

By this point, most people have heard of the 7.2 Richter earthquake that struck Kobe in Japan last Tuesday. Caltech has a greater than usual reason to be involved with this, as, in addition to our Geology department appearing on the news whenever there is an earthquake, (and at times blamed for causing the earthquakes and not notifying people ahead of time), Atsuko Kirschvink (research faculty and wife of Geobiology professor Joe Kirschvink) was from the Kobe area, and her family is still there (According to what Professor Joe Kirschvink told me, most of the family survived, with the death of his brother-in-law's grandmother, although they had their share of property damage as well). In addition to this, I have two friends that lived there (they are all right, I

City Home Page]

by Royden Jones

found).

As of 23rd January, 10:45am Local Time, there are four thousand, nine hundred and eighty five dead, one hundred and sixty five missing, and twenty five thousand nine hundred and eighty injured. The main earthquake measured 7.2 on the Richter scale. The ground moved 7 inches in horizontal shaking, and 4 inches in the vertical direction, the greatest ever recorded in Japan. In the 24 hours following the quake, there were 716 aftershocks, 74 of these could be felt by the human body, and 14 of those occurred on the 18th (Statistics were accurate to 10am January 18th).

It is unlikely that any other country is more aware of earthquakes than Japan. How is it then that this one has caused so much damage? Mention has been made of the previous earthquakes in the recent past. There were a total of three major earthquakes in Japan in 1994. The first was one that hit close to one of the northern islands. Although the quake did not cause much destruction, the ensuing tsunami caused major damage due to the lack of advance warning Tokyo itself was struck by an earthquake in early autumn. Damage was widespread, but relatively minor (especially when compared to the destruction of Kobe), and no deaths were reported. The third major earthquake occurred on December 28th. This earthquake (measuring 6 on the Japanese scale, 7.5 on the Richter scale) hit approximately 50 miles off the coast of Hokkaido. There were two deaths associated with this quake. Between then and the Kobe quake there were 9 earthquakes that could be felt or caused destruction, but these centered around Hokkaido and the northern part of Honshu. Just after the New Year, there was a minor quake in Tokyo proper. The next earthquake was the one in the Kobe/ Osaka area.

(as accurate as can be expected) From the Yorniuri Shinbun

· · ·				
	ad/Miss.	Homes	Area	Fires
Kobe-shi:				
Tarumi-ku	2	0	0	0
Suma-ku	283	16	460	3056
Nagata-ku	528	263	15994	5000
Hyogo-ku	295	50	1500	1222
Chuo-ku	164	26	1661	143
Nada-ku	534	100	1000	276
Higashi Nada	918	35	500	318
Nishi-ku	2	0	0	0
Kita-ku	1	0	0	0
Awajishima	56	0	3815	1.4
Ashiya-shi	386	45	356	6
Nishinomiya	708	52	1006	107
Amagasaki	25	0	288	25
Takarasuka	82	0	1418	1.2
Kawanishi	1	0	448	0
Itami	13	0	393	0
Osaka	9	0	652	23.6
Akaishi	4	Ó	321	1
Miki-shi	2	Ō	2	0
	_	-		

had not collapsed in previous earthquakes. According to a survey by Kyodo press on January 19th, more than half the victims found at that point were aged over sixty, and nearly all of them are thought to have died due to the collapse of the old frame houses.

The current state of affairs in the Kobe City region is a glimpse to the scope of this tragedy. The quake halted fifteen generators in thermal power plants in Osaka. Electric power supply was cut to over nine hundred thousand householders at one point. This recovered down to four thousand in Kobe and Nishimiya cities by the morning of the 18th. When electricity will be fully recovered is unknown. Natural gas supplies were halted to over eight hundred thirty thousand householders in Kobe, Ashiya, and Takarazuka cities due to more than two thousand six hundred separate reported cases of gas leaks in the Hyoga and Osaka prefectures. As Liquid Petroleum Gas is beginning to leak from the massive gas tanks holding some two million tons, located at the complex in Kobe, seventy thousand citizens have been evacuated from the area as safety precaution. Six thousand staff from the Osaka Gas company have conducted safety inspections, and are working round the clock to restore the gas mains within a month and a half. Around two hundred fifty thousand telephone lines were paralyzed at one point, and now, sixty thousand lines in Kobe City still have yet to be replaced. What telephone connections are working still have their connections lost on a regular basis. There is still little water running in Kobe, Nishinomiya and Ashiya cities, over 2.3 million who are hard up for water. Ninety percent of the householders of Nishinomiya have no water supply at all, causing a serious problem with lavatories. Restoration of water is conservatively estimated at four months. Two hundred thousand who lost their homes are taking refuge in unheated gyms and parks. In Awaji Island, the epicenter, the night time temperature dipped to negative two degrees Celsius, and there is a drastic shortage of blankets. The people of Kobe are currently fighting hard against the continuing disaster, as heavy rains have been beating the unstable areas. Unstable areas, especially when there are people still buried beneath rubble, with heavy rains

is a truly sad cataclysm.

This earthquake has not gone unnoticed on a global scale, however. On January 19th, Fidel Castro sent a sympathetic message to Emperor Akihito on the sadness of this tragedy. Also on the 19th, the Japanese Government formally requested aid from the US Army, which has already made thirty seven thousand blankets available to earthquake victims. Similarly, it was reported on January 22nd that an emergency unit from the United Kingdoms had left for Japan on a mercy mission.

At the opening of the January 20th Session of the Diet, the Speaker of the House of Representatives, Takako Doi, addressed the members to pay a one minute silent tribute to the victims of the earthquake. This is the first time there had been such a tribute since the end of World War II. The minute was lengthened when all the members of the diet rose to pray for approximately two minutes.

On the day of the quake, there were two thousand three hundred members of the Self-Defence Force. By January 19th, over thirteen thousand members were operating in the area. The government has met with some public outcry that it took so long to send the SDF into action.

The corporate sector was particularly crippled by the quake. Many of Japan's small and medium sized enterprises are concentrated in the hard hit Kobe city. It is likely that most of them will go bankrupt. Damage assessments may well reach dent. James Honaker won the position of Vice President/BoC Chairman. Proposed amendments 1, 2, & 4 passed, while amendments 3 and 5 failed.

Nominations are now up for other ASCIT offices on the east side of Winnett. Nominations close at 5:00 PM Tuesday, January 31, 1995. Anyone interested in running for office should sign up and follow the instructions that accompany the sign-up sheets. Any questions should be addressed to the Election Chairman, Cedric Hobbs, at 568-0001 or cedricit@ugcs.

Earthquake in Our Area?

by Michael Kantner

There's little hope of ever predicting the time and place of a large earthquake, Dr. Lucy Jones informed her Watson Lecture audience last November. Despite this pessimistic view, scientists can still provide valuable information regarding earthquakes. Given that earthquakes will occur, it is possible to predict where the damage will be severe. Also, the rates of earthquakes can be accurately predicted, on a geologic time scale.

Initially, Dr. Jones defined an earthquake. While everyone in the audience was familiar with what an earthquake was, she added a new definition. "An earthquake is the way the Earth releases its stress by transferring it to the people who live on it." The most notable fact was that "the big one" will last for about 2 minutes, much longer than any earthquake experienced recently.

The main problem with predicting the time and place of large earthquakes is that scientists have to detect and differentiate an indicating signal. Many different signals, including strain rates, seismicity rates, and ground water levels, have tried without success. For example, laboratory strain tests do not correlate with data measured in and around faults. It has been hypothesized that earthquakes follow some chaotic process, and are inherently impossible to predict. Rather than predict actual earthquakes, scientists have instead

large earthquake every 600 years has very little relevance on human time scale, but is valid when thousands of years are viewed at a time.

In addition to knowing how often earthquakes occur (on a geologic time scale), it is also important to understand how they propagate. The two plates do not move as solid units. Instead, the slip zone travels as a wave down the fault, with critical stresses at localized areas. The phenomenon is similar to how one would move a large carpet a small distance. A wrinkle is started at one end, and progresses across the surface until the entire carpet has moved a small distance.

Once a large earthquake has occurred, the amount and frequency of aftershocks can be predicted very well. However, the probability of a second large earthquake diminishes very rapidly. Also, 24 hours of data are required to identify important earthquake characteristics. By the time an official warning could be released, the value of the warning is negligible.

Since scientists know how often earthquakes occur and how they behave, it is possible to predict the amount of damage an area is likely to receive. After an earthquake, they can also predict the chance of more severe shaking caused by aftershocks in an area. With this data, it is possible to design building codes so that structures withstand, though perhaps sustain damage, some percentage of all earthquakes. Furthermore, past

As Kobe was in southern Japan, an area not known for quakes, the death toll was increased due to the large numbers of older buildings that one hundred trillion US dollars becalculated average rates for earthquakes of a given size. A rate of one SEE KOBE, PAGE 11

SUBMIT TO THE TO-TEM: The Totem is accepting now submissions All undergrads, grads, and faculty are welcome to submit poems, short stories, essays, photos, art, music, or ANY ORIGINAL COMPO-SITIONS. The deadline is APRIL 14!! Send all submissions either by email: TOTEM@TECH.CALTECH .EDU, or mail them to MSC 990 or bring them to Page, Rm 132.

TOTEM COVER DE-SIGN CONTEST: The Totem is looking for a creative cover design for this year's volume of the Totem. Designs should be drawn in ink and be the size of a 8 1/2" x 11" paper. Please limit designs to two colors. The winner will receive \$25 and a free, autographed copy of the Totem!! Deadline is APRIL 14! Send all submissions to the above addresses.

earthquakes have shown these calculations to be reliable.



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Letters to the Editor

The Tech Misses Martin Luther King, Jr. Day

Disclaimer - In this letter I mean no disrespect at all to Larry Gilbert.

Dear California Tech,

I am troubled. To tell you the truth, I felt insulted after reading your January 20th issue. The cause of my discomfort is the coverage you gave on the Martin Luther King Jr. Day celebration. The representation you gave in your paper for a day long celebration of a national holiday open to the entire Caltech community was a picture, a two-line caption, and the word "SING." Now, I don't wish to damn or condemn you, but I don't want this concern to go unnoticed either.

Trying to see the other side of things (I usually attempt to give people the benefit of a doubt), I thought about reasons why the coverage of the Martin Luther King Day celebration was the way it was. I think the first excuse I thought of was, "Maybe they did cover the celebration, but the coverage of the ASCIT elections was more urgent and required a lot of space which left no room for the article in that particular issue." This was probably the best thing I could come up with, and if it is true, then I apologize for underestimating you (it must have been the Head of Technology Transfer's birthday too). I thought, however, that this was unlikely the true reason. Another reason I thought might be given is, "There in reality are not enough writers for the Tech, and the writers we do have don't have an unlimited amount of time. Any Caltech student may write for the Tech, so if you wanted to see an article that badly, you could have written one yourself." That may be another good reason in general - but if this reason is given for neglecting to responsibly cover the Martin Luther King Day

celebration, then I find it difficult to accept. I think it is safe to assume that it is the responsibility of a campus newspaper to cover major campus events. If you happen to agree with this, then the only reason the Martin Luther King Day celebration could have been denied dignified coverage is that you didn't consider it a major event. The celebration on Jan. 16, however, was open to the entire Caltech community (students too) in honor of a national holiday. It was extremely successful; Dabney Lounge was packed to hear the GospelFest and Michael Dyson --one of today's leading Black thinkers-speak. A lot of time and effort was put into making the celebration something worthy of the quality that "the Caltech community really deserves."1 Many people (including me) dedicated the whole day (as it was a day-long event) to participating. The coverage the California Tech gave was equivalent to a slap in the face to everyone who applied effort to, spent time on, put money in, or even cared about the day and the

celebration on campus. Another thought that came into my mind was that placing the word "SING" above the single picture of the choir was a way of patronizing the traditions (gospel music) of Black folk - making a joke out of the only Black faces in the whole newspaper. That, I realize, is extremely unlikely. Unfortunately, that, I believe, is the effect that your coverage of the Martin Luther King Day commemoration had. If you attended Dyson's talk on the parallels between Malcolm X and Martin Luther King, you would have heard him warn strongly against containing the memory of Dr. King to "I have a dream" and his profile. Dr. King is and was more than just the 30 seconds of trite pledges to equality and freedom seen on McDonalds commercials around this time of year. Boxing Dr. King up into a few sound bites here and there takes away from what he did and what type of man

he was. It trivializes him and his memory, and like it or not, it appears to quite a few people that you did just that. There are others who share my opinion, so as Biggie Smalls says, "If you don't know, now you know."²

- Agyeman Siriboe Boateng

P.S. I thought about writing an article in case no one on your staff had, but I decided not to. Anyone who's interested in what happened on Jan. 16 who wasn't able to attend may talk to me or someone else who did attend. I would be glad to tell you about it. I don't think I'm that hard to find.

¹ Taken from "Yolanda King Speech Proves to be a Marginal Success" by Zackary Dov Berger; in the October 7, 1994 issue (volume XCVI, Number 3) of the California Tech ². Taken from "Juicy" by the Notorious B.I.G. from the album "Ready To Die"

> The captioner of the picture intended no offense at the caption. The observation that the Tech does not have enough writers is in fact correct and we urge you all to come to our mettings, on 12:15 Fridays in the Coffeehouse.

Flyer Against Caltech Y Fee Increase Inaccurate and Unethical

Dear California Tech,

I want to respond to the community regarding the flyer put out against the Caltech Y fee increase last week. While we are open to criticism, I was distressed by the mean spirited, unethical manner in which this campaign was conducted. (The Y budget is a matter of public record so confidentiality was not an issue.) The information of the flyer was obtained from a closed door ASCIT BOD meeting. To reproduce it and post it without accurate explanation and unsigned on the morning of the election violates ASCIT policy and flies in the face of the honor code and of free and fair elections.

The Y ExComm students followed ASCIT procedures. They had a choice about whether to make this a simple majority vote or a 2/3 vote and chose to go with a 2/3 vote. In addition, prior to the election, articles had appeared in the Tech twice to inform and invite questions.

The Caltech Y has been part of this campus for over 25 years. In that time, we have been as much a presence as a programming and service organization. The Y is the one campus entity whose sole purpose is to meet the array of student needs/ wants that arise. We meet in open session every Monday and distribute our funds to co-sponsor student, faculty, or staff-initiated programs. If a program is not funded which is infrequent, a response is provided as to why the program was not funded. The independence of the Y allows students to plan events they want without the "red tape" they might encounter in other places.

The down-side of the independence is that the Y has to do it's own fundraising inside and outside of the institute. By design, the Y is not part of any administrative area and so consequently, in the budget bargaining process we have a small voice. In fact the budget increase from the institute has been only \$3000 in the last 11 years.

In response to the inaccurate flyer, the salary line represents 3 salaries and benefits. Y employees, though holding the same credentials as other student affairs staff, receive significantly less in salaries and benefits. The general management expenses refereed to include operating expenses, equipment, phone, accounting services, and Friend and board related expenses. The Y budget is not cushioned. Overhead costs rise slowly and the programming funds rise slowly also. For example, the participation in Decompression has steadily increased and the budget for Decompression has not. The student ExComm continually accesses program to determine how to shave off overhead.

An indicator of effective programming efforts is that no one really knows who is responsible for the program. The Y is in business of supporting other organizations and helping others do the things they want to. We spend very little time marketing ourselves. The Y is so successful enabling other that the ExComm students are often overlooked as the service providers they are. We value the ExComm students who volunteer their time to function as a programming board and invite other students to participate with us.

> Sue Bunker Executive Director Caltech Y

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Sorry about not having any photos this week. We were going to run a picture of the Kobe Earthquake, but the photo was destroyed in the quake. Haha. Just kidding. I'd like to take this moment to urge all of you out there to sign up for *Tech* editor. Yep, that's it. If you run for *Tech* editor and win, you'll get this nice sinecure and get to write in this space every week. No,no, no...darn. You looked up that word in the dictionary, didn't you. Okay, so I lied, it's not a sinecure. Fine. Well, run for editor anyway. Come to think of it, if you're interested at all, come down to one of our meetings in the Coffeehouse at 12:15 today and we'll give you a head start. Yep, that's right. All the other candidates will be green when they enter the scene, but you'll be experienced! Look, if you were here last week, you might have discovered the horrible typo on page 1. Wouldn't that have been nice?

Deadlines for Submission to The Tech

Letters to the Editor — 5 P.M. Monday Events and Notices — 5 P.M. Tuesday Unsolicited Articles — 5 P.M. Tuesday Regular/Semi-Regular Columns — 5 P.M. Wednesday Articles, News Submissions — 5 P.M. Wednesday Art/Photo Submissions — 5 P.M. Thursday

Work for The Tech!

12:15, Fridays, Coffeehouse

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from Wei-Hwa

Once upon a time two

pieces of rope had decided to

celebrate by going to a bar

and ingesting high amounts

of alcoholic beverages. So,

without further ado, they

went to the bar. One piece

of rope entered, and said to

the burly bartender, "I'd like

was, "Say...you aren't one of

surprised at the question.

But it was a rather honest

rope, and it replied, "Yeah, I

back. "Well, we don't serve

your kind around here,

ROPE!" and threw the rope

clear across the bar and out

ing that the first rope was un-

conscious, formulated a plan.

simple granny, and loosened

his twisted ends. He then

he told the bartender, some-

another one of those ropes,

entered the bar.

what shaky.

'dem ropes, are you?"

The bartender's reply

The rope was somewhat

The bartender shot

Now the second rope had seen all this, and, notic-

He tied himself in a

"I'd like a drink, please,"

"Hmmm...you aren't

a drink, please."

think so.'

the door.

Bridge Without Sam

No Aces

by Jeff Goldsmith

Playing computer bridge over the Internet at matchpoint duplicate, partner deals and I pick up a good hand without any aces:

- VOID K93 ₯ KQJ1073
- \Diamond K1083.

Partner opens 1, RHO overcalls 1 (surprise) and I have an easy $2\Diamond$ bid. LHO raises spades and partner raises me. The opponents are done, and I have to find a good way to investigate slam. We are playing a 12-14 notrump opener, so partner ought to have either some shape or 15+ HCP. I think it is safe to venture beyond 3NT. My choice is 44, a splinter bid, hoping that partner, with all the right cards, can bid a slam. He bids 5th, which is forward-going, so I bid 5⁽¹⁾, confirming the void and showing a heart control. He bids 60. I don't know enough to bid the grand, although I feel pretty confident that it will make, so I pass. Partner puts down lots of aces, but not much else:



SPACE FILLER: SED RADIO

I bought a used 1994 Geo Prizm with a factory-installed Delco radio that claims to have a "theft deterrent." The owner's manual says "the theft deterrent feature ... can be used or ignored. If ignored, the system plays normally. If it is used, your system won't be usable if it's ever stolen. The instructions below tell you how to enter a security code into the system. If your vehicle loses battery power for any reason, you must enter the security code again before the system will turn on."

I was tempted to ignore it, but decided, what the heck, I suppose I'd better use it. Well, of course, I discovered that the previous owner had entered a security code, and had not removed it when the car was sold. So if anyone were to leave the car headlights on overnight and drain the battery (why, no, I certainly couldn't be so stupid as to do that) the radio would become unusable.

The used-car dealer had no idea what to do, but suggested I call a Chevy dealer. The Chevy dealer hadn't ever heard of the situation and wasn't aware the radio had such a feature, and suggested I call a Chevy 800 number. The Chevy 800 number know nothing, and suggested I call a Delco 800 number. At every stage, of course, I had to explain the security feature, which apparently was new to the 1994 model. And at every stage I had to endure further misunderstandings, because at each stage, they were initially unable to understand why there was any problem given that the radio worked.

Delco said, "sure, no problem, we'll fax the dealer the directions, a lot of them don't know about it." I asked how long the fix took and was told, "it depends how good they are at following directions. If the radio isn't inoperative yet it's easy, otherwise it gets pretty involved."

I took the car to the dealer. I had a chance to glance at the faxed instructions but not read them carefully. I have the impression that if the radio isn't inoperative, removing the security code just requires entering a complicated, but fixed series of digits and button-pushes. (A savvy radio thief would have to remember to do this BEFORE stealing the radio). After it has had power removed and decided to become inoperative, there is a much longer procedure, involving calling Delco to get a dealer code, leaving the radio unpowered for a long time, etc.

Later that morning the dealer called me and said, "We think your ignition lock security system must be interfering with your radio because we tried your radio and everything works fine, including the cassette player." So I explained the problem once again. I came by at noon as agreed to pick it up and was told it would take a little longer, "because we are waiting for Delco to call us back with a dealer code." When I picked it up, they HAD removed the old security code (and installed a new one, but they told me what it was). It had forgotten all the station settings. I suspect that they either did the complicated procedure when they only needed to do the simple one, or someone disconnected the radio as part of their troubleshooting, or someone couldn't resist disconnecting it to see what would really happen...

What's the real problem? Well, given that people do sell used cars, and that many people may not even bother to read that part of the manual— especially if the radio is working-what has been achieved overall is to take a highly reliable car radio and reduce its life expectancy to the same as that of a car battery.



1♣	1	2♦	2金
30	Pass	44	Pass
5♣	Pass	5♠	Pass
60	Pass	Pass	Pass

West leads the DQ, and I pause to take stock. I have eleven tricks off the top, and a possible 12th in either clubs or hearts or maybe a squeeze. If trumps are 2-2, I can ruff a club and take a heart finesse for the overtrick.

I think there is a better line of play, however, than to draw trumps and take the heart finesse. If suits are breaking reasonably, I can make 12 tricks on a dummy reversal. All I need is 4-2 clubs, 3-1 trumps, and nothing really awful. I think that must be the best line for the contract, and it probably does not give up too much chance of an overtrick.

I ruff the first trick and cash a high trump. Good, both follow. A second trump to dummy (East pitching a spade) is followed by a spade ruff. Club to dummy and another spade ruff. Another club to dummy (phew) holds, and I ruff the last spade in my hand with my last trump. On the second club, East dropped the Jack, so I cross to the \heartsuit A, draw the last trump and claim all the tricks. If it had not dropped, I would have cashed the $\heartsuit K$ first, then crossed to the $\heartsuit A$ and cashed the last trump. If East had the $\heartsuit Q$ and four clubs (pretty likely) he would have been squeezed for an overtrick.





by Sharon & Marc

Hello! We're back! Where were we? Good question! Unfortunately, your security clearance is too low, and we are unable to divulge that information. Well, we could, but then we'd have to kill you. Alright, here's a little hint: "Viva la revolucion!" Enough said.

Due to certain previous commitments to the "Company", we aren't going to write a singlythemed column this week. Instead, we'll touch on a variety of subjects. Tidbits. This and that. Musings. Meandering. Mabominables. Huh?

The Rose Parade: We took time off from our hiatus to stand on the sidewalk with millions of other people to watch the Rose Parade. And we had a blast! Marc was in top form, cracking wise and cracking well. Sharon broke personal records for upright endurance. We could hardly wait to review the parade on T.V., and then write a brilliantly hilarious column about it. But when we sat down and rolled the tape, we couldn't think of a thing to say. So, next year, make sure to walk north a few blocks and see the parade for yourself. It's much funnier in person.

Fortune Cookies: We are writing this in Panda Express (two hours before deadline), and Sharon just exclaimed, "This is mean!" Her fortune cookie read "You will do well to expand your horizons." Marc's was even more blunt: "Lose some weight, Chubs!" Apparently, fortune cookie writers are even more disgruntled than postal workers.

The WB: What kind of marketing "genius" decided that the corporate symbol for this new T.V. network should be that frog? Sharon has a frog, and when it's not covering itself with slime, it's going to the bathroom in the community water dish. Hmmm. Y'know, now that we've watched some of the W/B's shows, we're thinking that maybe this frog idea ain't so far off after all.

The Hat: Speaking of marketing genius, whoever is in charge of labeling drink sizes for The Hat (the pastrami place on North Lake) deserves a raise! Instead of making a "large" drink significantly, more capacious than a "medium" drink, they simply use an almost identically-sized cup, but made out of plastic. Paper or plastic? Who cares? Is "extra large" a glass jug?

Wired: Marc recently got a complementary issue of this magazine and all he can say is "Wow!" Actually, that's not true. What he really said was, "Wow! I don't think I've ever seen a magazine with a lower signal-to-noise ratio!" Sharon put it more succinctly: "It's cyber-trash." Although, we're sure that we'd like it if we were a lot younger and stupider.

Pitsa: Speaking of young and stupid, we're going to revisit our position on pizza. Mmmmmm-m, piiiizzzzaaaaaaa...... We originally recommended Pizza Hut, because it tasted pretty good and there were a plethora of coupons available. Well, we now have two problems with Pizza Hut. The pizza doesn't taste as good anymore, and there are a lot less coupons out there. So, we direct your attention to a recent issue of the Pasadena Weekly which contained a review of several local pizzerias. Their recommendation was Village Pizzeria. FYI: our non-local recommendations are Pizzeria Due (Chicago) and Crozet Pizza (Crozet, VA).

The Super Bowl: San Francisco versus San Diego! Who will win? That depends. Are the Niners going to be served bad fish on the plane? Is someone going to spike the Niners' Gatorade? Are they all going to break their legs? Catch Montezuma's Revenge? Ride a raft to Cuba? Get abducted by aliens? Eaten by gators? Hit by a meteor? Anything could happen! But we're still going to be glued to the set. Gotta see all those innovative commercials.

Pulp Fiction: Marc was crushed to discover that he is a member of a handicapped minority. Yes, Marc is "Quentin Tarantino"challenged. He found Reservoir Dogs to be insipid, and was almost totally unimpressed by Pulp Fiction. However, Sharon found Pulp to be interesting and very funny. What does all this mean? It means we're trying to pad out our column.

PTN: The other new T.V. network shows much more prom-

ise. The premiere of "Star Trek: Voyager", despite some bizarre editing problems, showed much more promise than most episodes of "Star Trek: The Moron Generation". In fact, it's literally impossible to compare the first episodes of "Voyager" and "Moron". It would be like comparing the first Star Trek movie to the second Star Trek movie. Or the first Highlander movie to the second Highlander movie. The second Highlander movie. Brrrrrrr. Speaking of which, is there anyone out there who thinks that Christopher Lambert is a better highlander than Adrian Rich? We didn't think so. But we digress. What were we talking about? Oh yeah! PTN. It's got potential. We'll see what's it like in six months

Isaac Richard: We had been planning on writing an entire column on Isaac Richard. We were going to create a fictional interview in which we skewered him nicely, and we were going to call it "Isaac Richard: Threat or Menace?" But now that we know that he's not running for city council again, we've lost interest. Maybe one of the new council members will also have a mouth whose size is inversely proportional to their common sense.

Newt Gingrich: Speaking of guys who talk loudly but carry a small mind, we just wanted to say that the current leadership in the Grand Old Party almost makes both of us ashamed to be Republicans. Not that we're going to become Democrats! Shame only goes so far!

Earthquakes: There but for the grace of God...





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B-Ball Beavers Fight Hard but Fall

The last tune-up before SCIAC games came on January 7 as Caltech's men's basketball team demoralized Southwestern College of Arizona in the finals of the HI-TECH II tournament. Caltech looked smooth as Coach Victor's patented piggyback and four-corners offenses got easy jumpers for everyone. Southwestern went to a man-to-man defense only to get burned with back picks leading to a barrage of lay-ups by Josh Moats, Steve Tsai, and Todd Gottula. Tech looked ready for conference play.

SCIAC play started the next Wednesday at Claremont-Mudd-Scripps. The Beavers got out to a quick 6-2 lead on lay-ups. Grant Templin scored 6 of his 8 points on expensive two-pointers that were just inside the three-point line. Ben Turk disrupted play in the paint, so the Stags went to their junior college transfers and used outside shooting to build a 40-21 lead by half-time. Tech came out quick the second half with four straight steals. CMS couldn't stop Moats from taking the ball to the basket the second period and had to send him to the foul line. Tsai scored all but three of his fifteen inside the key with his famous scooping lay-ups and hanging jumpshots. The Beavers outscored the Stags the second half, but it wasn't enough to come away with a win.

January 14 found the Beavers at Redlands. Redlands started the game playing tenacious defense forcing the Beavers to commit several shot clock violations. Meanwhile, Redlands shot 7 for 9 from three-point range and built a sizable lead. After the initial burst of defense, Redlands' players tired of chasing the Beavers in the well executed motion offense of the passing game and Tech slowly cut into the lead. After a 3-point buzzer beater at the end of the half by Moats, Tech was within 10 points. Rallying behind Gottula's leadership in the second half, Tech cut the lead to 3 points. Late in the game, the lead was only 5, but Tech missed two 1 and 1 free throw chances. Had those been made, the outcome may have been different, but Tech lost as Redlands stalled the rest of the game. Tech almost knocked off Redlands last year at home and when Redlands comes to Pasadena this year it should be a great game.

Cal Lutheran lost a player to the professional Australian Basketball League but they still brought a strong squad to Caltech's home opener. A large crowd turned out to see a sloppy game as both teams were hurt by turnovers. Ben Turk was nearly unstoppable when Tech managed to get him the ball deep in the post and he pulled down rebounds on both ends of the court. But 25 turnovers didn't help the Beavers and they couldn't give Coach Victor a birthday present.

Caltech cut the number of turnovers in half against the Pomona-Pitzer Sagehens, who were coming off a 40 point win over Redlands. The Sagehens didn't hit their second outside shot until 7 minutes left in the first half, but that didn't matter as their huge line-up coupled with their transition game scored easy points on layups and put-backs. An early 21-2 lead set the tone for the half. The fans came alive during the rigged half-time Fan Appreciation Raffle (the statisticians won half the prizes) and became more obnoxious after watching the refs let the Sagehens throw numerous elbows in the second period. Frosh Matt Hettermann played steady defense off the bench and closed the game with a nice baseline shot. The Sagehens showed why they could dominate SCIAC play for the rest of the season as the other half of their offense, their outside shooters, came alive in the second half and drained three-pointer after three-pointer.

Caltech traveled to conference favorite La Verne Wednesday. The next two games should be very competitive as the Beavers take a short trip down the road to Occidental tomorrow, then come home to face Whittier next Wednesday at Braun.

<u> Dpponent</u>	Score
CMS	64-46
Redlands	77-67
Cal Lutheran	67-48
Pomona-Pitzer	74-42

Upcoming Games Sat, 1/28 7:30 PM at Occidental Wed, 2/1 7:30PM Whittier, at Braun Gymnasium

California Institute of Technology Intercollegiate Athletic Events Jan. 27 - Feb. 4

Sat., Jan. 28 at home:

Baseball vs. Pomona-Pitzer JV (2) 11:00 a.m. M. Tennis vs. Faculty 1:00 p.m.

Sat., Jan. 28 away:

- Swimming vs. Occidental 11:00 a.m. M. Basketball vs. Occidental 7:30 p.m.
- Tue., Jan. 31 away:
- Baseball vs. La Verne J.V. (scrimmage) 2:30 p.m.
- Wed., Feb. 1 at home: M. Tennis vs. Whittier 3:00 p.m.

Basketball vs. Whittier 7:30 p.m.

- Wed., Feb. 1 away:
- W. Tennis vs. Whittier 2:00 p.m.
- Sat., Feb. 4 at home: Baseball vs. Cal Maritime (2) 11:00 a.m. Swimming vs. Whittier 11:00 a.m.
 - Basketball vs. Claremont-Mudd 7:30 p.m.
- Sat., Feb. 4 away:

Track and Field (Mt. Sac All-Comers) 11:00 a.m. Fencing (UCSD Invitational) TBA M. Tennis vs. Occidental 1:00 p.m.

Tennis Has High Potential

by Karen Nelson

This year's women's tennis team has five of last season's top seven players returning to the lineup for the '95 season. Returning for Caltech are seniors Monica Sharman (co-captain), Jun Yang, and June Fujiomoto, junior Laura Verhoff (co-captain), and sophomore Lena Petrovic.

"Adding tp the experience of the returners is a strong core of newcomers. Junior Angie Bealko and freshmen Alexis Johnson, Johanna Yao, Linda Park, and Fay Peng definitely add strength and depth to the squad," noted Coach Karen Nelson, who is in her 5th year as head coach of women's tennis.

Some of the goals for the team are to improve each individual's physical and mental games, to build strong team unity, and to create a fun and challenging atmosphere.

Caltech finished last season with a 9-12 overall record and claimed 7th place in the conference. This year's team is working hard and preparing themselves to challenge last season's final conference standing. Former four-year letterwoman Jill Bush returns to the Beaver team as assistant coach for the '95 season. The Beavers' season debut is Wednesday, February 1 at 2:00 P.M. against conference rival Whittier College on the Poets' home courts.



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Games & Puzzles

Confused States

by Wei-Hwa Huang

Here are fifty state nicknames. Match them up with the appropriate states. You may have to ask around a bit, though; I only got my home state, The Terrapin State. Send your answers to gp@tech, not next Wednesday, but the Wednesday after. The winner will win \$10.

- The Terrapin State 1.
- The Red Mud State 2.
- The Hot Water State 3.
- 4. The Snake State
- The Basin State 5.
- The Lizard State 6.
- The Hoop-Pole State 7.
- The Antelope State 8.
- The Saddle Horse Capital of the World 9.
- The Valley of Humility Between Two Mountains of Conceit 10.
- Uncle Sam's Pocket Handkerchief 11.
- The Land of the Rolling Prairies 12.
- The Land of the Delight-Makers 13.
- The Captain-General of Resistance 14.
- 15. The Modern Mother of Presidents
- The Banner State of the South 16.
- 17. Up Over
- 18. The Cyclone State
- 19. The Lion's Den
- 20. The Grape State

- 21. The Syringa State
- 22. The Holy Experiment
- 23. The Ocotillo State
- 24. The Water Wonderland
- 25. The Top of the Nation
- 26. The Soreback State
- 27. The Gateway of America 28. America's Loggerhead
- 29. The Cattlemen's Commonwealth
- 30. The Live Oak State
- 31. The Hospitality State
- 32. The Pickerel State
- 33. The Zephyr State
- 35. The Stubtoe State
- 36. Super America
- 38. The Future State
- 39. The Lively Experiment
- 40. The Boomer's Paradise
- 41. The Mother of Rivers
- 42. The Arsenal of the Nation
- 43. The Dark and Bloody Ground
- 44. The Empire State of the West
- 45. America's Dairyland
- 46. The Sportsmen's Paradise
- 47. The Theater of Seasons
- 48. The Everglade State
- 49. The Cradle of Liberty
- 50. The Land of Hard Cases

by Topher Hunter

February is Black History Month, and to kick it off, on Wednesday, Feb. 1, the Y will be presenting a talk by Dr. Virgil Shields in Dabney Hall at 12 noon. On Friday, the Y will bring the Agapeo Psalms of Victory Choir to Winnett Lounge, also at 12 noon. Barring rain, we will have a Noon Concert on Thursday, featuring Blackberry Rain.

The Y's weekly mountain biking trips have been put on temporary hold due to the heavy rains, but they will return as soon as the trails stop washing away! Call Chris at x 6164 for details.

Remember, the Y is also the office of that mistress of good cheer, Athena Castro! Athena is in charge of Volunteer Services, so if you'd like to volunteer, or if you'd like to do volunteer work for your federal work-study money, drop by.

That's the news, folks, and I am outta here! (Well, not quite yet...)



- 34. Wahoo

 - 37. The Mining State

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January 21



First light Not very bright That hint of a glimmer that shatters the night

Silence The world is tense In gath'ring its power for the thick of the fight

Just now A pregnant pause Awaiting the chances which come with the dawn

Run! Rush! Rustles in brush! I heard them so near but they're just out of sight!

Quiet now Spread through the breeze Hatched in the darkness, come down and they're gone

These secret reasons fleeing every which way To give their truth To the day

The penetrating soul might with care perceive Hidden meanings At first light

Kreative Korner Policy

Guidelines for Submissions.

Submissions are generally creative works, such as narrative, fiction, drama, poetry, artwork, or photographs. Essayists are encouraged to submit to The California Tech. Most cartoons should probably belong in the Inside World.

1. All submissions must be in by the Tuesday preceding the issue in which the submission is to appear.

2. Submissions may not contain libelous material without consent of those being libeled. It is the responsibility of the author(s) to check on this fact. Suspicious submissions will not be printed.

Submissions may not contain vulgarities. The editor has judgement on what constitutes a vulgarity. 3.

Submissions must be turned in by e-mail, Macintosh disk, or 3.5" high-density IBM compatible disk. 4.

All submissions will be submitted to the *Totem* after publication unless explicit instruction is given by 5. the author(s) to the editors to the contrary.

The author must be part of the Caltech/JPL community. Certain waivers for alumni, friends of the community, etc. may be made at the editor's discretion.

The editor reserves the right to edit, shorten, disallow any submission, or take exceptions to these rules.

ASCIT NEWS

27 January 1995

✓ CURRICULUM

David R. Derkits

- Bylaw Amendment #1, which passed in the Presidential Election, creates the Academics and Research Committee (ARC) to replace the old Educational Policies Committee (EPC). Members to the ARC will be selected in House elections (in the same manner as BOC Reps), and there is also an ARC Secretary elected by the entire student body (nominations are now open). If you are interested in improving academics and research at Caltech, you should consider seeking a position on the ARC. Watch for additional information in the Houses. - The outgoing EPC is preparing, using the responses taken in the Core Curriculum Survey, a formal 'freshman grading policy' proposal. There will be an open meeting of the EPC Monday evening in Page House lounge to complete the work on the proposal. Questions may be directed to Flora Ho at floho@cco. **✓** ELECTIONS - Congratulations to Jonathan McDunn, reelected President, and to James Honaker, Vice President / Board of Control Chairman - Elect. - Nominations for all remaining ASCIT elected offices are open until 5:00 PM Tuesday, 31 January. Campaign statements are due to the Tech by 5:00 PM Wednesday. Nomination sheets are posted on the east side of Winnett, by

the ATM. The ASCIT Officers Election will be on Monday 6 February.

✓ MISC ANNOUNCEMENTS

- Meetings of the Board of Directors are held every Wednesday at 11:00 AM in the ASCIT Office, 64 SAC.
- The Undergraduate Research Opportunities



January 18

Suspicious person

Male White, 31, 5'8" 160 lbs, red hair, blue eyes, white sweat pants, white hat, white sweater, was observed on San Pasqual St. at 1:06 pm. Security located him on San Pasqual and escorted him from the campus.

January 18

Attempted Vehicle Burglary Victim parked the vehicle in Tournament Park Lot at 12:00 noon upon returning to his vehicle at 6:00 pm he notice the left side door lock had been tampered with and damaged. No property was reported missing.

Suspicious Person Person reported suspicious person inside a red Chevy Citation in the area around 1170 Del Mar. Security responded to the report, suspect was no longer in the area.

January 21

Suspicious Person Two male youths in the Page House Lounge,

Security responded, suspects were advised that they were on private property, and escorted off campus.

January 22 Bicycle Theft

Blue, Diamond Back, 12 speed, standard frame bicycle, taken from 1032 E. Del Mar, value \$250.00. The bike was last seen on January 8, 1995.

January 25

Suspicious Person

Male White, Brown Hair, blue T-Shirt, reported bathing in the woman's restroom in Winnet Lounge. Suspect vacated prior to security's arrival.





Handbook (UROH) has been released. Copies are available in the library of each House. - Kim West is planning to organize a DAPAC Review Committee to look into these policies and recommend improvements. Watch for additional information from the DRL's office. - Today, and every Friday from 2:00 to 4:00 PM, undergraduates have the opportunity to talk/chat with various Student Affairs administrators in the Coffeehouse. Refreshments will be served.

- The committee charged with reviewing the advisor system is releasing a 'Survey on the Advising System' to the student body. ASCIT is helping with collection of the surveys.

- http://www.cco.caltech.edu/~ascit/

- Copies of ASCIT Board Minutes are available by mail or e-mail free of charge on request to students, faculty, and administrators. Requests should be sent to Secretary, ASCIT 64-58. The Minutes are available on caltech.ascit.announce and in House lounges.

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Information Session for Prospective SURFers

Presented by students and SURF Team. Everything you ever wanted to know about SURF (and some things that never occurred to you that you needed to know). A multidisciplinary student panel to offer advice and answer questions.

Monday, January 30, 7:00 p.m. **Room 106 Spalding Lab**

For more information, contact the SURF Office at x2885, 137 Beckman Institute, or surf@romeo

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The Counseling Center invites you to:

A SERIES OF PRESENTATIONS ON RELATIONSHIPS

Over the remainder of Winter Term, the Caltech Student Counseling Center is offering a series of presentations on the topic of Relationships. The overall goal of the series is to provide information on how to build and maintain healthy relationships with friends, loved ones, and family members. Various programs in the series will address common problems that arise in relating to friends and romantic partners. The series is open to all students as Caltech. Please feel free to come to any or all of the programs. For more information, please call the Counseling Center at x8331 or contact Virginia at email virginia_licon@starbase1.caltech.edu.

How to Meet People and Keep the Conversation Going Monday 1/30/95 7:30-9:00 pm Beckman Institute Auditorium Speaker: John Fergus, Social Scientist and Researcher

Understanding and Maintaining Love Relationships Tuesday 1/31/95 7:30-9:00 pm Beckman Institute Auditorium Speaker: Gary Brainerd, Ph.D. Psychologist and Author

Super Highway **Roadmaps: A Social Commentary**

by J. Random HercFrosh III and Lauren

Recent events have brought to light the possibility of violating the honor code as a result of demonic possession. The impact that this might have on the Caltech community and on the honor code in particular is of particular interest to us. Accordingly we have decided to contact the BoC Rep. formerly known as Prince (we want to protect his/her/its anonymity).

Q: If someone were to suddenly to become possessed by a demon during a test, would this be considered illegal collaboration and therefore an honor code violation? A: It would be considered a violation only if the demon provided answers. The answers may be right, they may be wrong, that is inconsequential. Just as a student should make a note of when he (or she) has gone overtime, he (or she) should make a note on his (or her) page where the possession began, and, if applicable, where it ended. If these steps are taken, much of the fault may be removed from the student.

Q: But what if the student attempts, but fails, to fight off the demon. He (or she) may be powerless to take these measures. Should the student be held responsible for actions which he (or she) had no control over? It seems to us that if the demon is unwanted, it should be the demon who is to blame. Can you BoC a denizen of a different spiritual plane?

A: Let me address these issues one at a time. First, we are dealing with adults on this campus and we must hold them accountable for whatever events occur in their life. They are mature enough to deal with the consequences. If that is not the case, they should not be at this school-they are obviously unfit to live under the Honor Code. Second, as the denizen is

licensing from Sally Strothers. Their bedside manner is abyssmal.

Q: So are you suggesting we all keep a priest watching over us while we take our tests?

A: Well, I find the care and feeding associated with maintaining your own priest to be prohibitive. However, for those who fear the BoC and its powers the way it should be feared, it is not a bad idea.

Q: Do you keep one?

A: I do, but because I find their morals and their theological propaganda so offensive, I keep mine stored in a footlocker, and only bring it out during a test.

Q: Before we conclude this interview, I have one final, unrelated question. The BoC has often been criticized for being overly secretive, Orwellian, and even Nazi. Are you, or do you know any member of the BoC who is a registered member of the Nazi party of America?

A: Off the record?

Q: Yes, just between you and me. A: To tell the truth, a number of members have been known to come to meetings dressed in full Klan regalia on a number of occassions. I'm not sure, but one might even be a Grand Wizard.

We would like to thank the BoC Rep. formerly known as Prince for his (or her or its) help and for being a good sport. One last note, the views expressed above are not neccessarily those of the BoC Rep. formerly known as Prince, nor of the BoC at large. Also the information may not be accurate, as the interviewee seemed to be in a trance-like state and occassionally growled and ask we call him Gwothar, Dark Lord of Sewage Waste Management.

When Relationships End Wednesday 2/8/95 7:30-9:00 pm Caltech Y Lounge Speakers: Kevin Austin, Ph.D. CIT Counseling Center Director and Mark Rosenblatt, M.A., Psychology Intern, CIT Counseling Center

Intimacy, Sex, and Communication Thursday 2/16/95 7:30-9:00 pm Caltech Y Lounge Speaker: Mary Morahan, Licensed Clinical Social Worker

Love and Hate: Avoiding the Pull to Co-Dependency Wednesday 2/22/95 7:00-8:30 pm Caltech Y Lounge Speaker: Leslie Maxson, Ph.D. Psychologist

"Let's Just Be Friends" Tuesday 2/28/95 7:30-9:00 pm Winnett Lounge Speakers: Jon Pedersen, Ph.D. and Aimee Ellicott, Ph.D. Psychologists, CIT Counseling Center

Look for details on these programs in the Tech announcement section.

not a member of the Caltech community, they cannot be held under the Honor Code. That is to say, we cannot expect them to respect the sanctity of the Honor Code. What's more, powerful as it may be, the BoC does not have jurisdiction over the underworld.

Q: What recommendations could you give any student who finds him(or her)self in this unfortunate situation?

A: Beyond the need to note the possession on your paper-as discussed above, I can think only of one suggestion. Find a fully licensed priest, preferably a union member, who has been trained in the art of excorcism. A special note, for those who might be strapped of cash, avoid trying to save some money by going to a priest who has recieved his (or her)

And a special random note: Crime And Incident Beat-The Darker Side of Tech:

The ASCIT copier stole a shiny new quarter (25 cents) from our own Lauren on 1-25-95.

Adam Villani is still missing his jacket, backpack, Peter Gabriel CD, Art of Noise CD (the one with the light blue cover), and most of the rest of his personal belongings. Could be stolen. circa 9-18-93 thru 1-25-95

This week's total: \$0.25 + a lot of junk



fore they can be fully tallied. Before this happened, Japan was struggling out of a recession, and as 5% of Japan's GNP was from this region, which is unlikely to be productive anytime soon.

The damage to the railways alone could exceed \$20(US) trillion. Damage to Hankyu Corporation alone is as high as \$10(US) trillion, and Hanshins Electric Railway Co. Ltd. has railway damage at over \$5(US) trillion. JR Nishi Nippon has announced damage to it's lines is in the trillions of US dollars. Other corporations particularly hard hit are Toyota (All factories are closed down and twenty thousand cars are cut in production), Kirin Brewery company (One thousand five hundred Kilo liters of beer effluxed), Kawasaki

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PROGRAMMER WANTED for software development company specializing in collections management and digital imaging for museums worldwide. 4-year degree or graduating senior. Programming experience preferably with Windows applications Please fax cover letter and résumé to Dave Rhoadarmer at QSI (818) 403-1739 or send to: 899 El Centro St., Suite 101, South Pasadena CA 91030.

Heavy Industries (Machineries are destroyed and plants are closed down), Sumitomo Rubber Industries (Head office and plants were partially destroyed), the Hyogo Bank (Complete halt of the on-line system) and the hanshin Bank (Telecommunications lines are completely paralyzed), as well as hundreds of other businesses to lesser degrees.

Even the criminal associations have gotten involved in this tragedy, but perhaps not in the way most would expect. Japanese Yakuza affiliated with the Yamaguchi-gumi's headquarters in Kobe have started

providing vital relief aid to earthquake victims. Since the quake struck on January 17th, several hundred people have lined up at the groups headquarters for food, drinking water, powdered milk, and paper diapers, among other needs. One victim was quoted as saying "By taking over what is normally the government's job, they have shown 'giri' (faithfulness) and 'ninjo' (warmheartedness)."

As with any tragedy of this magnitude, there are particularly noteworthy stories of survivors, one being that of Shinsuke Yamada, a nine year

old. He was rescued around 3pm on January 19th and carried to an emergency center. He had endured over 57 hours under the rubble of the earthquake and is still improving.

INFORMATION SOURCES: World Wide Web Sites: [http://eccosys.com/SMN/quake.html] 'The City of Kobe Home Page' [http://www.kobe. cufs.ac.jp/kobe-city/index.html]

Internet News Groups: alt.current-events.kobe-quake alt.disasters.earthquake More Groups:

clari.news.hot.japan_quake clari.world.asia.japan sci.geo.earthquakes soc.culture.japan

January 27, 1995

Japanese National Police Agency, International Liason Division (these people are answering telephone queries reguarding victims who may have died in the earthquake. Calls are accepted 0900-2100 JST, 0000-1200 GMT, 1600-0400 PST) 81-3-3591-3501 or 81-3-3580-0401 Kobe City Hall(For information on missing persons) 81-78-360-5158 or 81-78-360-515 The Daily Yomiuri Newspaper (Osaka Office FAX, who provided the data) 81-6-366-1894.



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= The Totem is now accepting submissions! All undergraduates, graduates, and faculty are welcome to submit poems, short stories, essays, photos, art, music, or any original compositions. The Totem is also looking for a creative cover design for this year's volume. Designs should be drawn in ink and be 8 1/2" x 11". Please limit designs to two colors. The winner will receive \$25 and a free, autographed copy of The Totem!! The deadline for both talent searches is April 14th. Send all submissions either by e-mail (totem@tech.caltech.edu), mail (MSC 990), or by foot (Page, room 132).

Sharyn Slavin, Assistant Vice President for Student Affairs, and Stan Borodinsky, Student Affairs Administrator, invite you to stop by the Coffeehouse on Friday afternoons from 2 to 4 p.m. to talk with them. All students are welcome, and free drinks will be available. Please drop by and get to know Sharyn and Stan. They will be happy to answer questions or provide assistance.

The AIDS Service Center presents "Just Say Know," a free eight week educational support group that will explore different topics related to HIV and AIDS. "Just Say Know" will meet every Tuesday from 6:30 to 8:30 p.m. from January 31st through March 21st at the AIDS Service Center, 126 West Del Mar Boulevard, Pasadena. To participate, call Tom Drake at (818) 398-4553.

The Caltech Muslim Student Association will hold Muslim Friday Prayers weekly in the Y-lounge at 12:40 p.m

From the **Counseling Center**

The counseling center will be offering a group for undergraduate students who are interested in developing skills that will help them overcome their shyness. The group will meet for five weeks, on Wednesday, from 3:00-4:30 p.m. beginning February 8th. The focus of the group will be (1) understanding your shyness and the underlying thoughts and beliefs that serve to maintain shyness, (2) developing skills to manage your anxiety and to help you become more effective socially, and (3) increasing your confidence and level of comfort by joining others who can identify with and support your experience.

The Gay, Lesbian and 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 - including coming out, being out, self-discovery, coping with families.... We begin with a focus topic but move to whatever is feeling most relevant to the group that night. Refreshments are served. For information, please call 395-8331.

Coming Events

⇔The Caltech Film Program, as part of it's "Film of the Sixties" Series, presents the counter-culture classic, "Alice's Restaurant," on Monday, January 30th at 7:30 p.m. in Baxter Lecture Hall. The film is free and open to all of the Caltech community. A discussion will follow.

⇔On Saturday, February 11th at 7:30 p.m., the Castle Shakespeare Company will be holding a dramatized reading of *Romeo and Juliet* at the Old Town Pasadena Barnes and Nobles. A non-profit professional theater company based in Pasadena, the Castle Shakespeare Company also offers a unique Valentine's Day service: "a costumed professional actor will surprise your love with a recitation of a Shakespearean sonnet, and then present one perfect rose and a beautiful printed scroll of the sonnet." For more information, or to be added to their mailing list, please call 564-8564.

⇔For a good time, call x1543. Call soon, call often!

Student Affairs and Friends of Caltech Instrumental Music will be hosting a Noon Chamber Music Concert in the Dabney Lounge on January 31st (originally scheduled for the 27th). Featured in the concert will be works by Mozart, Beethoven, Schubert, and Mendelssohn. Admission is free, and lunch will be served to the first one-hundred people to attend.

The Caltech Folk Music Society will present singers I C:- J. M

Events and Notices

🗢 denotes a new announcement.

John Denver, Gordon Lightfoot, and Anne Murray, while Mangsen has recorded a pair of memorable alburns featuring her "rich, full voice." Tickets are \$10

Two concerts are to be held in the Dabney Lounge by the Chamber Music Ensemble. The concert on . Saturday, January 28th at 8:00 p.m. will include works by Brahms and Muczynski trios, and the Schubert Cello Quintet. The Sunday, January 29th "Super Bowl Alternative Concert" shall be held at 3:30 p.m., and will include works by Mendelssohn, Dvorak, Beethoven, Khachaturian, and Cui. All concerts are to be performed by Caltech students, and admission is free.

each, \$4 for Caltech students.

An all-new edition of "Masters of Magic and Illusion", featuring the magic of Tiny Clark and Les Arnold, will be held on Saturday, February 4th in the Beckman Auditorium. Admission is \$9 for adults, \$5 for children. For more information, please call x4652.

A Paco A. Lagerstrom Chamber Concert will be performed by Nai-Yuan, violin, and Paulina Crake, piano, on February 5th at 3:30 p.m. in the Dabney Lounge. The performance will include Mozart's So nata in E minor, KV 304; Beethoven's Sonata in F major, Op. 24; and Strauss' Sonata in E-flat Major. Admission is free.

Pianist-Composer Vatché Mankerian will perform works by Bach, Beethoven, Debussy, Babjanian, and Mankerian on Sunday, February 12th, at 3:00 p.m. in Harbeson Hall, Pasadena City College. General admission is \$20, students \$10. For ticket information, please call 794-2141.

At the Beckman Auditorium on January 28th at 8 p.m., B.J. Crosby Sings Gospel Choir will sing a night of gospel music and song. Featuring members of the choir from the First A.M.E. Church of Los Angeles and directed by Barbara Allen, the Admission cost will range from \$22.00 to \$28.00 for adults, with student and senior rush tickets costing \$8.00 beginning one-half hour before the start of the performance.

Club Announcements

The Caltech Ballroom Dancing Club offers free beginning ballroom dance classes available to all. These are perfect classes for people who have never danced before or for people who want some basic step help. People are welcome to join the classes anytime and it is not necessary to have a partner for any of the classes. Please note, however, that the beginning ballroom dancing class has been moved to Thursday nights in Dabney for the dates of February 2nd, 9th, 16th, and 23rd, though classes will resume on Monday nights in Winnett as of the 27th of February. In the larger room the group will learn the waltz, Viennese waltz, and polka. For more information, contact Jeanne Hardebeck at jlh@seismo.gps.caltech. edu, x6971, or MC 252-21.

⇔The Caltech Folk Music Society are looking for more volunteers to help with mailing and publicizing their concerts, learning how to engineer the sound system, settin up before and tearing down after the concerts in exchange for free admission and a great opportunity to schmooze with guitarists, songwriters, and bluegrass musicians. If you are interested in giving a few hours a month, or would like to receive announcements for each concert, give Rex a call at 791-4583, or come to the next concert in Dabney at 8:00 p.m. on Saturday, February 4th.

The Undergraduate Seminar in Mathematics will have its first meeting on Wednesday, February 3rd, at 7:00 p.m. Wei-Hwa Huang will talk on "A 'Proof' of the Four-color Map Theorem" and refreshments will be served. The seminar will meet in the lounge on the third floor of Sloan.

Club Latino, an apolitical student organization functioning in and for the Caltech Community, will hold a meeting on Monday, February 6th at 5 p.m. in the Caltech Y Lounge. Members of the club are currently working on the organization of "Semana Latina". If you are interested in helping with the organization of this event, you are welcome to assist to the meeting. For more information, please send email to mariomu@systems .caltech.edu or call Mario at x4880.

nese weapons, qi-gong, iron body training, meditation, proper stretching & holistic health practices. For further information, please contact Sifu Gene Black at (818) 359-1270, or Prof. Steve Wiggins at x4127.

The Ballroom Dancing Club is currently accepting registration fees for a beginning Salsa and West Coast swing class. Enio Cordoba, a professional dancer and the owner of Alhambra studio Let's Dance LA, will teach the class at Caltech. Classes will be from 7:00-9:00 p.m. approximately every other Friday night. The classes will be held in Dabney Lounge. The cost is \$15 per term for a student or staff or JPL employee and \$30 per term for anyone unaffiliated with Caltech or a spouse of a member of Caltech or IPL. Make the check payable to Caltech Ballroom Dancing Club and mail with your name to Bob Herman at MC 170-25 (RHERMAN@arms.gps. caltech.edu) or register at the door.

The Ballroom Dancing Club meets this Friday from 7:00 to 9:00 p.m. in Winnett lounge for a dance break. This dance practice is open to beginners, intermediate and advanced dancers who want to practice dancing or socialize and watch others dance. For more information, contact Jeanne Hardebeck at jlh@seismo.gps.caltech. edu, x6971, or MC 252-21.

Women's Glee Club begins all new music this term: Purcell's "Come Ye Sons of Art", Stravinsky's "Symphony of Psalms", and the Mozart "Requiem". Refiearsal will be held in SAC 1 on Mondays from 7:30 to 9:30 p.m. and with the Men's Glee Club in Beckman on Wednesdays from 5:00 to 6:00 p.m.. This is the last time this year that the Glee Club can accept new singers. For more information contact Laura Brady. President (356-7427, laura@ugcs) or Monica Hubbard, Director (X6260, mhubbard@cco).

Internships and Competitions

SEEE is currently recruiting Student Government Leaders, Environmental Leaders, and other ambitious, motivated, and outstanding students from across the nation to join their internship program. Twenty students will receive a \$1000 stipend and a trip to Washington, DC, March 17-19, to learn about energyefficient technologies and then work on campus to make them a reality. Open to Freshmen, sophomores, and juniors. All applications must be received by February 22, 1995. Please come to the Deans' Office, 102 Parsons-Gates, for an application. If you have questions about the internship or SEEE, call 617/ 493-6271 or e-mail at fine@husc. harvard.edu.

RAND will be sponsoring interns in engineering, applied sciences, and physics in its 1995 Graduate Student Intern Program this year. They are soliciting applications form students who have completed two or three years of graduate study towards a Ph.D. and who are interested in applying their skills to the analysis of public policy problems. The program is intended to introduce outstanding graduate students to RAND in a way that permits them to produce and publish as part of the ongoing RAND research program. Each summer intern in assigned a distinct research task that can be completed during the twoand-a-half to three months he or she is at RAND. In some cases the work may be related to an ongoing dissertation topic or used to provide the foundation for future research. Interested graduate students should send resumes, cover letters, and names, addresses, and telephone numbers of three references to: Dr. Glenn A. Gotz, Director Graduate Student Intern Program, RAND, 1700 Main Street, P.O. Box 2138, Santa Monica, CA, 90407-2138.

The Deans' Office is accepting proposals for the Monticello Foundation Internship. Three Caltech undergraduate women (current freshmen, sophomores and juniors) will be given an opportunity to participate in research projects outside the Caltech-JPL community for ten weeks during the summer. Each student will receive a \$3,600 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. If you are interested, simply identify a sponsor for your experience at a research facility for a tenweek period. In a short essay, describe your project, and submit it to the Deans' Office, 102 Parsons-Gates, along with two faculty recommendations. Pro-

Completely exhausted of the long hours of constant droning by your math and physics profs? Internships for a culturally diverse group of undergraduate students interested in exploring careers in art museums and related areas of the visual arts and the humanities will be offered this summer by the J. Paul Getty Trust. Students of all cultural backgrounds and academic disciplines are encouraged to apply for this tenweek internship opportunity. In keeping with the focus of the program, students in the Los Angeles metropolitan area and Los Angeles residents attending school elsewhere will be given priority. The internships are full-time, beginning June 19th and ending August 25th, 1995, and include a stipend of \$3,000. Individuals will be assigned to one department and will work with a mentor on specific projects. All applications materials must be postmarked by February 27th; notifications will be made by May 1st. To receive an application form, please contact Getty Undergraduate Internships for Diversity in the Arts and Humanities, Department of Education and Academic Affairs, The J.P. Getty Museum, P.O. Box 2112, Santa Monica, CA, 90 407-2112, or call (310) 451-6545.

Sao Summer Internship Program 1995 Applications are invited from undergraduates to participate in the Smithsonian Astrophysical Observatory Summer Intern Program at the Harvard-Smithsonian Center for Astrophysics in Cambridge, Massachusetts. We anticipate that twelve positions will be offered during the summer of 1995. Research opportunities exist in all areas of astrophysics from planetary science to cosmology including theory, observation, data analysis, instrumentation and laboratory astrophysics. The program will provide students with the opportunity to use telescopes at the Oak Ridge Observatory and to present a paper at a scientific meeting. The Intern Program begins June 12th and ends August 18th, 1995. The stipend will be \$250 per week, and housing/travel will be subsidized. Applicants must be US citizens (or hold a valid green card) currently enrolled in a program leading to a bachelor's degree. Graduating seniors are not eligible. For more information email to: IN%kdow@corwin.harvard.edu.

Fellowships and Scholarships

The Financial Aid Office has applications and/or information on the following and additional scholarships. All qualified students are encouraged to apply. The Financial Aid Office is located at 515 S. Wilson, second floor.

Glamour Magazine announces its 1995 Top Ten College Women Competition. Scholarships are in the amount of \$1000. Winners also receive national recognition in Glamour's October 1995 issue, and the opportunity to meet with top professionals in their fields. Women who are full-time juniors for the 1994-95 academic year are eligible to apply. Applications are due January 31, 1995.

The Korean American Scholarship Foundation, Western Region, is offering two scholarships of \$10,000 each or four scholarships of \$5,000 each, and more than 20 scholarships of \$1,000 or higher to full-time students of Korean American heritage. Applicants must be at least second year undergraduates, or graduate students. To receive an application, write to: Scholarship Committee, KASF Western Region, 400 Bridge View Drive, Anaheim, CA 92808. Completed applications are due January 31, 1995

The National Academy for Nuclear Training announces its Scholarship Program Competition. Academy scholarships are awarded on the basis of merit to students with a demonstrated interest in, and potential for, a career in the nuclear power industry. Approximately 125 awards of \$2,250 each will be made

to students who are currently pursuing a bachelor's degree in nuclear engineering, power generation health physics, or a nuclear/power option in a discipline such as chemical engineering, electrical engineering, or mechanical engineering. Application materials must be postmarked no later than Febru-

The College Women's Club of Pasadena Scholarship Foundation is awarding scholarships and fellowships of at least \$1,500 for the 1995-96 academic year. Applicants must be at least second year undergraduates or graduate students who will be enrolled fulltime in 1995-96, and who have at least a grade point average of 3.0. Completed applications and all supporting documents must be submitted to the Finan cial Aid Office no later than February 9, 1995.

ary 1, 1995.

The American Society of Naval Engineers is sponsoring a scholarship program with awards of \$2,000 each for the 1995-96 academic year. Eligible students must be U.S. Citizens, graduate or undergraduate students (undergraduates must be in their final year of study), majoring in engineering, and who demonstrate a genuine interest in a career in naval engineering. Demonstrated financial need is not a requirement but may be taken into consideration. Applications are available from the Financial Aid Office, and are due February 15, 1995.

The American Meteorological Society announces the 1995-1996 AMS/Industry Undergraduate Scholarship competition. Full-time students who will be juniors in 1995-96 and who are: 1. Pursuing a course of study leading to a B.A. in the atmospheric or related oceanic or hydrologic sciences; or 2. Enrolled in a program leading to a B.A. in science or engineering who have demonstrated a clear intent to pursue a career in the atmospheric or related oceanic or hydrologic science following the completion of appropriate specialized graduate level education are eligible to apply. Applicants must also have a minimum 3.0 GPA, and must be U.S. Citizens or permanent residents. The awards are \$2,000 for 1995-96, and are renewable for the following year (the senior year). To request an application, mail a self-addressed, stamped envelope to: American Meteorological Society, Attention:: AMS/Industry Undergraduate Scholarship Program, 45 Beacon Street, Boston, MA 02108-3693. Applications are due February 17, 1995.

The American Chemical Society is pleased to announce a Minority Scholarship Program to African-American, Native American, and Hispanic students. Eligible students must be currently freshmen, sophomores, or juniors who are enrolled in chemistry, biochemistry, or chemical engineering programs. Scholarships of up to \$2,500 a year will be given for the sophomore year; students who will be juniors and seniors in 1995-96 will receive up to \$5,000. Interest in chemistry, biochemistry, or chemical engineering, demonstrated potential for success, and financial need will be considered in evaluating the applicants. Additionally, eligible students must be U.S. Citizens or permanent residents, and must have a minimum GPA of 3.0. To obtain an application, or more information, phone 1-800-227-5558 (then press 9, press 3, press 5). Applications are due March 1. 1995.

The Society of Manufacturing Engineers announces the availability of 41 scholarships for undergraduates, and 10 graduate fellowships. All of the undergraduate scholarships require applicants to be full-time, second year students with a minimum G.PA. of 3.5. Forty of the scholarships are being offered to students who are enrolled in a degree program in manufacturing engineering or manufacturing engineering technology. One scholarship is available to a full-time student seeking a career in robotics/automated systems. The graduate fellowship is offered to a student in a graduate program for manufacturing engineering or manufacturing technology. Applicants for the graduate fellowship must have a minimum 3.5 G.P.A. and must have proven scholastic ability, exemplary character, and leadership capability and who have demonstrated their potential for future leadership in the profession. Completed applications are due March 1, 1995.

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