to be in a house where people play sports for fun, anyway? You want to be in Fleming because there they play to win. And they have The World's Greatest Athelete.

7) It's liberal

Well, the rumors got around that I left the Ath Team because of its unforgiving drug policy, but everyone knows that flems don't use drugs . . .

estimate that there was upwards of 80% of the oncampus flem guys whom I never saw in just boxer shorts, and almost 90% whose buttocks or genitals were not shown to me with others around (though the mooning that occurred at dinner might make up for that 90%).

5) It's female-friendly

Ahh, what a place to blossom as a young woman! It teaches you the real, feminist meanings behind such things as the gang-bang song (it's really about wanting to hang out in a gang), the office of House Bike (it's not what you think "because everybody gets a ride" means), and "Where Men are Men, Giants Roam the Earth, and the Thundering Herd is Real". Female flems? They're really guys in disguisethat's the way to interact with them.

4) It's tolerant

Hell, I wore my CLU shirt there a few weeks ago and didn't get beat up! And only three of the many gaypositive things I had posted on my door and in the hall last term ever got defaced or torn down! And this year they even ommitted to put "no same sex couples allowed" on their Wine and Candlelight sign-ups! But it's so tolerant because there are no gay flems. Yahuh.

3) It stimulates creativity

Uh. Yeah. We had beer and baseball last week, beer and broomball the week before, beer and basketball the week before that, so let's have a barbeque this week. And beer.

2) It has a receptive excomm, and change is quick

Like any strong, backward country, the old government chooses the new; those burdensome democratic processes like house meetings are guaranteed to last under 5 minutes; and the plebians are wisely kept from being told what goes on in big, bad excomm meetings.

1) It has complex, rejuvenant symbols and traditions

The cannon! The color red! What more could you ask for!

I forgot the off- campus people. 83. Gypsy—People who know where the Y is. 84. Karen-A share in Lyndie's new bird. 85. Michelle C.—Sonic CXIV 86. Travis—A blimp he can blow up. 88. Dan D.-TACIT.

87. Rob-Morning classes from here to eternity.

89. Brendan-Work that's due at the end of the week, as opposed to Monday, Tuesday, and Wednesday.

90. Chris—A narrower range of musical tastes, so he doesn't have to spend quite as much time/ money keeping current in everything.

91. Elef—Some really HOT outfit for Apache. Maybe I'd better rethink this one. 92. Cedric-Madonna, gift wrapped.

93. Jake—A bright orange cast for the next time he breaks something.

94. Rachel-All the barbequed roaches she can handle.

95. Liz-See Radhika.

6) It has modesty

Gosh, looking back at my time in Fleming, I would

* I must warn you that there are exceptions to these stereotypes, so think carefully before you rush to join the proud, strong ranks of Flems!

96. Alicia—OK, so I should get to know the upperclassmen better, too.

97. Dori—Absolut.

98. Sacha—Someone who says something besides "Hello, Ms. Malin."

98. Mike—Gwar.

100. Anthony-More interesting places to get pierced.

101. Dinner is taking too long. 102. Brien-Beer.

103. Radhika-See Michele W. 104. Aaron-Why is he here? He's my next-door neighbor! Call it a quieter neighbor, then.

105. Scott T.—Something interesting, I'm sure. 106. Sean—A chance to play Broooooomball while rollerblading. 107. Josh-Remember what I said about getting to know upperclassmen?

108. Michele W.—See Liz.

109. Joanne- It was a dark and stormy night... 110. The end.

---Keith "It's all my fault" Counsell

This is like page) Kim Lambard's A Day In The Life: Sonny Arcilla 1994

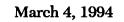
1990

Business Manager for the *Tech* (aka Money Chowcilla). [excerpted from The California Tech, June 8, 1990]

Gets up Bathes Puts on suit and "power tie" Eats Breakfast Doesn't wash dishes Looks through ASCIT Bylaws for more ways to squeak out cash Wakes roommates with Paula Abdul CD Leaves quickly Goes to 20 hour/week job at JPL **Plays Tetris** Skips Class Goes back to apt Makes lunch Eats lunch Doesn't wash dishes Checks calendar for appointments Checks for phone messages Doesn't return phone calls Goes to class Plans presentation for meeting tonight Picks up assignment Asks prof. for extension Goes to Tech office Checks phone messages Returns calls for ads Tries to sell ads Does ad layout of paper Yells at editors Meets Dean about money for Tech typesetter Asks him for money Goes back to apartment Cooks dinner Eats dinner Doesn't wash dishes Goes out Buys new speakers, new CD Goes to meeting Makes presentation Asks for money Threatens hecklers Goes back to apartment Sets up new speakers Calls up girl friend Soothes shattered ego with loud music from new CD Greets newly awakened roommates Discusses with roommates Adjusts volume **Applies bandages** Drafts budget proposal Plans fund raising Checks tomorrows calendar Gets books out for homework Late snack Doesn't wash dishes Brushes teeth Put books back up Goes to bed.

Situation: Sonny is a sophomore living off campus. He works as Situation: Sonny is a super super senior living on campus in Fleming. He suffers under a chronic delusion he will graduate this year. [Updated for today's "changing" Sonny]

> Gets up Showers Puts on sweats and "power boots" Eats Breakfast Doesn't wash dishes Looks through California Civil Code for more ways to squeak out cash Wakes alleymates with Gloria Estefan CD Leaves quickly (music still playing) Wakes up Kim, chats Reads "Stereo Equipment" magazine Skips Class Goes back to room Watches movie on new TV Eats lunch Doesn't wash dishes Checks computer for appointments Checks for phone messages Doesn't return phone calls Goes to class Plans to register (for THIS term) Picks up (past-due) assignment(s) Asks prof. for extension Skips interviews (in order to make up his resume) Goes to CDC to sign-up for more Checks mail, opens bills Doesn't pay Calls up Credit Agencies Yells at creditors Does Financial Aid Form (for this YEAR) Wakes up Kim, asks for credit card Goes back to room Watches movie on new TV Goes to dinner, eats Complains people use his dishes without washing them Goes out Buys new center channel, new CD Considers upgrade to a larger TV Goes to Blockbuster/Tower/etc. **Returns** movie Rents more movies with credit card Goes back to room Arranges speakers, sets up center channel Calls up "Infatuation o' the week" Soothes shattered ego with loud music from new CD Greets newly awakened person X Discusses with person X Watches movie of person X's choice on new TV Wakes up Kim, returns credit card Drafts new lawsuit **Reviews outstanding lawsuits** Checks computer calendar Gets books out for homework Late night pancakes Doesn't wash dishes Brushes teeth Put books back up Goes to bed. The more things change, the more they stay the same . . .



sp⊛rts

ALTECH CA

Caltech track crushes opposition

by Some Guy

The Caltech women are now 6-0 after a stunning victory over Whittier and Fresno Pacific Universities at last week's Caltech Invitational. The final score was Caltech 181, Whittier 169, and Fresno Pacific 56. Impressive individual performances were turned in by Amy Oldenberg, Rebekah Mills, Gretchen Larson, and Cailin Henderson. Oldenberg won the javelin, discus, and 100 meter hurdles, while Mills took the 200 meters with a time of 29.55, and the shot put with a P.R. performance of 32 feet, 1.5 inches. Larson competed in all of the jumping

events once again, winning the triple jump with a massive P.R. of 32 feet, 11 inches. Cailin Henderson, the long distance machine, came second in the 800 and 1500 meter events against a strong field of Whittier athletes.

The men's team also crushed Whittier and Fresno Pacific: the final score was Caltech 256, Whittier 144, and Fresno Pacific 54. Perhaps this victory was initially sparked by Ben Hogan's win in the pole vault, with a vault of 10 feet, 6 inches. Matt Metz led the scoring for the Beavers and was named athlete of the meet, winning the 110 meter high hurdles, 400 meter intermediate hurdles,

and javelin; he also contributed to a first place finish in the 1600 meter relay. Ned Bowden also had a good day, winning the 800 m in 1:59.88 and the 1500 m in 4:10.45. Steve Greenberg was the team "workhorse" competing in six events and finishing second in the long jump, triple jump, and 200 meters. Other noteworthy performances include Karl Thulin's second place finishes in the shot put and discus, Andy Zug's second place finish in the 5000 meters, and Matt Goff's second place finish in the high jump.

Next week, the track team will face the more competitive teams of Occidental, Redlands, and Laverne at the CIT SCIAC dual meet.

The final word on basketball Caltech goes to

by Bryce H. Elliott

I've been writing these articles all year in the third person, but since this is the last basketball article I ever expect to write for the Tech, the format will be a bit different. We played our last basketball game against the Claremont-Mudd Stags, and didn't get the SCIAC victory we had been searching for. I wanted it so bad I could taste it, but I don't feel mad or upset. I feel hollow, like there will always be a gap in my life where there ought to be a SCIAC win. I

only ever really wanted one. To all the guys I ever played ball

with: I'll never forget any of you, especially John and Bug, who were at the first basketball meeting when we were frosh, on the court with me when the buzzer sounded that ended our Caltech basketball careers, and everywhere in between. To Coach Victor: Thanks for your dedication, discipline, support and love. To the teams that come after me: I hope you can achieve what we never did; never stop working toward victory.

bridge nationals

by Jeff Goldsmith

For the fifth time in six years, Caltech won the Intercollegiate Regional bridge tournament and advanced to the national finals. This year's nationals are in Memphis in May. The team of Bobby Bodenheimer, Brian McAllister, Curt Hastings, and Jeff Rawlings squeaked out a narrow victory over Stanford, who were second in the country last year. A second Caltech team, led by Xiaodong Fang, clobbered Stanford, and though they finished fourth, demonstrated that they were not to be taken lightly.

Matt Metz wins the 110 m high hurdles in 16.76 seconds on the way to scoring 33 dual meet points in last week's Caltech Invitational.

Boffo Broomball XIV 12:30-12:45

by Sam Webb

Yep, it's finally here . . . the moment you've all been waiting for. Once again, Boffo Bonecrusher XIV returns to the Pasadena Ice Skating Center. This term they'll be two, count 'em, two packed nights of broomball action, on Friday and Saturday. The games will start at 12:30 A.M. each night and will go on to the wee hours of the morning. As always, if you're not playing, you can show up and watch the carnage. This term, as always, we have a very limitted amount of time, so show up promptly! If you notice below, we've had to shorten the games to fifteen minutes so we can actually have a final round. (We've been scrunched between hockeyplayers and little figure skaters.) The finals however, will remain twenty minutes. The teams which advance to the finals will be determined by win/loss record and goal differential. Show up and have a great time.

Friday Schedule

- 1 Ice Weasels
- 2 Munth
- 3 Lloyd Frosh

1:30-1:45 1 vs. 7 1:50 - 2:055 vs. 2 2:10-2:25 4 vs. 1 2:30-2:45 6 vs. 3 Finals 2:50-3:10 3:15-3:35 3:40-4:00

7 vs. 5

3 vs. 4

2 vs. 6

Saturday Schedule

Blacker Team 1

12:50-1:05

1:10-1:25

- 2 Backstabbers 3
 - Plaid Thunder Penguins Team Seiya
- 5
- Larger Than a Truck Thundering Herd 6
- Aero 7
- Tim's Team 8

12:30-12:45	7 vs. 1
12:50 - 1:05	8 vs. 3
1:10-1:25	2 vs. 4
1:30-1:45	6 vs. 5
1:50-2:05	4 vs. 7
2:10-2:25	1 vs. 8
2:30-2:45	5 vs. 2
2:50-3:05	3 vs. 6

Finals



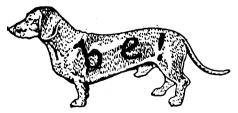
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4	Rudd Hyperfrosh	3:15-3:35
5	Damn Scurves	3:40-4:00
6	The Meat Council	4:10-4:35
_		

7 Violent Femmes





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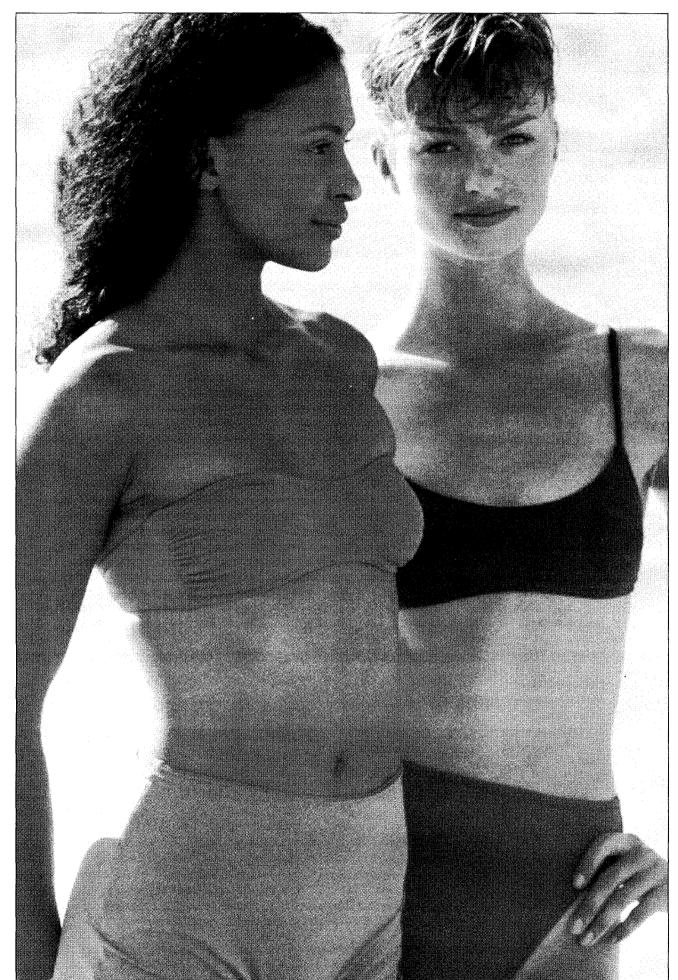
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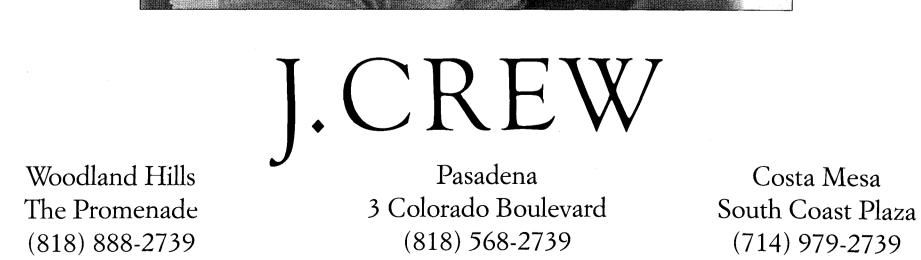
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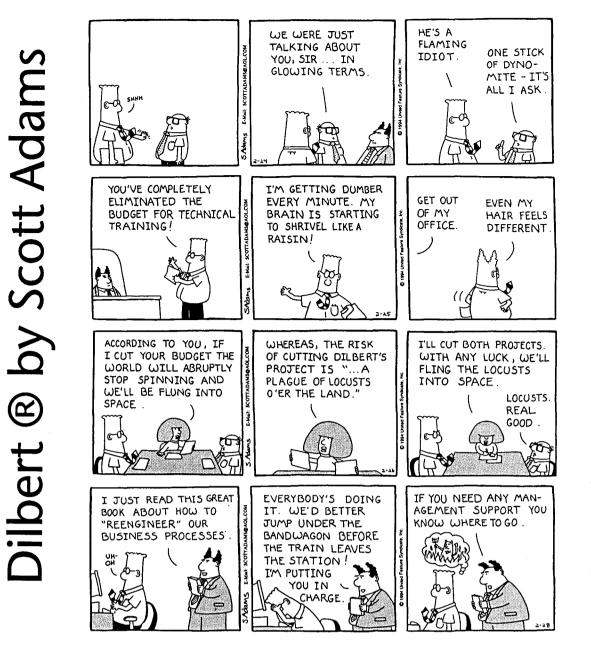
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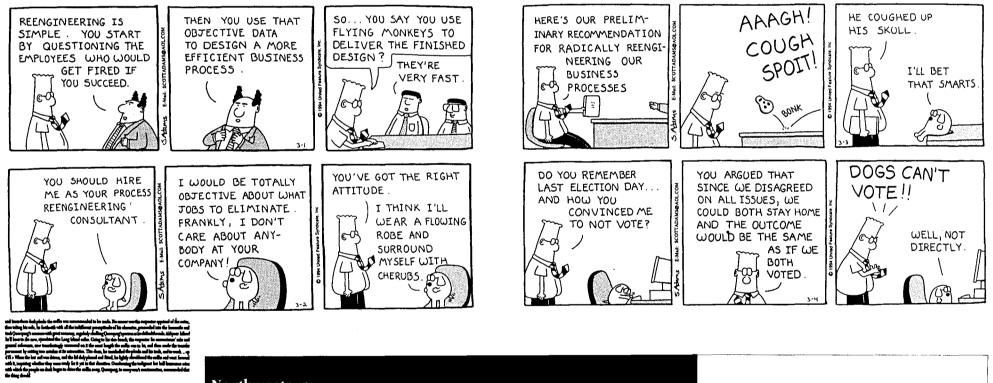


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Pizza	Nobel prize
Sandwiches	Best and worst class
Thai	Best and worst classroom
Shopping—the best: Grocery store	Best college to recruit no Caltech administrators from
Music store	Nicest on-campus building (chitecture)
Entertainment—the best and worst:	Best and worst toilet
Doctor	Other
Local band	Best pickup line
Movie Theater	Best/worst font

This is your last chance to vote in this year's survey. Send your opinions to us by e-mail to editors@tech or by mail to 40-58 SAC. Please vote only once in each category.



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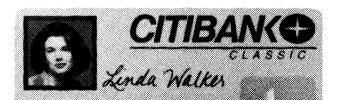


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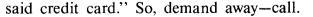
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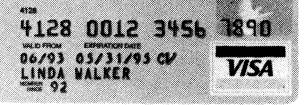
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and needs, while reducing the Risk Factor in respect to limited and often scarce resources--with the greatest supply of services and savings possible--then students will demand





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continued from page 1 ervan Action

work from his laboratories has demonstrated that nearly quantitative reactions are possible using strictly chemical methods on single atoms at a single site within 15 million base pairs of DNA.

Dervan, a native of Boston, received his bachelor's degree from Boston College in 1967, and earned his doctorate from Yale University in 1972. After a year as a postdoctoral fellow at Stanford, he joined the Caltech faculty in 1973. At Caltech Dervan has received such scientific honors as the Harrison Howe Award, the Arthur C. Cope Award, and the Willard Gibbs Medal. He is a member of the National Academy of Sciences and a fellow of the American Academy of Arts and Sciences.



continued from page 5 ames

six, not in five. White does PxP, and Black realizes horribly that the last bishop move has sealed off the knight from moving, rendering Black helpless against PxN (B or Q) mate.

The "Excelsior theme" is now known as that of a pawn marching

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down from its starting square down to the last rank, promoting, and administering mate. As a further comment, there is outstanding a "Double Knight Excelsior Helpmate" challenge, which to my knowledge is still unsolved and has a \$100 prize attached to it. I will describe the problem on request, but as it is, we'll leave chess for a while.

continued from page 6 ASCIT

• There will be a club survey for all undergraduates to complete, probably at registration for third term. The exact content will be determined over the next few weeks. The results of the survey will be used in the Budget Meeting, which is tentatively set for April 10, 1994.



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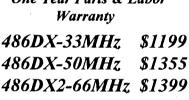
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* Note: asterisks denote new announcements.

Notices

* Caltech Golfing Club—Due to an almost complete lack of activity in the Caltech Golfing Club, it went into hibernation at the end of the last school year. Since we received plenty of funding from the GSC, we are obliged to attempt a restart. Last year, we were very unsuccessful at organizing events that fit the schedules of our membership. Thus, we will be setting up a "ladder," where people can play other members at times of their own choosing. If you are interested in joining the Golfing Club or if you want more information, please contact Bob Blake at mail code 127–72, x6576, or reb@puck. If there is enough interest, a meeting will be scheduled.

* TACIT Auditions—for "The Watched Pot", a comedy by H.H. Munro (Saki). The auditions will be held this Saturday and Sunday from 1–6 in Winnett room 1. The production will be directed by Todd Brun, and will premiere the last two weekends in April.

Senior Messages This year, students can submit messages to members of the senior class in the *Big T*. These messages will appear in pages at the end of the senior section. If you would like to submit a message, you can sign up March 2–4 from 12– 1 P.M. by the student mailboxes. Forms will also be available in the houses. Messages cost \$3 per line for a line of up to 32 characters.

Events & Services

* A Blues and Folk Concert—The Organization for Women at Caltech, in association with the Y and OPE, take great pride in bringing singer/ songwriter Judith Gorman back to Caltech for a performance Thursday, March 10, at 7 P.M. in Dabney Lounge. The performance is free. Pete Seeger thinks very highly of Ms. Gorman, but then again, Pete's generally a pretty positive guy. Draw your own conclusions.

Glee Club Concert—The Caltech Men's and Women's Glee Clubs will present motets, chansons, and Faure's "Requiem" March 4 at 8 P.M. Tickets are \$5.00 and are available from the Ticket Office.

Caltech Velo—The Caltech Bicycle Club meets every Thursday at noon in Red Door Café. The club organizes all types of rides, both road and offroad rides, for all skill levels, from novice to advanced, including collegiate racing. All cyclists are welcome. We lead the following weekly rides, all meet in front of Winnett Lounge:

Monday 8:00 A.M. 25 miles, moderate pace Tuesday 12:00 P.M. 10–15 miles, easy pace Wednesday 2:00 P.M. Off road ride Also other harder rides not listed.

Please contact the club in advance to double check the time of the ride. We also lead other rides which are not listed. For more information, contact Michael Kantner at x4882 or e-mail to cycling@cco.caltech.edu.

Events and Notices

Gay/Lesbian/Bisexual support group meets the first and third Tuesdays of each month at 7:30 P.M. in the Health Center Lounge. This confidential meeting is open to all Caltech community members looking for a supportive context in which to address questions and concerns about sexual orientation. Refreshments are served. For more information, call 395–8331.

A women spsychotherapy group for graduate and undergraduate students will be meeting weekly on Tuesdays from 12–1:30 P.M. at the Counseling Center beginning mid-March. The group will examine a range of issues releivant to women's lives and experiences. For more information of to schedule a pre-group interview, call the Counseling Center at (818) 395–8331.

Caltech Alpine Club "Sit and Chat"—Bring a sack lunch to the patio outside the north end of Keck Laboratory on Wednesdays from 12 to 1. Talk about mountains, the weather, and outings, past and future.

Friday Prayer—Prayers organized by Caltech Muslim Students are held in the Caltech Y lounge at 12:15 P.M. every Friday.

Mass—Catholic campus life includes Mass on Sundayat 10 A.M. (Winnett Lounge) and on Thursday at 8:15 A.M. (Y Lounge), Rosary at 11:15 A.M. daily in Winnett 1A, and various spiritual development groups and study circles. For more information contact Fr. Brian Wilson at x6212.

Bible Study and Discussion—Every Wednesday at noon in the Y lounge. Bring your own lunch. For more information call Mike Gerfen at x4886.

OpenLine—A group made up of students, staff, and faculty from many different departments on campus, and from a variety of ethnic and cultural backgrounds. We are both an action group and a discussion group. Our agenda is very flexible and is solely determined by what people in the group suggest. Drop by any meeting and say hellol We meet from noon to 1 P.M. on Tuesdays in the Y Lounge (2nd floor Winnett, feel free to bring your lunch!). Remember, we *always* welcome new people, at any time of the year. Hope to see sometime! For more information contact Gary Mines at x6542 (gam@xhmeia.caltech.edu).

Caltech SEDS (Students for the Exploration and Development of Space) meets every Sunday evening at 9 P.M. in 107 Downs to discuss and plan for its \$4 million satellite proposal. Help is needed from undergraduate and graduate students, and advising is needed from research fellows, faculty and staff. Experience with space hardware or with the specific experimental subsystems (gammaray astrophysics and atmospheric chemistry) is not necessary. All members of the Caltech and JPL community welcome. Contact Ben McCall at x2902 or bjmccall@cco. Baby Furniture Pool—The Caltech Service League loans out baby furniture to students and postdocs on Wednesday at 324 S. Chester from 10 to 11 A.M. For more information call 952–1631.

Israeli Folk Dancing—Sundays in Winnett lounge. Beginning instruction starts at 7:30 P.M., intermediate at 8:00 and open dancing goes on from 8:30 to 10:30. For information call Nancy Macmillan at 795–3655. Admission is \$2.00.

*** Ballroom Dancing Class**—Thursdays in Dabney Hall, beginning at 6:30. The classes are free. No partner or experience is required. For more information, contact Sharon Kadar, x6971, sharon@seismo.gps.

Scottish Country Dancing—On Wednesdays in Dabney Lounge from 8 until 10 P.M. Beginners are welcome and no partners are needed. For more information call David Hills at 354–8741.

Music with James Boyk—Pianist James Boyk gives a performance each Wednesday from 4:30 to 6 P.M. in Dabney Lounge. The performance is open to the public and free of charge. Feel free to come late or just skulk. For more information call x6353.

Open House—The office of International Student Programs (ISP) would like to invite international students, scholars, and the Caltech community to coffee, tea, and conversation every Wednesday from 4–6 P.M. Take a break and relax with friends at ISP (Lloyd House on the Olive Walk).

Lectures & Seminars

* Practical Safety in A Research Environment—A presentation for non-technical personnel, Friday, March 11 at noon in Winnett Lounge. Topics will include acid accidents, lasers, radioactive materials, and other exciting dangers. Presented by the Safety Office and the Organization for Women at Caltech.

John Stachel, from the Office of History and Technology at U.C. Berkeley, will give a lecture entitled **Out of India: Bose and Einstein** in the Judy Library on Friday, March 11 at 2:00 P.M. Refreshments will be served.

The Middle East Peace Accords: Present Realities and Future Possibilities — International Student Programs invites all Caltech community to a presentation given by peace activist Marina Riadi, on Friday, March 4, 1994, at 4 P.M., at Beckman Institute Auditorium. You are encouraged to take part in the discussion, which will follow the presentation. Refreshments will be served. Sponsored by the International Student Programs, Women's Center, Caltech Y, Open Line, and the American Friends Service Committee. For more information stop by ISP or call x6330.

Scholarships, Internships, し Competitions

* SERS Scholarship—The U.S. Dept. of Energy is sponsoring the Science and Engineering Semester (SERS) to encourage undergraduate students to continue their studies in science and engineering. For more information on the SERS program, contact: Science and Engineering Research Semester; 901 D Street, SW; Suite 201 A; Washington, D.C. 20024; (204)488-2426. The application deadline is March 15.

Travel Grants for Undergrads—Undergraduate students who are U.S. citizens or permanent resident may apply for the International Student Identity Card (ISIC) Travel Grant. Students involved in any type of educational program including study, work, voluntary service, internships, etc. in one of the developing nations of Africa, Asia, or Latin America are eligible. This grant will cover round-trip expenses from the U.S. to the overseas program. Last spring one Caltech student was awarded this grant. The application deadline is March 15. Check with the ISP office (x6330) for further details.

The Deans' Office is accepting proposals for the Monticello Foundation Internship and the Robert and Delpha Noland Summer Internships. Three Caltech undergraduate women (current freshmen, sophomores and juniors) will be given an opportunity to participate in research projects outside the Caltech community for ten weeks during the summer. Each student will receive a \$3,500 stipend. Applicants are required to identify the projects in which they wish to participate. All arrangements with the principal researcher will be the responsibility of the student. Interested? Identify a sponsor for your experience at a research facility for a ten-week period. In a short essay, describe your project, and submit it to the Deans' Office, 102 Parsons-Gates, along with two faculty recommendations. Proposals are due March 4, 1994.

Political Internship—The Beckman Internship will be available for the summer of 1994. The internship, supported by friends of Arnold Beckman, will pay a stipend of \$3600. It allows a selected intern to spend the summer working in the office of a politician and to see the inside process of government. The intern is expected to make arrangements with the appropriate political persons. It is open to any undergraduate who intends to be a Caltech student next year. If interested, submit a brief proposal describing where and how you would use the stipend, to the Deans' Office, 102 Parsons-Gates, by Monday, March 7, 1994.

The Financial Aid Office has applications and/

The California Tech

or information for the following and *additional* scholarships. All qualified students are encouraged to apply. Our office is located at 515 S. Wilson, second floor.

* The Orville Redenbacher Second Start Scholarship Program is offering 30 \$1000 scholarships to qualified applicants. To be eligible you must be 30 or over, and a part- or full-time undergraduate or graduate student at an accredited college or university. All applications must be **postmarked by May 2, 1994**.

The Ebell of Los Angeles is announcing the competition for the Ebell/Flint Scholarship. Applicants must be U.S. citizens who are legal residents of Los Angeles County, must attend an accredited college or university in Los Angeles County, and must be registered to vote here if eighteen years of age or older. Applicants must be unmarried, full-time undergraduates and have a G.P.A. of 3.25 or above. Applications and all supporting documents must be returned to the Financial Aid office by April 22, 1994.

The John Gayles Educational Trust is offering financial assistance to Canadian and American citizens. Selected students will receive up to \$2500. A minimum GPA of 2.7 is required. Deadlines range from April to November. For an application, send a SASE (#10 envelope) to: The John Gayles Education Fund, Attn: R. James Cougle, Administrator, P.O. Box 4808, 712 Riverside Drive, Fredericton, New Brunswick, Canada E3B 5G4.

The American Scandinavian Foundation of Los Angeles (ASF/LA) will dist. bute five \$1,000 scholarship awards to upper division and graduate students enrolled in accredited schools in the Greater Los Angeles Area. Students must have a demonstrated interest in Scandinavia. Applicants must have strong academic qualifications and must show financial need. Two letters of recommendation, appropriate transcripts, and the completed application are due by March 15, 1994.

SPIE—The International Society for Optical Engineering is once again offering scholarships for 1994. Applications may be made for the funding of any activity in the field of optics. They will be judged on the basis of the long range contribution which the granting of the award would make to optics and optical engineering. Awards WILL NOT be made on the basis of need. Applications must be received at SPIE Headquarters by April 1, 1994.

Sunkyong's second annual Global Leaders of Tomorrow Essay Contest has begun. Registration forms and information are available in the Financial Aid Office. Essays must be received by Sunyong no later than April 4, 1994.

The Danville-Alamo Branch of the American Association of University Women is offering several scholarships, from \$500 to \$1000. Applicants must be female students from the San Ramon Valley, and must have a junior or senior standing in September 1994. For application packets, write: Mrs. Janet Lather, 703 Contada Circle, Danville, CA 94526. The completed application **must be postmarked by April 5, 1994.**



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