

A rainbow is faintly visible over the half-completed parking structure/satellite physical plant on Holliston Ave.

## Campaign for Caltech reaches goal

by Zackary Dov Berger

The Campaign for Caltech, a major drive to raise funds for the Institute, reached its goal of \$350 million on October 20, according to Tanya Mink, its director. The centennially inaugurated Campaign—accompanied by the slogan “A Second Century of Discovery”—ends on December 31.

Led by the Trustees and coordinated by the Dabney Hall Development staff, the Campaign sought funds for priorities outlined in a 1989 study by President Thomas Everhart and the faculty. These basic priorities, said Mink, fell into three broad categories: capital funds; endowment; and programs and current operations.

Capital funds—for big-ticket items—include support for the Moore Engineering Laboratory; the Keck II telescope; and Avery House, the planned undergraduate-graduate-faculty commune.

Particularly notable in the last regard are references to the House system in the Campaign’s handsome, blue brochure, a publication included in the recruitment of possible donors, according to Mink. On page 28 (under the heading “Centennial House”) one can read a grudging admission that the Houses “have definite advantages over typical college dormitories.” Nevertheless, “the physical structure and social traditions [of the Houses] leave some residents feeling isolated from one another . . . and from the outside world.” Thankfully, though, the Institute means to “bring undergraduates into the mainstream of Caltech’s diverse culture and . . . to increase their exposure to the outside world.”

Endowment funds, investments from which only the interest is used, include more than forty important new (mostly need-based) undergraduate scholarships. According

to the director, this area was one of the few for which expected goals have not been met: only eleven of an expected fifteen million dollars have been raised for such scholarships.

According to an article in *On Campus* (published by the Office of Media Relations), the funds raised during the Campaign were given by various groups: approximately 39% was donated by foundations; 23% came from Trustees; and 17% of the total was given by corporations. Other donors included alumni, faculty, and miscellaneous “friends of the Institute.”

President Everhart and the Trustees, said Mink, are now examining further money-raising strategies. While it is unlikely that another campaign is in the works so soon after a successfully completed drive, Mink said she is following up on those “who can give.”

## Class promotes freshman research

by Amanda Eckermann

Why is Caltech the best school in the United States? Why does Caltech attract people from foreign countries? Why does Caltech have the best faculty in the country? Why did you decide to come here? (Besides the party scene.) The answer is simply written: research opportunity. Unfortunately, these words cause little arousal in

Caltech undergrads. Dr. Thomas Tombrello is working to change that by teaching a class designed to open the door to real research for undergraduates.

The class Ph 11, preceded by Ph 10, consists of five freshmen, selected according to performance on a problem (called a “Hurdle”) created by Dr. Tombrello. The Hurdles consist of strange problems that are quite unlike home-

work in that the solution is not definite. The results are based on research, and the students are judged on how they approached the dilemma, which includes their decisions on what to assume and whether or not to pursue the problem after a point. Once five freshmen have been selected, they are paid to work on a research project during the summer. In this aspect, the class is similar to the SURF program.

After only five years, the class has had success. Several papers have been published in official journals. Students have won numerous Green Awards, as well as Haran Fisher Awards, which award \$1200 and \$350 to students exhibiting creative scholastic promise. The class also provides invaluable experience for the students, not only in the experimental process, but

see RESEARCH, page 10

## Moore named new Trustee chairman

by Zackary Dov Berger

Gordon E. Moore, Chairman of Intel Corporation and a member of the Board of Trustees since 1983, will be the next chairman of Caltech’s Board of Trustees. The Board is Caltech’s highest governing body.

Moore will replace Ruben F. Mettler, retired Chairman and CEO of TRW, Inc., at the end of

the year. Mettler, who was first elected trustee in 1969, will remain on the Board.

Moore was an active participant in and contributor to the recent Campaign for Caltech. His interest in electronic materials and structures, as well as his monetary contributions, made possible the eponymous Moore Engineering Laboratory, which is scheduled to be built within the year.

## Mars Observer’s demise hinders planetary science

by Michael Kantner

Recent events have sent shock waves through the scientific community. The Mars Observer (MO) disappeared, the Superconducting Supercollider has been cancelled, and Congress has been slashing funding for scientific projects. Dr. Arden Albee, project scientist for MO and dean of graduate studies, had several comments on the state of space exploration in America. In short, he believes that planetary science will continue, but in a smaller scale.

The loss of MO was a large blow to planetary science. After twelve years of planning and construction, the satellite was to have been transmitting data now. The entire project, from orbit path to camera selection, was driven by scientists to maximize scientific return. Basically a combination of a Landsat and a weather satellite, MO would have given scientists a better knowledge of Mars than they have of Earth.

Now, engineers and scientists are working on a new mission that will use MO’s spare parts and fly in 1996. Unfortunately, this requires money in the 1995 budget, which has already been drafted. Since missions to Mars can only be launched every two years due to planetary alignment, the next window of opportunity is in 1998. Around Thanksgiving, the results of the funding requests should be known. With Congress in a budget

slashing mood, optimism is not running high.

According to Albee, the MO’s disappearance directly affected all planetary scientists. Since spacecraft do not arrive at planets often, huge amounts of data are collected in relatively short time spans. Recently, Magellan finished its mission, and MO was supposed to have provided the next large data set. Fortunately, the immediate effects on campus are small. While about 250 people at JPL changed projects or were laid off, at Caltech the effect was not immediately seen. In general, only research proposals were affected. While several faculty and graduate students planned to analyze the data, the funding had not yet begun. Few existing projects were hurt.

However, future missions to Mars will be affected by the loss of the Mars observer. While Pathfinder, an engineering demonstration of small Mars lander, will continue, MESUR (Mars Environmental Survey) is in a state of flux. Pathfinder, essentially a heavy predecessor to MESUR, will not perform much science. MESUR, on the other hand, will return large amounts of data. MO would have provided data necessary for planning landing locations and resolving other issues for MESUR. While MESUR is continuing, its requirements, status, and launch schedule are changing.

see MARS OBSERVER, page 9

### 1993 Mudeo

Mudeo is the annual “Freshman-Sophomore Event” organized by the Junior Class officers. This year it will be held on November 13, from 11 A.M. to 3 P.M. There will be a campus-wide Scavenger Hunt, and two competitions in the mud pit by the gym. The class that wins two out of three events will get its name engraved on the Mudeo plaque. The mud events are Volleyball and Tug-O-War, so wear your best old clothes and old shoes. The Mudeo Barbeque is at 3 P.M. by the gym. To participate in the events, please meet at 11:00 A.M. by the Bookstore on Saturday.

### The California Tech

In this issue . . .

Letters to the editor . . . . .	2
Ernest Explains . . . . .	2
Crime & Incident Beat . . . . .	3
World News . . . . .	3
Y News . . . . .	3
Bridge Without Sam . . . . .	5
Entertainment . . . . .	5
ASCIT minutes . . . . .	7
IHC minutes . . . . .	7
Adam Villani: Media Guy . . . . .	10
Comics . . . . .	10
Events & Notices . . . . .	12



# letters to the editor

## Night out with the BOD

by Anandi Raman

Would you like a free ticket to see the "Three Musketeers" at the El Capitan, a really old theater in Hollywood? Would you like to see this movie before most of the people in this country? Would you like to enjoy the company of the entire ASCIT Board of Directors off campus?

The ASCIT Social Budget will pay for 18 people to see this movie

on Friday, November 19 at 7:30 P.M. Sign up now on the side of Winnett to enter your name in the drawing. The 18 people will be randomly selected and the winners notified by phone, so don't forget to leave a phone number where you can be reached! Transportation will be provided.

The signup sheet is coming down at 10 P.M. today (November 12), so hurry over and sign up soon!

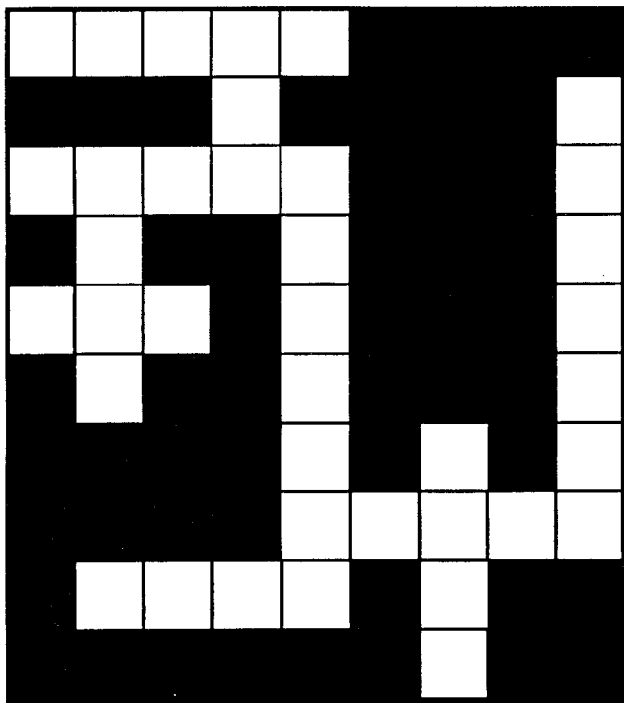
Mike Benedetti's

### Word Puzzle Fun

#### Things That Are Dropped

Suggested time: 17 minutes

(The answers to the crossword puzzle below will fit the description in the title.)



Some of the answers are plural, some singular. Most answers fit some sort of cliché. Hints: One answer is "subject." One is not "line."

## IHC

### 'praised'

I would like to congratulate the IHC on their professionalism and depth of character which are immediately apparent to anyone who read the IHC minutes in last week's issue of the *Tech*. I was especially impressed with the courtesy and respect the IHC extends to other student groups; it is encouraging to me that our elected officials work so well with the other pillars of student government at Caltech. Indeed, I think I speak for many students when I say that their minutes exemplified the kind of commitment and integrity we have come to associate with, and indeed expect from, the IHC.

Michael Brundage  
Vice President, ASCIT/  
Chairman, BOC

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](mailto: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.

#### Announcement

A new group, the Student Affairs Committee, is forming to facilitate communication between students and Sharyn Slavin, Asst. V.P. for Student Affairs. Students interested in participating in this committee, which will meet bi-weekly should come to an informational meeting on Thursday, November 18 at 12:30 in the MOSH's office.

### ACADEMY BARBER SHOP

27 N. Catalina Ave., Pasadena  
Open Tues.-Sat., 7:30 A.M.-4:00 P.M.  
(818) 449-1681

**Paris**  
**\$199\***

Mexico City \$118\*  
Dallas \$120\*  
Boston \$179\*  
Washington DC \$179\*  
Paris \$199\*  
London \$215\*

\*Fares from Los Angeles and are each way based on a roundtrip purchase. Restrictions apply and taxes not included. Student status may be required.

### Council Travel

14515 Ventura Blvd. #250  
Sherman Oaks, CA. 91403

**1-818-905-5777**



Ernest Tomlinson

# Ernest Explains

Dear Ernest,

What did you think of TACIT's production of "You Can't Take It With You"?

—Just Wondering

Dear Wondering,

It sucked. This bunch of sorry amateurs should pack up and go home now.

Dear Ernest,

I was shocked and disappointed to read your complete dismissal of TACIT's fine production of "You Can't Take It With You." How could you be so callous? You clearly didn't take the time to go backstage and meet the cast. I'm sure they would have been more than happy to talk with you, maybe even to buy you a drink or something.

—Shocked and Disappointed

Dear Shocked,

First of all, the play took place in Winnett Lounge, so there wasn't any backstage to visit. Secondly, I have met many of the cast members, and I really would rather not socialize with them.

Dear Ernest,

This flyer was taped to my windshield recently, and I thought you might be interested in it:

#### "YOUR CHILDREN ARE IN DANGER!"

The dangerous drug LSD has recently been found in this neighborhood in the form of small "tattoo" decals depicting Mickey Mouse, the Walt Disney character. The unscrupulous drug dealers give these decals free to small school children, who lick the tattoos and ingest the LSD. Once the children become addicted, they are forced to steal money from their parents every week for their next "hit." The children cannot stop taking the "acid," as it is called, without a long and painful withdrawal. Write your congressman today and ask for tougher legislation before your child becomes the next victim of these drug dealer scum.

—Keeping my Children Inside

Dear Keeping,

Thank you for alerting the community to this danger. I'm sure there are many grateful mothers out there who will now be able to protect their young children from this menace. God bless you.

Write to Ernest Tomlinson, c/o this newspaper for Ernest's free pamphlet, "How Drugs Are Destroying Our Nation." Enclose a self-addressed, stamped envelope and \$5 to cover shipping and handling.

## TONIGHT'S ASCIT MOVIE

### IN THE LINE OF FIRE

STARRING CLINT EASTWOOD

Friday, November 12  
Baxter Lecture Hall  
7:30 & 10:00 P.M.

\$1.50 for ASCIT members  
\$2.00 for all others

NEXT WEEK: \* *The Muppet Christmas Carol* \*

## LAEMMLE THEATRES

### ESQUIRE

2670 E. Colorado Blvd.  
(818) 793-6149

Anthony Hopkins  
Emma Thompson

### Remains of the Day

Daily 4:00, 7:00, 10:00 p.m.  
Sat-Sun Bargain Matinee 1:00 p.m.

### COLORADO

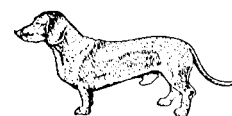
2588 E. Colorado Blvd.  
(818) 796-9704

Robert Altman's

### SHORT CUTS

Daily 4:20, 8:10 p.m.  
Sat-Sun Bargain Matinee 12:30 p.m.

## The California Tech



Caltech 40-58 SAC, Pasadena, CA 91125  
phone: (818) 395-6153  
e-mail: [editors@tech.caltech.edu](mailto:editors@tech.caltech.edu)  
ISSN 0008-1582

VOLUME XCV, NUMBER 8  
NOVEMBER 12, 1993

#### EDITORS

Michael "Arnold" Benedetti  
Chris "Freddy" DuPuis  
Michael "Vincent" Radford

BUSINESS MANAGER  
Chris "X" Echols

EVENTS AND NOTICES EDITOR  
Jeff Denniston

SPORTS EDITOR  
Damian Martinez

PHOTOGRAPHER  
Rich "Mr. Woodman" Zitola

CIRCULATION  
Heidi Sutton  
Wei Lin

#### STAFF WRITERS

Gypsy "Julie" Achong  
Tobias Bartels  
Margaret "Egan, Penfold!" Belska  
Zackary "Gabe" Berger  
Amanda Eckermann  
Jeff "Beau" Goldsmith  
Wei-Hwa Huang  
Monwhea Jeng  
Michael Kantner  
Laurent Stadler  
Adam Villani  
Jonathan "Juan" Weinstein

CONTRIBUTORS  
Dirk Runge

Published weekly except during vacation and examination periods by the Associated Students of the California Institute of Technology, Inc. The opinions expressed herein are strictly those of the authors.

Letters and announcements are welcome. All contributions should include the author's name and phone number and the intended date of publication. Submit copy (preferably on Macintosh 3.5" disk) to the Tech mailbox outside SAC room 40, or e-mail to [editors@tech.caltech.edu](mailto:editors@tech.caltech.edu). The editors reserve the right to edit and abridge all submissions for literacy, expediency, etc.

The California Tech is distributed free. Issues will be mailed off-campus upon receipt of \$10 per year to cover third-class postage and preparation costs. Printed by News-Type Service, Glendale.

## CRIME AND INCIDENT BEAT

by Gypsy Achong

**Crime Tip:** Please lock away all valuable personal belongings when leaving an office or lab, especially if the room itself is not locked.

11/1 10 A.M.-8 P.M. An undergrad locked his bike in the bicycle rack east of Steele with a chain and lock. The bike was missing when he returned. \$400

11/2 10:30-11:30 A.M. A member of staff left her briefcase on a chair inside of her office in Steele Lab. When she returned she noticed that her briefcase had been opened and \$20 removed from her wallet. The office door was not locked. \$20

11/5 5:00 P.M.-11/7 10:00 A.M. Four light fixture covers in the south west elevator of Beckman Institute were vandalised. \$120

11/6 A keg and tap were stolen from a party at 255 S.Hill. \$52 + beer

**This Week's Total: \$592 + beer**

## ynews

by Sam Webb

Welcome once again to the Y News. Look outside on the Olive Walk today for our Noon Concert. This week, the band is Hammersmith, playing a variety of blues and jazz. Next in the Noon Concert Series will be Caltech's very own Jazz Band, next week on the 19th. To remind everyone who signed up for broomball, it's coming up on November 20th (we apologize to those who were unable to sign up—our ice time has been decreased by *two hours*. In addition, people who read the Y News were on the move—all spaces were filled by Monday, November 1 at 10 A.M.). Schedules will be printed in next week's *Tech*. If you couldn't manage to sign up this term, get ready for next term. Due to popular demand, we might be having *two* tournaments! Also remember that as the term begins to die out, Decompression will be coming soon. Don't forget to show up for the entertainment and free food. The Caltech Velo, Caltech's Bike Club, sponsors trips every week into the San Gabriels, so if you got the extra Wednesday, don't be bashful and head off away from the smog. The Y also coordinates many volunteer activities. Coming up soon is trail maintenance in the mountains, working to help improve and build hiking trails. The next trip will be on November 20th, so mark it on your calendars and sign up at the Y. The Y also needs volunteers to tutor on Thursdays from 4-6 P.M. If you are interested, show up in Clubroom 1! This weekend there was also a Tijuana trip, to help build a community center. It's a lot of fun and you can count on a bunch of trips coming up soon. Well, that's all for the week. Remember that the Y ExComm has weekly meetings on Mondays at Noon in the Y lounge, so if you're interested, drop in. If you have any questions about any events, feel free to give us a call at x6163.

### Haiti

The military government of Lt. Gen. Cedras stayed away from U.N. talks on reinstating President Jean-Bertrand Aristide. U.S. officials said that the U.S. will seek major increases in sanctions against Haiti.

### Jordan

The fundamentalist Islamic Action front lost 6 of its 22 seats in Parliamentary elections for the 80-seat lower house. Secular ruler King Hussein praised the results as a critical step towards democracy.

### Russia

Yeltsin revealed his new proposed constitution. His new constitution gives Russian citizens the right to own land and businesses. It also increases the powers of the president, allowing him to appoint ministers and judges, and the prime minister with Parliamentary approval. The President also gains the ability to dissolve Parliament if it rejects his candidates for Prime Minister three times, or if a no-confidence vote passes. The new constitution also makes it harder for Parliament to impeach the president. To impeach the president, the lower house must initiate charges of treason and form a commission to investigate the charges, the Supreme Court has to confirm the members of the commission, and the upper house has to convict the president on the charges by a two-thirds vote. Half the members of the upper chamber will be appointed by officials who work for the president.

The strong presidential power gives other liberal parties an issue to separate themselves from Yeltsin. Up until now, the various liberal parties have not had significantly different stands on the issues, so Yeltsin's party, Russia's

Choice, has been leading the liberal vote largely through name-recognition. But with the strong presidential powers in his new constitution, other liberal parties have an issue to attack Yeltsin and his party with. It is not yet clear whether they will do so.

The document also reduces the autonomy of Russia's 22 ethnic republics. The republics contain ethnic groups which want to remain separate from the Russian federation both for ethnic cultural reasons, and for economic reasons—the Russian government collects taxes through the regional government, and many of the ethnic republics currently keep most of their tax revenue. While Yeltsin's earlier

Valery L. Manilov announced that Russia's former policy of only using nuclear weapons as retaliation for a nuclear attack was over. A new doctrine signed by Yeltsin says that nuclear weapons may be used to stop non-nuclear attacks.

### Somalia

Fighting in Mogadishu between regional leaders Mohammed Farah Aidid and Ali Mahdi Mohammed continued. U.N. officials met with both clan leaders (warlords) to discuss how to reduce tensions and fighting in Somalia.

### United States

The Senate voted for mandatory life sentences for those convicted

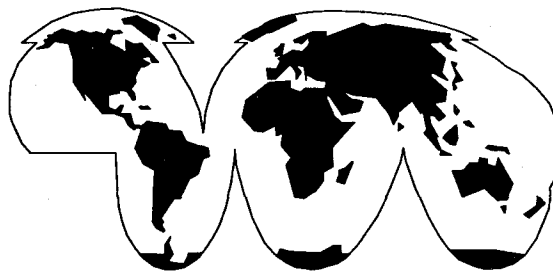
by federal courts of a third violent felony and to outlaw handgun possession for most people under 18.

President Clinton said that the United States would not allow North Korea to develop a nuclear weapon. The State Department reported that North Korea had moved more troops to its south-

ern border. Clinton said that he would consider an attack on South Korea to be an attack on the U.S.

Perot said that a police officer had told him that the FBI had heard from an anonymous caller who was speaking on behalf of an unidentified man who was just released from a Mexican prison that six Cubans were planning to assassinate him. He explained that the Cubans wanted NAFTA to pass so that they could make money selling drugs shipped through Mexico. He told his supporters that if he should be killed, they should not "spend a minute mourning . . . Make sure you stop NAFTA, with or without me."

## World News



by Momo Jeng

constitutional drafts gave the republics more autonomy, his new version makes them equal in power to the administrative units of Russia.

A referendum on the new constitution will be held December 12th, along with new Parliamentary elections. The constitution will be pass if over half of eligible voters vote, and over half of those voting approve the new document. The 50% quorum means that those opposed to the new constitution may vote against it simply by boycotting the election. Alexander V. Ivanchenko said that if the constitution is voted down, the new Parliament will draft a constitution.

Yeltsin announced that he plans to finish his term, which is scheduled to last until 1996, reversing promises he made earlier to hold presidential elections next June.

## HEY, YOU!

Write for the *Tech*.  
Yes, you.

**Lucy Baldwin**

**A Social Pub**

Fine Deli Sandwiches  
Microbrewed Beers  
Curries  
Darts  
Wines

This Week's Guest Beer:  
**Lost Coast Wheat**

45 N. Arroyo Pkwy  
Pasadena, CA 91103  
(818) 795-0652

open until midnight

Guinness • Bass • Fullers • E.S.B. & London Pride • Sierra Nevada Pale Ale • McNeillie's Extra Irish Ale  
Blackthorn Cider • Newcastle Brown • Young's Ramrod • Sheaf's Stout • Sam Adams • Sam Smith's  
Heineken • Amstel Light • Black Dog Ale

**DESSERTS**  
with the  
**MOSH**

The evening of  
**December 1<sup>st</sup>**  
from nine o'clock  
until eleven o'clock

**Steele House**  
355 S. Holliston Ave.

**Pasadena's Biggest & Best Used Bookstore**  
**Cliff's Books** RECORDS & COMICS  
630 E. Colorado Bl. Pasadena  
"Just around the corner from the Pasadena Playhouse"  
818-449-9541

**ALWAYS OPEN UNTIL MIDNIGHT**

- ☐ Over 1/4 million Books, Records & Comics
- ☐ Largest selection of paperbacks in L.A.
- ☐ Biggest Science / Technical stock in USA
- ☐ Fine & Rare Book Room ~ 1st Editions

20% Discount  
with CalTech ID





# You Can't Take it With You

by Mike Benedetti

Ah, fall. What a season it is. The changing of the leaves, the year's first snow, the bittersweet smell of flaming thespians in the air. Must be time for TACIT's fall production.

"You Can't Take It With You", a comedy by Moss Hart and George Kauffman, opens tonight in the Winnett center. The play follows an event in the lives of the unconventional Vanderhoff family: the engagement of Alice Vanderhoff (played by Priyamvada Rai) to Tony Kirby (Myke Hoskins), an upper-class youth whose family does not approve of the wild antics of the Vanderhoffs.

I went to Wednesday's dress rehearsal of the play, and I enjoyed it. TACIT's production of the play is rather rough in spots, but what it lacks in polish, it makes up for in entertainment value. The cast is solid, with particularly interesting performances from Daniel Williams (as Grandpa), Priyam, and Myke. Also memorable were Eve

Kiefer, Michael Ohliger, and Gary Olsen.

"You Can't Take It With You" was written early in this century, so the crack TACIT staff had to update some of the references in the play for 1993. For the most part, the additions are seamless, and some of them are even funny. The play itself is less likely to provoke a laugh than a smile.

In the tradition of all great Tech TACIT reviews, I guess I should slam the play, so let me warn you that no one in the cast is able to react convincingly when surprised by a snake. Furthermore, the special effects (excepting Rob Ferber's pyrotechnics) are rather unimpressive. However, if you can deal with these hardships, you should be able to enjoy "You Can't Take It With You" despite yourself.

"You Can't Take It With You" opens tonight at 8 p.m. in Winnett Lounge. Tickets are available at the Caltech Ticket Office: \$6.00 general admission, \$4.00 for Caltech students.



Freshman Toby Bartels as Paul Vanderhoff tests out fireworks during Wednesday's dress rehearsal of TACIT's "You Can't Take It With You."

## RAVE REVIEWS

# Sin-a-matic

by Leo Fontaine

Saturdays at club 7969 (formerly Peanuts), Sin-a-matic is the sister club to Club Fuck! It is run by the same people. Club Fuck! ran into some silly trouble with the LAPD awhile back, and is currently not running. Fortunately, Sin-a-matic is in West Hollywood, which is a city by contract. If you don't know what that means, ask Dr. Kiewiet.

About the club: Sin-a-matic has one of the most relaxed and laid back crowds of any club in L.A. The crowd is mixed, about 25% Homosexual and 30% Heterosexual. The music is industrial, played over a decent sized dance floor with some pretty interesting, and possibly X-rated visual effects, though not as impressive as kontrol factory's visuals. Because the crowd is laid back, the dress "code" is relaxed too. Jeans, and a rock band T-shirt will do quite well, so will basic black, which is preferred. Dress cheap if you like—don't dress elegantly. You may show as much skin as you like, as long as you leave your underwear on. The club used to allow female patrons to go topless, but that may have changed.

The atmosphere can be best described in a nutshell as "The Big Tease." If you get "into" the club's atmosphere, expect to be flirted with. There are three rooms in the club. The main room has the dance floor, some seats that seem to be always taken, and the main bar. There is a second room with another bar, more tables, a pool table, and some—ahem—interesting paintings on the walls and doorways. The back room deserves its own paragraph.

On most nights, not all, the back room has some sort of S & M show. Sometimes the people are paid performers putting on a show on behalf of a record company, or just to bring people to the club. Other times the performers are just other patrons having a good time. Should you venture into the back room and people are "playing," please watch quietly, and stay out of the way. If you are *really* adventurous, you can ask someone to "play" with you, just be sure that those you ask are regular patrons too.

Two types of people shouldn't go to Sin-a-matic. The squeamish, or easily offended, and those who are likely to get themselves into something that they might regret later. Sin-a-matic, otherwise, is a really cool industrial dance club with a little twist to it. When you go there, if you get there early, you can park on the lot at the club. Otherwise park on the street nearby. The parking meters aren't active after 6:00 p.m., so there is plenty of free parking.

**Sin-a-matic:** Saturdays at Club 7969 (formerly Peanuts), 7969 Santa Monica Blvd, West Hollywood, (213) 654-0280 or (213) 654-0281. \$10, 18 and over.

Since the little ☺ editors decided to cut the club listings from the little ☺, this column was started in the Tech in hopes that the reviews will be included in the next little ☺. This is an open column—if you wish to write your own **RAVE REVIEW**, please submit your review to the Tech as you would any other submission.

You are cordially invited to attend a

# PRESENTATION

on

# FIXED INCOME SALES & TRADING

on

Thursday, November 18, 1993

5:00 p.m.

East-West Room

Athenaeum

All undergraduates are invited to join  
Lehman Brothers professionals

# LEHMAN BROTHERS

# Bridge Without Sam

by Jeff Goldsmith

## Dreaming

Just as I was falling asleep one night, a hand from Jimmy Kauder's *Creative Card Play*, a.k.a. *The Bridge Philosopher* spurred a strange and devious thought. Kauder's book, by the way, is spectacular.

♠ AQJ103	♠ K72
♥ 932	♥ AK4
♦ 96	♦ 742
♣ 983	♣ 642

N

W

E

S

♠ K72

♥ AK4

♦ 742

♣ 642

SOUTH	NORTH
1♦	1♠
3♣	3♣
4♣	5♣
Pass	—

I am sitting (sleeping?) East and the opponents hop to game. Declarer is a well-known professional, one of the best; dummy is immaterial. Partner leads the ♥J, which I win, picking up declarer's Queen. I cash a second high heart and everyone follows.

The hand is counted out, now. Declarer should be 1-2-5-5. If partner has a minor suit King, we have this beaten, but can I beat this hand if he has less? Maybe, by a terrific swindle.

Let's imagine that I had ♠Jxxx. Can I beat it then? If I return a heart, declarer will ruff and draw two rounds of trump, partner outshowing on the second round. He'll then cross to dummy with the ♠A and hook back and claim if his diamonds are as good as AKQ, which they almost certainly are. To avert that, I can return a spade, taking out dummy's entry before trumps are tested. The problem with that play is that it is entirely too suspicious. Declarer is easily good enough to figure out why I played a spade into the AQ and take a first round club hook.

Therefore, if I do that without the ♠J, maybe declarer will work it out and take the club hook, losing to partner's Jack. Imagine the look of surprise on partner's face to take that trick!

So I return a spade into dummy. Without a sideways glance, declarer draws trumps, dropping partner's doubleton Jack smoothly, and claims. Oh well, maybe it was a nightmare after all.

# Weavers box set disappoints

by Michael Benedetti

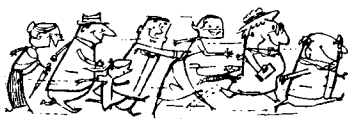


Let me begin by saying that I don't like most folk music. Few performers are either innovative or talented enough to produce anything worth buying. In fact, aside from Dylan, Guthrie, or any blues artist you care to name, the only folkies I like are the Weavers, the original black-listed, torn-and-twisted masters of folk.

Vanguard has recently released a four-disc Weavers boxed set, *Wasn't That A Time*, marking the 45th anniversary of the Weavers' formation. Overall, the set is mediocre. It does justice to the Weavers' early, pre-blacklist days, featuring everything from the period that matters. "Goodnight Irene," "Wimoweh," and "Kisses Sweeter than Wine" are all here, in their overproduced glory.

The set continues with the Weavers' Carnegie Hall reunion and their sixties work. This is the heart of the set—song after song from the grand folk catalogue, all performed simply and with grace.

Unfortunately, the set does not contain any material from their final 1980 reunion at Carnegie Hall. The compilers made a big mistake here: the final show was an important part of the Weavers' story, and its inclusion would have helped the set a lot. As it stands, *Wasn't That A Time* will only suit hardcore fans looking to round out their collections, or folkies who know what they're getting into.



# entertainment

## Games & Puzzles: Mischmash

by Wei-Hwa Huang

Lewis Carroll is best known for his "children's" book *Alice's Adventures in Wonderland*. His alter ego, Charles Dodgson, was an amateur mathematician. His expertise was logic, which is evidenced by a few strange passages in his *Alice* books. He also invented this extremely beautiful pictorial representation of logic (this was before Boolean Algebra was invented) which I cannot show here for two reasons: one, the editors might not be so eager to reproduce it; two, I don't remember it and I'm too lazy to do the research right now. (Actually, I shouldn't be insulting the editors just because THEY ARE GREAT PEOPLE WHO SHOULD BE PAID FOR THIS JOB, since they could change the words I write anytime they wish. [Actually, Wei-Hwa, we are paid approx. \$3.00/hour for our time. Thanks anyway—eds.]) Carroll also was a great fan of puzzles: he wrote hundreds of acrostics, was an avid anagrammer, and turned out such gems as:

Yet what are all such gaities to me  
Whose thought are full of indices and surds?  
 $x^2 + 7x + \square = 11/3$

This is the only poem I know that features a quadratic equation inside it.

**Puzzle 1:** What number did he put in the blank? *Hint:* It's an integer between 1 and 100.

Anyway, the feature of this column is a game invented by Carroll that he called Mischmash. He developed a elaborate system of scoring, etc. but the basic idea has resurfaced quite a few times under such names as "tidbit," "Words

Sources," and the like. The rules are quite simple: a person in a group thinks of a keyword, and pulls out a "kernel" from it. A "kernel" is a sequence of letters that appears in the word consecutively and in that order. For instance, if the word was WINDJAMMER, then DJ, IND, DJAM, MME, would all be acceptable "kernels." The other people then try to find words that fit the kernel. It does not have to be the keyword: any word that fits will work. Since the first person may have chosen a really easy kernel (such as IND which may lead to WIND, WINDOW, KIND, INDIGENOUS, etc.), I play with the idea that the word former may add letters to the kernel to make it harder (in the previous example, one could say "No, I'm thinking of a INDJ.") Sometimes this may make the keyword obvious; if you said "GP" and you were getting KINGPIN, PIGPEN, FLAGPOLE, MAGPIE, GANGPLANK, you might modify it to "GCP," which would make the answer, EGGPLANT, quite evident.

**Puzzle 2:** I've left out a solution to GP. What is it?

The scoring should somehow acknowledge good kernels that have hard-to-think-of solutions, and also acknowledge those people who can find the less obvious solutions to the kernel. This will work in a large group by giving bonuses to those who can think of words that no one else has thought of. There should be the customary word game restriction of no proper nouns, no abbreviations, no hyphenated words, etc. I find this game works best with a group of people just sitting under the stars, with no scoring and just calling kernels to each other. Here's a few DB for you to start out with. Send

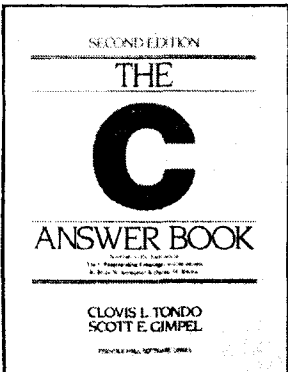
your solutions to Wei-Hwa Huang (see address below). "Best" solutions will be printed in a later issue, and I will verify them by my copy of "The Complete Word Game Dictionary." Please, don't try to "cheat" by using grep on /usr/dict/words. It's probably a violation of the honor code.

1. HPU	14. XYH
2. BMA	15. NDM
3. UIA	16. EOPH
4. DYT	17. ETBA
5. ATHB	18. GD
6. IGME	19. AXA
7. SMIS	20. YPU
8. DJO	21. TBL
9. OJO	22. WERH
10. XW	23. RMP
11. ANZ	24. ERH
12. ZYZ	25. IPB
13. WF	

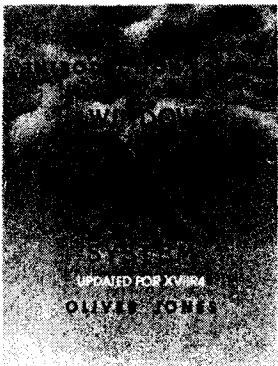
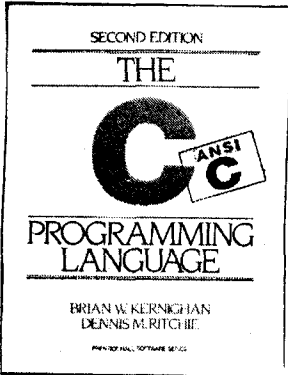
Oh, one more thing: If you want to send me your best Mischmash kernels, go ahead. I may print those in a later issue too if I get enough good ones.

**Solution to last week's Hit or Miss:** I have the disadvantage in this game. Each of the 13 places has a 1 in 13 chance of getting the correct card, so my expected value of correct cards in the first round is one. But this turns out to be true no matter how many cards I'm trying to fit, so at each round my expected value of correct cards is 1. In other words, I can expect to finish in 13 rounds. That's a payment of thirteen dollars for \$11 (\$10 plus the cards), so I should expect to lose two dollars every time I play.

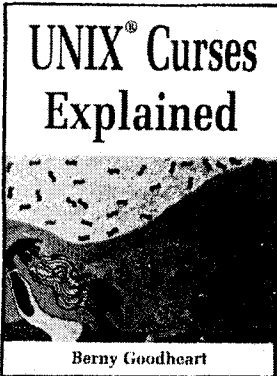
Anything you'd like to see in this column? Send your suggestions, comments, ideas to Wei-Hwa Huang, MSC 542, call x1540 and leave a message, or e-mail to whuang@cco.



## PRENTICE HALL COMPUTER BOOK FAIR



SELECTED UNIX... AND X WINDOW SYSTEM COMPUTING TITLES WILL BE 10% OFF NOVEMBER 17 & 18 AT THE CALTECH BOOKSTORE'S ANNUAL FALL SIDEWALK SALE



**DAD SAID.  
“YOU  
DON’T GET  
SOMETHING  
FOR  
NOTHING.”**

**WELL, GUESS WHAT?  
HE WAS WRONG.**

**WE’VE MADE A BIG DEAL OUT OF NOTHING.  
YOU SEE, WE DON’T CHARGE AN ANNUAL FEE.  
PROVING ONCE AGAIN, WHAT  
DAD DOESN’T KNOW WON’T HURT HIM.**



**IF YOU DON'T GOT IT,  
GET IT.<sup>SM</sup>**

## IHC minutes, November 4

by Craig Smith

**Present:** U.S.A.F. Hassan, Ben Smith (Bl), Jumpin' Jim Murdoch (Da), Eric Loftsgaarden (Fl), Eric Slayback (Ll), Dave Perlman (Ri), Stan Grant (Ru), Tom Mannion (Housing), Kim West (DRL), Gregg Henderson (Security), Moeen Abedin, Jen Cato, Justin Stapleton, Ed Etzkorn, Brian Cooper (briefly), and me.

**Interhouse Swimming:** Coach Dodd has sent a letter via Brian Cooper saying that there should be another women's Interhouse swimming event because of the increased number of undergraduate women who swim. The IHC agrees that if the House athletic teams agree to something and present it to us, we will approve it.

**Security Escorts:** Because of the recent muggings of Caltech undergraduates, awareness of personal safety has increased. There was a meeting about a week ago at which Barbara Green, Sharyn Slavin, Gary Lorden, Stanley Grant, Moeen Abedin, Asif Hassan, Bill Irwin (Physical Plant), and Gregg Henderson discussed the problem, and a possible student solution. In Ruddock, hopefully starting next week, there will be an organized effort to provide an service where students who live off-campus can get a ride home from a student with a car. There will be two shifts each night (8-midnight and 12-4 A.M.). So far, Stan has seventeen volunteers in Ruddock. Moeen and Stan would like for there to be a coordinator in each House who would take care of such items as scheduling for their house, and for each House to have someone on duty. Call Moeen @ x6757 if interested.

The administration will help the students take care of the legal details of their service, provided it works, and is used. As of now, in addition to the experimental student service, Security will provide a ride for students wanting a ride to their off-campus homes, but it may take a while, and don't expect to be taken 20 miles away.

**Emergency Phones:** The emergency phones have all been hard-wired now, so that there should be an instant response. A light comes on over in security letting them know which phone was activated within seconds of activation.

**House Security:** Kim and Tom Mannion are looking into revamping the Houses' security. They would like to get a group of undergrads to help them look into the options. They are considering things like magnetic locks and keypads. There would be a time commitment, mostly in the winter term, and they would like to put together

a proposal by spring term. If anyone is interested, contact Kim, Asif, or me.

**Master Keys:** Kim and Asif had a meeting where they discussed campus master keys. Kim would like to get a group of undergrads together to discuss how to strengthen the master key system. Part of this would involve talking to the people who are in charge of the particular building keys. Unfortunately, there is a trend to take buildings off of the South Master because of the security risk. Rather than allow this to continue, we would like to make the whole system more secure by re-keying the appropriate locks, and checking that the people in charge of each building actually want students to have access to it.

**Pumpkin Drop:** Blacker and Ricketts will give Dabney \$25 for the Pumpkin Drop. Fleming won't. Ruddock and Lloyd don't know [typical—eds.].

**Discobolus News:** Fleming defeated Lloyd [typical—eds.] in Ultimate. Ricketts will play Fleming in volleyball this weekend. Page challenges next.

**Meeting Times:** Asif feels that if we want to be more involved in campus affairs, we must be more accessible; meeting at midnight is not the most accessible time for administrators who may want to come to our meeting to tell us something. After much deliberation the meeting time is set at Wednesdays at 3:00 P.M.

**Attendance:** Stan feels that by Derek not attending the meeting, and not sending a representative to the meeting, that the members of Page House are not being fairly represented.

**Other Announcements:**

- Food and Socialization at DRL/MOSH office on Friday afternoons from 3-5 P.M.

- Rob Cobb's old office in the SAC may become the new ASCIT/IHC meeting room/office.

- E-mail me (craig@cco) or talk to me by Tuesday at 3:00 P.M. if there is something which you would like on the agenda for the meeting on Wednesday. Also, e-mail me if you would like a copy of the agenda e-mailed to you on Tuesday afternoon.

- Moles are armed with paint guns now, so watch out. If you are pissed at them using them inappropriately, feel free to complain to Ben Smith.

- Dave is worried about a Safety Office plot to remove all transoms from the south houses because they are fire hazards.

- In a related announcement, Stan tells us that he was told that Ruddock's lounge furniture is a fire hazard.

## ASCIT BOD minutes, November 9

by Karen Shih

**Present:** BOD (minus Gisela R-Sandoval), Jennifer Trittschuh, Dave Derkits, Christy Esau, Vicki Brown, Eric Hackman, Roy Jones

*New Business*

- Big T Compensation Schedule and Budget for the 1993-94 book are presented. The BOD expresses some concern over my role as an "editor" without official appointment; for now, I am merely an assistant and do not have any official editorial powers. Motion to approve both schedule and budget, passes, (6-0-0; Anandi is late)
- ASCIT Movies, Women's Glee Club, Anime Society, and IHC all pick up money for first term and some, for last term. The BOD would like to know where the Velo Bike Rack is, and where it will be stored if it's not going to stay on the ASCIT Van.

*Old Business*

- Bylaws—If anything is to be done this term, the BOD will have to approve proposals next week; after looking over the calendar, the following schedule is set to bring the proposals to a vote before the end of the term: 11/16—approve proposals, 11/19—publish proposals in the Tech, 11/29—vote. Some

more discussion takes place, but no one brought up any new arguments for either side. A vote will be taken to approve the proposals at the next BOD meeting. The approved proposals will be posted by Wednesday, November 17 and all comments should be published along with the proposals on the 19th since there will not be another Tech before voting takes place on the 29th.

*ExComm Chair*

- If anyone is interested in buying a set of used speakers, talk to Jennifer Trittschuh.

*Director of Social Affairs*

- The Three Musketeers sign-up goes up tonight; it will come down Friday night at 10:00 P.M. Watch for an article in The California Tech for more info.

- An ASCIT/ GSC Party is slated for January 8th, 1994.

- Mudeo 1993 is this Saturday at 11:00 A.M.; meet in front of the Bookstore.

*Director of Academic Affairs*

- Two sub-committees have met; the last one is meeting tomorrow. Flora will publish a synopsis of the progress in all sub-committees next week. Any correspondence should be directed towards Flora Ho, 205 Page.

- CLUE class evaluation sheets will be sent out sometime in the next two weeks. Flora needs co-editors.

*Freshman Director-at-Large*

- Faculty will get forms soon for entries in the UROH; co-editors are needed for second term. Anyone with any research leads should talk to Angie Bealko, 210 Page.

- Lighting Tour: There is an informal walking Lighting Tour, conducted to bring light to any badly lit areas on campus; please direct any suggestions for more/ better lighting anywhere on campus to Angie; she is the undergraduate representative on the Tour.

*IHC Chair*

- The saga of the nomadic IHC continues as House presidents search for a meeting time to satisfy all schedules. Entries for its agenda are due 24 hours in advance to Craig Smith, IHC Secretary.

- Many alumni-undergraduate programs are in the works; there are lots of funds for this purpose just waiting to be used.

*BOC Chair*

- Congratulations to Zack Berger on his appointment as a BOC Representative-at-Large.

- ASCIT Office Hours for the V.P.: Tuesdays, 3-6 P.M. SAC 38

## IHC minutes, November 10

by Craig Smith

**Present:** Asif, Ben Smith (Bl), Jim-Bob Murdoch (Da), Brian Cooper (Fl), Eric Slayback (Ll), Stan Grant (Ru), Derek Surka (Pa) Tom Mannion (Housing), and me.

**Meeting Time next week:** we decided to meet on Tuesday morning at 11:00 A.M. next week, the 16th of November. Hopefully, this meeting time can be permanent.

**Interhouse Swimming:** Brian talked to the Athletic teams (except one), and everyone thought it would be fine to add another women's swimming event (50 m) per Coach Dodd's recommendation. Vote to add Women's 50 Breaststroke to Interhouse swimming event list passes (4-0, one abstention).

**Food Contract Renewal:** TFM's contract is up for renewal this year. First topic of discussion for next week's meeting is Food Service. Feel free to attend.

**Rotation Rules:** We will be taking proposals for changes to the rotation rules at next week's meeting.

ing. Changes will be voted in by the meeting three weeks from now.

**Alumni Association News:** The alumni association is trying to develop programs to provide interaction between current undergrads and alumni. One of their plans is to possibly have a sort of career day where alumni talk about their careers at a reception in one of the houses. Another interesting idea is that of a Homecoming party for the alumni, where each of the Houses has a party, and the alumni come back and meet the current undergrads in a social setting. This might happen second or third term if the proper channels are pursued now, and the ball gets rolling.

**Fire Safety Classes:** James asks if other houses, or just other people who have been in trouble about fires would mind contributing to

the cause of paying for the Fire Safety Classes which about forty darbs have been taking. The total cost will be \$1400.

**Sharyn Slavin,** the Assistant Vice President of Student Affairs, wants to set up a Student Advisory Committee of about 10 or 11 undergrads with whom she would meet about once every two weeks informally to discuss issues which may come up which affect the student body. For example, when the sexual harassment policy came out a few years ago, that is where it came from. If you are interested, call Sharyn at the Student Affairs Office.

**Discobolus News:** Fleming beat Ricketts in Volleyball last week, Fleming has accepted Page's challenge in Tennis this week. Dabney challenges next.

### DE LUXE SHOE REPAIR

946 Huntington Drive, San Marino

(just east of Oak Knoll Avenue)

**FREE PICK-UP AND DELIVERY WITH  
\$20 MINIMUM ORDER — TO CALTECH  
OR WITHIN 2-MILE RADIUS OF CAMPUS**

- EXPERT SHOE REPAIRING
- ALL TYPES LEATHER REPAIR
- RESTYLING • DYEING • COLOR MATCHING
- ZIPPER REPLACEMENT
- ORTHOPEDIC SPECIALISTS
- HANDBAG REPAIRS • LUGGAGE REPAIRS
- CUSTOM-MADE BELTS
- BIRKENSTOCKS RESOLED & RECORKED

**Vibram**  
sole  
Authorized  
Factory Dealer



ALL WORK GUARANTEED TO YOUR SATISFACTION

**(818) 282-9875**

MON-FRI 8 am-5 pm  
SAT 9 am-2 pm

### Spring Garden Chinese Restaurant

Mandarin & Szechwan Cuisine—Best in Town!

### LUNCH & DINNER

Lunch Special

Monday-Friday, 11:30-2:30 P.M.

5% discount with Caltech ID

CATERING & FOOD TO GO

Beer • Wine • Banquets

AMPLE FREE PARKING

187 N. Sierra Madre Blvd.,

Pasadena, CA 91107

(818) 796-2531



SERVING CALTECH  
SINCE 1945

Authorized Agents for Airlines,  
Hotels and Steamships

**H.B. BENNETT**  
The  
Finest in  
Professional Travel  
Services  
(818) 795-0291  
(213) 681-7885  
CAMPUS EXTENSION  
5091

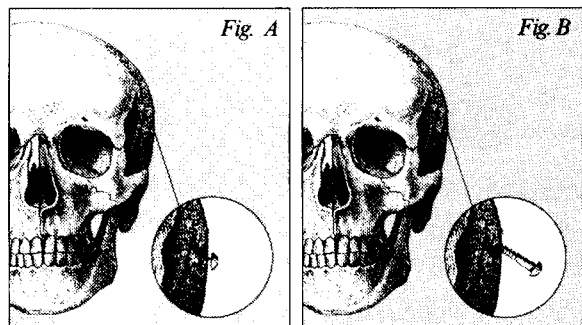
690 E. GREEN ST.  
PASADENA, 91101  
(between El Molino & Oak Knoll)





# The Anatomy of the Citibank Classic card: a body of services and peace of mind for students.

For years, scientists could only theorize about the Citibank Classic Visa® card, unable to actually observe anything below its epidermal surface (i.e. the plastic). Surely, the highly intelligent services were evidence of an advanced brain. But with the latest advances in x-ray technology, and when the light could catch the various parts just so, it was confirmed: the Citibank Classic Visa card



Scientists theorize that the mind of the Citibank Classic Visa cardmember (Fig. A) is secure because it receives superior service; the mind of the non-Citibank Classic Visa cardmember (Fig. B) is not secure because—could it be—it has a screw loose?

is head to toe more evolved than ever imagined. ¶ At its backbone are 3 services to cover the purchases you make on the card. Starting at the *Lower Costal Spine*, we see **Citibank Price Protection** can assure you of the best price. All you have to do is discover the same item advertised in print for less, within 60 days, and Citibank will refund the difference up to \$150<sup>1</sup>. Along the *Oops-It-*

*Slipped Disc*, **Buyers Security**<sup>sm</sup> can cover those purchases against accidental damage, fire or theft, for 90 days from the date of purchase<sup>1</sup>; and **Citibank Lifetime Warranty**<sup>sm</sup> allows one to extend the warranty for the expected service life of eligible products up to 12 years<sup>2</sup>. So if you ever buy a walkman, a stereo, whatever, it will be reassuring to know that Citibank can bend and be flexible while still lending support.

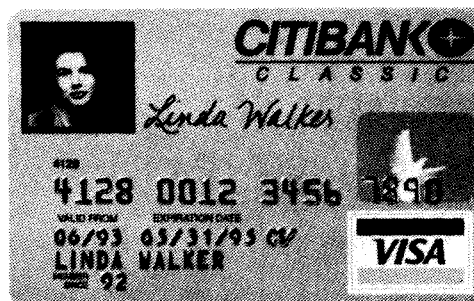
¶ The backbone is then connected to the cranium or headbone. You can actually see it on the top left hand corner of the card. Look at the bottom of the page. The **Citibank Photocard** has the head of the cardholder on it, as well as his or her own signature, right on the front. That way, it will help prevent fraud.

It will make a good form of ID as well, since you get to choose your own photo. ¶ But what about the Nervous System? The fact is, it doesn't have one, not in the spinal cord nor in the brain. What it has is the Very Calm System. Because even if your credit card gets stolen, or gets lost, an involuntary muscle called the *Extendus Anewcardeus* activates the **Lost Wallet**<sup>sm</sup> Service which can replace your card usually within 24 hours. ¶ As suspected, there's another involuntary muscle: the *heart*—a beating and caring heart, big enough to give students special discounts and savings. You'll receive a **\$20 Airfare Discount**

on domestic flights<sup>3</sup>; savings on mail order purchases, sports equipment, magazines and music; a low variable interest rate of 15.4%<sup>4</sup>; and, no annual fee. (In other words, the card itself doesn't cost a forelimb and a hindlimb.) ¶ Naturally the heart of the Citibank Visa card pumps life and personalized customer service into all its parts, **24 hours a day**. So no matter what the question you might have concerning your card, you need only call the 800 number. Citibank representatives each have a neck they are eager to stick out for you. They will always lend an ear. Or a hand. They will keep an eye out for you. They will put their best foot forward. Etc. ¶ So call to apply. You don't need a job or a cosigner. And call if you'd like your photo added to your regular Citibank Classic Visa card. The number is **1-800-CITIBANK** (1-800-248-4226), extension 19. ¶ If we take an overview of the whole body of services that make up the Citibank Classic Visa card, and consider that it will facilitate building a credit history, then you must shake a leg, flex your index finger and call today.

## Monarch Notes® Version:

With your purchases covered, no fee, and a low rate, the Citibank Classic Visa card will go easy on your Nervous System. Call **1-800-CITIBANK** (1-800-248-4226), extension 19.



Not just Visa. Citibank Visa.

<sup>1</sup>Certain conditions and exclusions apply. Please refer to your Summary of Additional Program Information. Buyers Security is underwritten by The Zurich International UK Limited. <sup>2</sup>Certain restrictions and limitations apply. Underwritten by the New Hampshire Insurance Company. Service life expectancy varies by product and is at least the minimum based on retail industry data. Details of coverage are available in your Summary of Additional Program Information. <sup>3</sup>Offer expires 6/30/94. Minimum ticket purchase price is \$100. Rebates are for Citibank student cardmembers on tickets issued by ISE Flights only. <sup>4</sup>The Annual Percentage Rate (APR) for purchases is 15.4% as of 10/93 and may vary quarterly. The APR for cash advances is 19.8%. If a finance charge is imposed, the minimum is 50 cents. There is an additional finance charge for each cash advance transaction equal to 2% of the amount of each cash advance transaction; however, it will not be less than \$2.00 or greater than \$10.00. Monarch® Notes are published by Monarch Press, a division of Simon & Schuster, a Paramount Communications Company. Used by permission of publisher. ©1993 Citibank (South Dakota), N.A. Member FDIC.



# The Tech Survey

As we printed earlier in the term, the editors have decided to revive the *Tech* survey to spice things up (and fill space) this term. The response has been somewhat light, however, so we've printed the categories again, along with entry blanks for your convenience. Submit your votes to us by e-mail at [editors@tech.caltech.edu](mailto:editors@tech.caltech.edu), by campus mail at SAC 40-58, drop it in the box outside the office (SAC 40), or give it to one of the editors. Please vote only once in each category.

<b>Food—the best and worst:</b> Caffeinated beverage	<b>Shopping—the best:</b> Grocery store	<i>Tech</i> feature	Best and worst toilet
Chinese	Music store	T.V. show	<b>Other</b>
Coffeehouse shake			Best pickup line
Coffeehouse waiter	<b>Entertainment—the best and worst:</b>	<b>Caltech</b>	Best and worst font
Hamburger	Doctor	Professor most likely to cop the Nobel action	
Italian	Local band	Best and worst class	
Mexican	Movie Theater	Best and worst classroom	
Pizza	Radio station	Best college to recruit new Caltech administrators from	
Sandwiches	Romantic composer	Nicest on-campus building (architecture)	
Thai	Superhero		



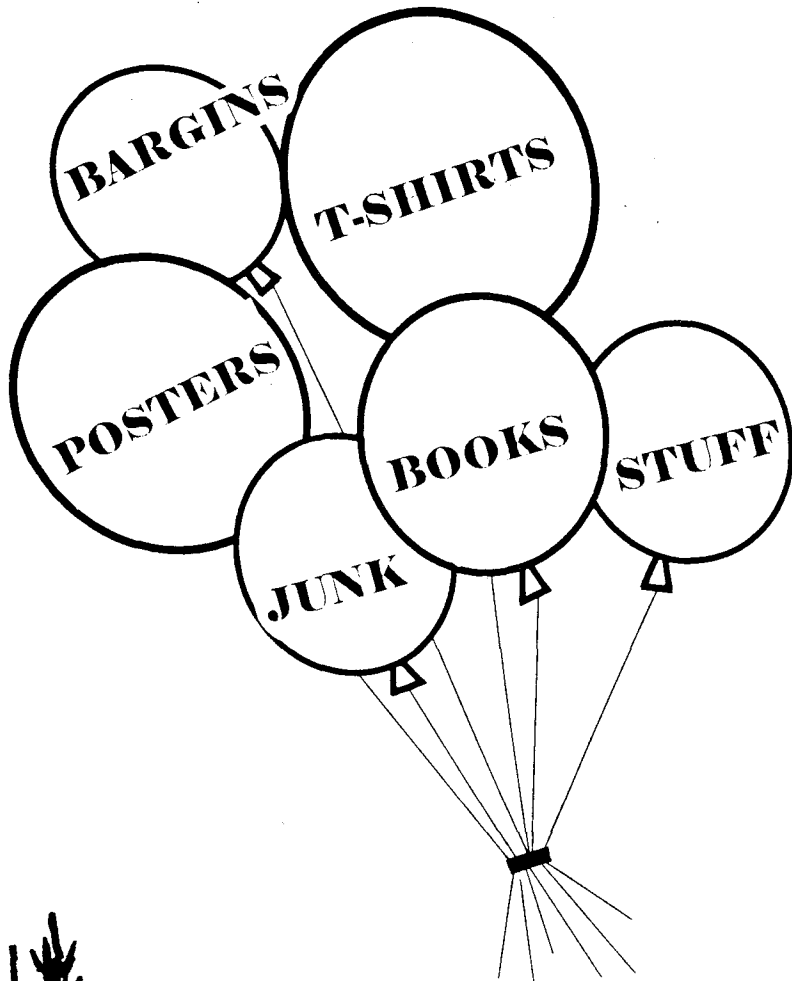
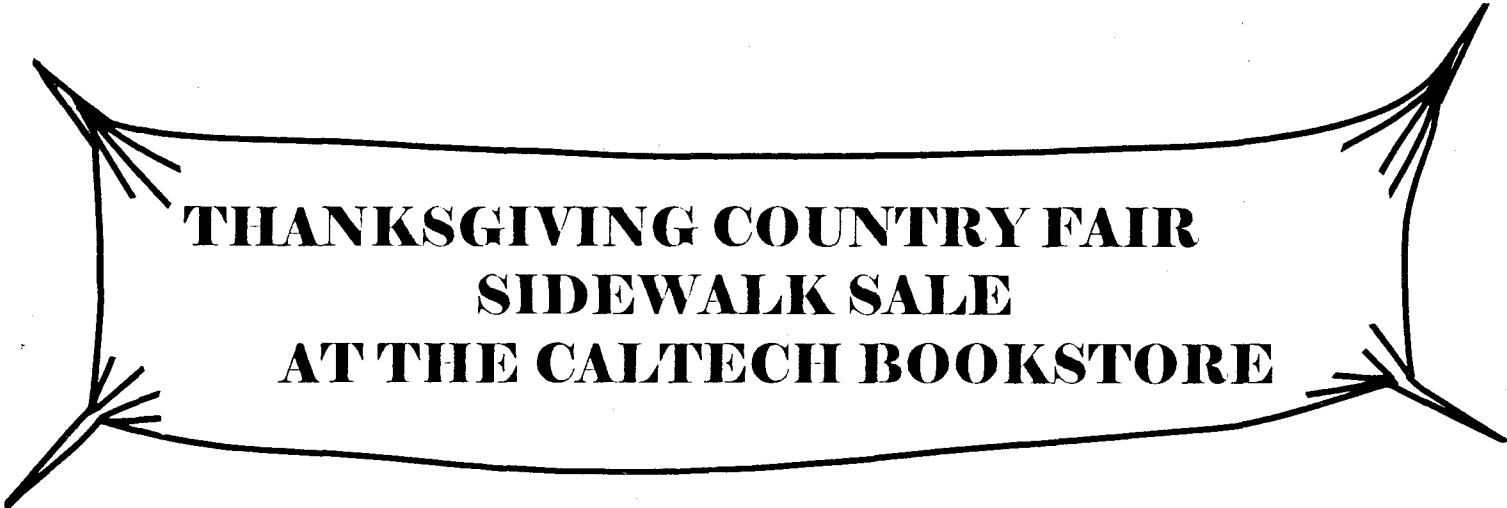
continued from page 1

## Mars Observer

The Cassini program may also be affected indirectly by MO. As NASA's last large planetary probe, it represents the end of an era. NASA's new ideal is "Faster Better Cheaper." Cassini is none of these. Since Cassini is a line item on the budget, Congress can directly kill the program, as they did to the Supercollider. However, Cassini is nearly finished and already has been through some major budget cuts so it is expected to continue.

Clearly, Congress plays a large role in planetary science, and this role appears to be increasing. While multi-year commitments to a project would be ideal, they will not be seen in the near future. In fact, Congress is doing the opposite. Some bills are so detailed that they include management instructions. The nation's anti-incumbent attitude also hurts science. Politicians are being elected on platforms of budget cutting. Projects approved in the past no longer have their supporters, and are easily cut.

With NASA on a tight budget, it is impossible to predict what the next planetary science mission will be. Many people are proposing different Discovery Class Missions, which cost about \$150 million (including launch vehicle) as opposed to MO's price of over \$1 billion. Since money is tight, a simpler MO-like mission could displace funds from other missions, such as the Pluto Fast Flyby. However, it is clear that any new project will be small and inexpensive to fit NASA's new direction.

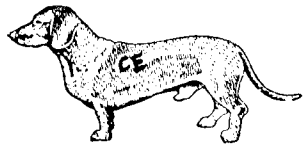


COME AND JOIN US FOR THE  
BEST SIDEWALK SALE EVER  
TERRIFIC BARGAINS BETTER  
THAN EVER BEFORE

DATE: NOVEMBER 17TH AND 18TH  
TIME: 10:00 AM TO 4:00 PM  
FREE COOKIES AND LEMONADE



CASSETTES  
SWEAT SHIRTS  
GREETING CARDS



**Rag Time**  
on Green  
RESALE CLOTHING  
for  
WOMEN  
1136 E. Green St. • Pasadena  
(818) 796-9924  
Wed 10-6 • Mon-Tue-Thu-Fri 10-5 • Sat 10-3



Dilbert® by Scott Adams



## ADAM VILLANI: MEDIA GUY

by Adam Villani

### Things to watch out for in the Nov. 25 *Rolling Stone*

- The letters page.
- The article on Meat Loaf. Even though a few issues ago *Rolling Stone* acknowledged the fact that his new album, *Bat Out of Hell II*, is really awful, they somehow felt inclined to legitimize Mr. Loaf with an article about his comeback, now that the album has topped the charts. This only cements their position as record-company publicity writers masquerading as journalists.
- The footwear ad on page 20. There's a picture of a 90's-looking young woman with the caption, "Anti-establish yourself." What is the message here? That you aren't cool and independent unless you wear our shoes? This is the same sort of thinking that calls the most popular music in America today "alternative".
- The Evian ad on page 40. Not only is there the usual ad copy insinuating that somehow you need Evian to sustain life, but this time it's accompanied by a photo very reminiscent of the cover to Nirvana's *Nevermind*. Eerie, isn't it?
- The cover story on basketball star Shaquille O'Neal. It's a pretty decent article on a rising celebrity, but all of the talk in the article about his merchandizing empire only makes me think that his being on the cover of *Rolling Stone* is all part of a big capitalist ploy to control our minds and wallets.
- Perfume/Cologne ads.
- The Red Hot Chili Peppers naked on page 88. Last week I mentioned this picture, and a few days later, *Rolling Stone* publishes it again. Who says Media Guy doesn't have his finger on the pulse of America?
- The PowerBook ad. Actually, this is just a funny ad.
- The review of Kate Bush's *The Red Shoes*. Once again, Media Guy foretells *Rolling Stone*.
- On page 123, in the Holiday Gift Guide, there's an ad for a book with the most pretentious title in publishing history: *The Best of Rolling Stone: 25 Years of Journalism on the Edge*.
- Finally, the charts. Garth Brooks is number one.

### "You Can't Take it With You"

Okay, so it isn't high art, but this new TACIT production certainly is enjoyable. The best part is that watching the wacky hijinks of the family in this play is like watching a family full of Techers.

### Jan Svankmajer's "Alice"

This is a bizarre Czech version of *Alice in Wonderland* available on video that combines live action with object animation. Svankmajer succeeds in creating an *Alice* even more surreal than the original book. In case you aren't familiar with Svankmajer's work, Peter Gabriel's "Sledgehammer" video was a very good imitation. Svankmajer animates skeletons, meat, and an actual dead white rabbit to create a very disturbing, surreal film. It's not all gimmicks, though; Svankmajer is not just a great animation director but a great director, period. Note that many people become annoyed at the voice-over, while I thought that it just added to the paranoia of the movie. Watch the film when you're in the right mood, and while you're at it, be sure to try to see some of his great short films, too.

continued from page 1

## Research

also in defending their results and in discussing problems responsibly.

Dr. Tombrello hopes to see this type of class adopted by other scientific divisions at Caltech. Knowing the undergrad tendency to procrastinate on homework and sleep in class, he would like to see smaller classes where discussion is animated and students are under more pressure to know the material. The instantaneous feedback would al-

low flawed ideas to be discarded quickly and solid thoughts to be improved upon more easily. Such a system is traditional in many British schools and is used in a number of American schools, including Harvard.

The Second Hurdle will be available Monday, for any freshmen interested (sorry, only frosh are eligible). You need not have worked on the First Hurdle in order to be considered for the Ph 11 class. So go for it, frosh! You just might have fun and win some money besides gaining valuable experience!

## THINK GREEN

1½ miles east of campus

## SAVE GREEN

A free turkey to this term's renters!

Furnished 1-bedrooms &amp; studios

320 &amp; 340 S. Sierra Madre Blvd. • (818) 564-1137



INDIVIDUAL

### ENGINEERING COMPUTER SCIENCE GEOSCIENCE APPLIED SCIENCE

Individual initiative has always played a major role in Schlumberger's growth and technological leadership. Today, Schlumberger employs 51,000 people in 75 countries with annual revenues in excess of \$6 billion.

Schlumberger is comprised of two main business groups: oilfield services, which offers a complete range of energy exploration and recovery services; and Measurement and Systems which produces everything from utility meters to CAD/CAM systems.

The Schlumberger Companies value individual initiative. If you'd rather lead than follow, and enjoy the recognition that goes along with taking responsibility for the work you direct, contact us today. We'll give you the support, training and opportunity you need to meet the challenge.

INITIATIVE.

Schlumberger

Founded On Innovation.  
Expanded Through Technology.  
Worldwide.

**Please Note:** Open to all interested students. Your attendance at the Information Meeting is a prerequisite to your interviewing process. Please attend. Refreshments provided! Casual attire.

### INFORMATION MEETING:

Date: November 22, 1993

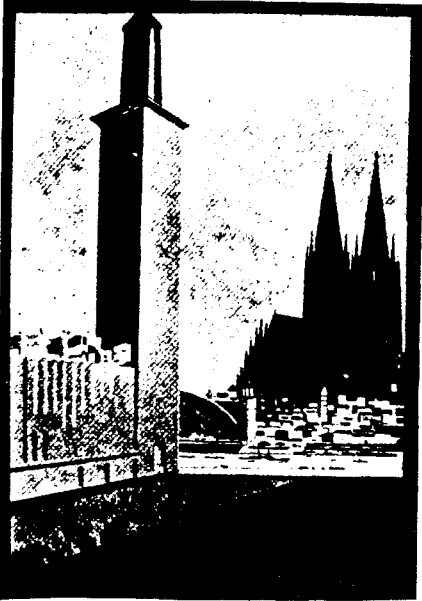
Time: 4:00pm-6:00pm

Place: Student Activity Center, Room 15

### INTERVIEWING:

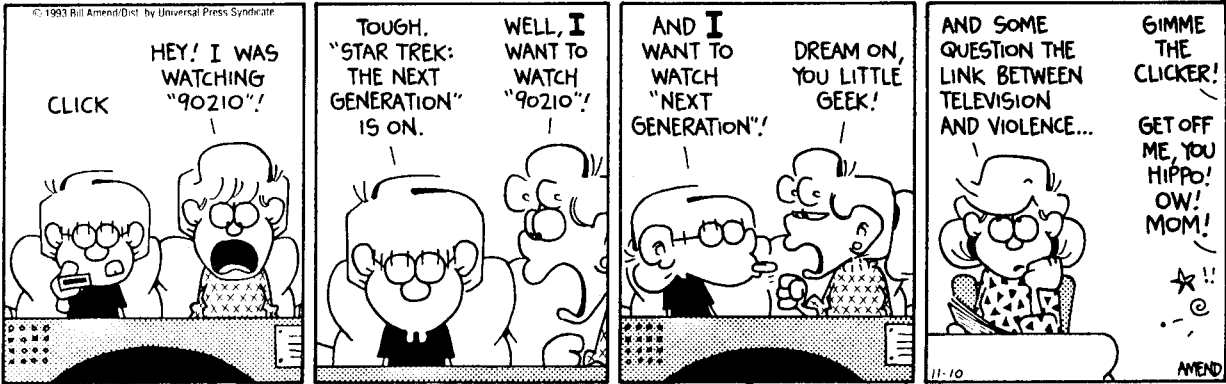
Date: November 23, 1993

An Equal Opportunity Employer



FoxTrot

by Bill Amend



PASADENA COMPUTER

1756 E.Colorado Bl.,Pasadena,CA.91106 T:(818)568-1088 F:(818)568-9132

Since 1988

Canon

- 486 VESA LB
- Pentium overdrive ready
  - 2 VESA & 4 ISA slots open
  - 4MB ram up to 68MB
  - 240MB IDE hard disk
  - 3 1/2" & 5 1/4" floppy drive
  - Canon 14" SVGA monitor (.28)
  - VESA accelerator SVGA W/1MB
  - 2 serial, 1 parallel
  - 9600 fax/ 2400 modem
  - Canon 101 keyboard
  - Logitech mouse, Canon mouse pad
  - Energy star compliant (EPA)
- Free software pre-installed (w/manuals)
- Microsoft DOS 6.0 (Value \$55)
  - Microsoft Windows V3.1 (Value \$75)
  - Microsoft Works for Windows (Value \$115)
  - MicroFax by Phoenix (Value \$95)

One Year On-Site Warranty

486DX2-50MHz \$1695

C:M

486 VESA LB

- Pentium overdrive ready (P24)
- 256K cache
- 3 VESA local bus slots
- 4MB ram up to 32MB
- 255MB IDE hard disk
- 3 1/2" & 5 1/4" floppy drive
- 14" SVGA full screen (.28) NI
- VESA accelerator SVGA W/1MB
- 2 serial, 1 parallel
- VESA dual IDE FD/HD controller
- 101 keyboard
- 3 button mouse

One Year Parts & Labor  
Warranty

486DX-33MHz \$1275

486DX-50MHz \$1450

486DX2-66MHz \$1525

C:M

Super power  
486 EISA VESA LB

- Pentium overdrive ready (P24)
- 256K cache
- 100% bus mastering
- Eight 32 bit slots
- 4MB ram up to 32MB
- 340MB IDE hard disk
- 3 1/2" & 5 1/4" floppy drive
- 14" SVGA full screen (.28) NI
- VESA accelerator SVGA W/1MB
- 2 serial, 1 parallel
- VESA dual IDE FD/HD controller
- 101 keyboard
- 3 button mouse

One Year Parts & Labor  
Warranty

486DX-33MHz \$1575

486DX-50MHz \$1750

486DX2-66MHz \$1825

All the computers & notebooks, printers are cash discount only

Canon  
INNOVA 486NX



- New Intel enhanced 486SX-25MHz
- 4MB ram up to 12MB
- VGA accelerator video card W/512K Ram (3.8 Winmarks support ex.SVGA monitor)
- 120MB IDE hard disk
- 1.44MB Floppy drive
- 9600 Fax/ 2400 modem
- Built-in trackball (Middle)
- Battery hours: 2.5 to 5 hours
- 110-240 automatic
- 5.9 lbs
- Microsoft DOS 6.0
- Microsoft Windows 3.1
- Microsoft Works V2.0
- MicroFax by Phoenix

One Year Road-Side Warranty  
\$1595

Canon  
NoteJet 486



- 486SX-25MHz
- 4MB ram up to 12MB
- PCMCIA II slot
- 80MB IDE hard disk (135MB, 185MB option)
- 1.44MB Floppy drive
- Built-in Bubblejet printer
- 360 dpi
- Canon hand held trackball
- Microsoft DOS 6.0
- Microsoft Windows 3.1

One Year Road-Side Warranty

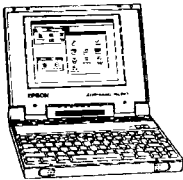
80MB HD \$2195

135MB HD \$2395

185MB HD \$2595

EPSON®  
ActionNote. 4SLC/33

- 486SX-33MHz
- 4MB ram up to 8MB
- 120MB IDE hard disk
- 1.44MB Floppy drive
- 9600 Fax/ 2400 modem
- Carrying case
- Logitech trackball
- Microsoft DOS 6.0
- Microsoft Windows 3.1
- Win fax lite



\$1650

One Year On-Site Warranty

MITAC

- 486SX-25MHz (Intel inside)
- 4MB ram up to 18MB
- Removable 120MB IDE hard disk
- 1.44MB Floppy drive
- Built-in trackball mouse
- System Preloaded
- Microsoft DOS 6.0
- Microsoft Windows 3.1

\$1350

CLASSIFIED ADS

FUNDRAISING--

GREEKS & CLUBS

Raise up to \$1,000 in just one week! For your fraternity, sorority, and club. Plus \$1,000 for yourself! And a free T-shirt just for calling. (800) 932-0528, ext. 75.

HELP WANTED--

**CAN YOU MAKE** a car vanish from police radar in a manner consistent with FCC regulations? If so, we need to talk. Outstanding opportunity! Mike McKown, President, Jammers, Inc., Douglas, Wyoming. (307) 358-1000.

**ALASKA SUMMER EMPLOYMENT** - fisheries. Many earn \$2,000+ /month in canneries or \$3,000-\$6,000+ /month on fishing vessels. Many employers provide benefits. No experience necessary! Get the necessary head start on next summer. For more information call (206) 545-4155 ext. A5955.

LAMPSHADES 'R' US--

**SORRY**, we're all out. But if you have a lampshade or other mathom to pass on, drop a line to Mathom Dept., 40-58 SAC.

REAL ESTATE--

**CALTECH PROFESSOR'S DREAM HOME!** Reduced! English style, 2-story, 4-bedroom, 3-bathroom, with study. 100x150 lot. Quiet rose garden, many fruit trees. 1535 Oakdale St., Pasadena. Call Daniel at (818) 288-1396 for appointment. Hurry! Won't last.

ADVERTISEMENTS WANTED--

YOUR AD HERE

**RATES**.....\$4.00 for first 30 words; .....10c for each additional word. Send written ad with payment to 40-58. Deadline is 6 p.m., Monday before issue. No charge for on-campus lost & found.

\* Note: asterisks denote new announcements.

## Notices

The Los Angeles Branch of the Orton Dyslexia Society and the Los Angeles Chapter of the Learning Disabilities Association of California are holding their **3rd Annual Free Information Fair and LD Walkathon** on Sunday, November 14, 1993 at Los Angeles Pierce College in Woodland Hills. Registration for the LD Walkathon begins at 8:00 A.M., the Free Information Fair opens at 9:00 A.M. For a free brochure and information call (818) 725-3777.

\* **Don't Board Your Pet this Thanksgiving!** While I'm pet sitting/house sitting for a Caltech family, I'll also sit (spoil) your pets—for free! Available November 19 to December 5. Call Susan at (818) 796-8879 after November 19 to have your pet cared for.

\* **Opera History? You've got to be kidding!** If you're one of the many who can't believe anyone would take an "opera survey" course at Caltech, you ought to think twice. For nearly 400 years, opera has been the most lavish, expensive, and enduring form of public entertainment in Western Civilization. Find out more about it when Mu 122, Form and Style in Music, takes on the music of Mozart, Verdi, Puccini, Bizet, Strauss, and even the perennial favorite of Caltech: Wagner. In-class videos and field trips to live performances. OM Monday, 3 P.M., 25 Baxter. Instructor: Neenan.

## Events & Services

\* **The Caltech Occidental Concert Band** will present a concert on November 20, 1993, at 8:00 P.M. in Beckman Auditorium with soloist Jane Wei, and Cosmo the Magician, who will perform a magic act to the music of Disney's *Aladdin*.

\* **Occidental-Caltech Symphony Orchestra**—Concerts will feature: the overture to "The Merry Wives of Windsor" by Nicolai; Sinfonia India, by Chavez; Concerto in E Major for Double Bass, by Dittersdorf; and Symphony No. 8 by Beethoven. Allen Robert Gross will be conducting, and David Young will be playing double bass. Monday, November 22, 1993 at 8:00 P.M. in Ramo Auditorium (for information, call (818) 395-4652), and Tuesday, November 23, 1993 at 8:00 P.M. in Thorne Hall, Occidental College (for information, call (213) 259-2785).

\* **The Caltech Women's Tennis Team** is hosting the **1993 Beaver Fever Tennis Tournament** on November 20-21. Entry fees are \$10 for singles and \$15 each doubles team. The events are women's and men's singles and mixed doubles. Please contact Coach Karen Nelson at x3265 for more information. All of the Caltech/JPL community is welcome to enter.

**You Can't Take It With You**—Come see Teachers in TACIT's production of this immortal comedy. The show runs evenings in Winnett Lounge, Nov. 12, 13, 19 and 20 with matinees on Nov. 14 and 21. Tickets available at the door or through the Caltech Ticket Office (x4652) for \$6.00 or only \$4.00 for Caltech students.

**Racquetball Club Tournament** on November 13 and 14 to be held at the Braun Athletic Center during the normal hours of the gym. The entry fee includes racquetballs for the tournament with a tournament T-shirt. ASCIT, GSC, and OWC members will receive reduced entry fees courtesy of their organizations. Entry forms will be available at the Braun center or will be mailed to people by request. Please contact Larry at hazman@cco.caltech.edu or x6727.

**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.

**Caltech Velo**—We have had some trouble getting a room for Wednesday, so send mail to cycling@cco or read the newsgroup caltech.announce.bicycle to discover the secret location!

The Caltech Bicycle Club organizes all types of rides, both road and off-road 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, 5:00 P.M.: 15 easy paced miles
- Tuesday, 5:30 P.M.: women only road ride
- Wednesday, afternoon: off-road ride, times vary
- Saturday, 10:00 A.M.: off-road ride

Rides leave at the time listed, so please arrive a few minutes early. In addition, we are trying to organize a weekly off-road ride, and other recreational rides. Starting November 9, we will be going to the Dominguez Hills Velodrome for track bicycle riding. Cost is \$40 for four sessions, including bicycle rental. For more information, contact Michael Kantner at x4882 or send e-mail to kantner@hot.caltech.edu.

The **Caltech Gay/Lesbian/Bisexual Support Group** meets the first and third Tuesdays of each month 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, call 395-8331.

**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 Sunday at 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 hello! 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@xhmcia.caltech.edu).

**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.

**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 leave early. 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

\* **Women, War, and Rape in Bosnia-Herzegovina**—Lisa Watson, Director of the Pasadena Foothill Valley YWCA Rape Crisis Center, will talk on her recent trip to Bosnia-Herzegovina to help establish a Rape Crisis Center for war survivors there. She recently returned from a similar trip to Kuwait. Monday, November 15 from noon to 1 P.M. Winnett Club Room 1.

\* **Unwinding the Double Helix: The Ethical and Theological Implications of the Human Genome Project**—Biologist and theologian Fr. Richard Benson addresses the ethical and religious questions posed by what may be the most ambitious scientific project of the next half century. Sponsored by the Caltech Newman Center and the New Oxford Review Forum, on Monday, November 15 at 7:30 P.M. in 24 Beckman.

\* **Undergraduates in math, applied math, and physics or otherwise interested in mathematics** are encouraged to attend the **Annual Charles R. DePrima Memorial Undergraduate Mathematics Lecture**, to be held December 1, 1993, 4:15 P.M. in 151 Sloan. The Charles R. DePrima Memorial Undergraduate Mathematics Lecture was established by a gift from Charles R. DePrima and Margaret Thurmond DePrima. The Institute is privileged to honor the memory of Professor DePrima with a lecture each year by an outstanding mathematician. DePrima served as a faculty member at Caltech for over forty years. Ray Redheffer, UCLA, will deliver the lecture; his topics "Information, Probability, and the uniqueness of you and me." The lecture is free.

\* **How to Survive a Parents Busy Schedule**—Do you ever feel frazzled and have difficulty knowing where to begin? Do you find that you put off things? Do you feel like your days are too short? At times do you find yourself buried in clutter? Do you have difficulty remembering the last time you did something for yourself? If you said yes to any of the questions you will want to attend our **FYI Lunchtime Learning program featuring Cynthia Knight, Caltech Training and Development Specialist**. Five steps will be shared and explored on how parents can survive with busy schedules. Bring your questions and ideas on how you survive your schedule to share with other parents. Wednesday, November 17, 1993 from 12 noon to 1 P.M. in Winnett Lounge.

## Scholarships, Internships, & Competitions

**Rotary Scholarship**—If you missed the November 12 information meeting on the Rotary

Scholarship, please contact Lauren Stolper, Fellowship Advisor for information and application materials. Call x2150 or drop by her office by Lloyd House.

**Zonta International Foundation Amelia Earhart Fellowship**—provides grants of \$6000 for women who will be or are pursuing graduate studies in an aerospace-related science or engineering field. Call Lauren Stolper, Fellowship Advisor for further information at x2150.

\* **Visit China—The Durfee Foundation** invites Caltech students, staff, faculty, and recent alumni (those who have earned degrees in the last seven years) to apply for funds to support up to a year of travel, study, or exploration in China. Proposals that reflect a personal interest and vision related to China will be accepted between now and June 1995. The program is looking for projects in the range of \$3,000 to \$20,000 which will run no longer than one year. For further information and a brochure, contact Caltech's Office of Foundation Relations (x3969).

For information on the following scholarships, please contact the individuals listed at the end of each scholarship.

**United States Department of Energy: Integrated Manufacturing Pre-doctoral Fellowships**—The United States DOE is offering twelve three-year fellowships for study toward the Ph.D. degree. Eligibility is limited to citizens, nationals, and permanent resident aliens of the United States, who will have received a master's degree by the fall of 1994, but evidence of equivalent post-baccalaureate professional industrial experience may be offered by the applicant in lieu of the master's degree. There is a stipend of \$20,000 per year, and up to \$15,000 per year will be provided toward tuition and fees. Selection is merit based. Contact: Fellowship Office, National Research Council, 2101 Constitution Avenue, Washington, D.C. 20418, or call (202) 334-2872. Initial application date is November 5, 1993.

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

\* **The annual Mensa Scholarship Essay Contest** is here again. The essay should present clearly and concisely the applicants academic vocational and career goals. The only requirement is that the student be enrolled at an accredited college/university for the 1994-95 award year. All entries must be postmarked on or before January 31, 1994.

\* **The Korean American Scholarship Foundation** is offering two scholarships of \$10,000 each and over 20 scholarships of \$1,000 or higher. Applicants must be full time students of Korean heritage. Applications are available upon written request from KASF Western Region Office, 4424 Dulcinea Court, Woodland Hills, CA 91364.

Completed applications must be received by January 31, 1994.

\* **The Society of Women Engineers** is seeking qualified applicants for thirty-six varying in amounts from \$1,000 to \$4,000. Applications and supporting documents must be postmarked no later than February 1, 1994.

\* **The American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.** is announcing its Grant-in-Aid program. To be eligible for the program an applicant must be a full-time engineering student in the final two years of undergraduate study and have a cumulative grade point average 3.25 or above. The Grant is intended to encourage the student to prepare for service in the HVAC&R industry, and to stimulate his/her interest in research. Applications must be received at ASHRAE Headquarters by December 15, 1993, to be considered. Applicants will be notified of the results by April 1, 1994.

**The Association of State Dam Safety Officials, Inc. (ASDSO)** is offering two scholarships, in the amount of \$2500 each, to be awarded for the 1994-95 school year to one junior and one senior undergraduate student. Successful recipients must be enrolled in a civil engineering program, or in a related field as determined by ASDSO, and must demonstrate an interest in pursuing a career in hydraulics, hydrology, or Geo-technical disciplines, or in another discipline related to the design, construction, and operation of dams. Also, a GPA of 3.0 is required. Applications must be received by ASDSO no later than January 30, 1994. Announcement of successful candidates will be made in the spring of 1994.

**The American Society of Naval Engineers** is sponsoring a \$2000 scholarship for the 1994-95 academic year. The candidate must be a U.S. citizen, demonstrate a genuine interest in a career in naval engineering, and be applying for support for the last year of a full-time or co-op program or one year of graduate study leading to a designated degree in an accredited college or university. Application and supporting documents must be received by the association by February 15, 1994.

**The Data Processing Management Association** is offering two scholarships for \$1,000 each provided by the Bert A. Monaghan Scholarship Fund. Applicants must have financial need and have made Computer Science their major career goal. The Scholarship Committee must receive the application by November 19, 1993.

**The American Scandinavian Foundation of Los Angeles** will distribute five \$1000 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. Awards will be presented at an event in the late spring of 1994. Checks will be issued to students, payable following enrollment in the fall of 1994 (with the exception of senior awardees).



## PARIAN TRAVEL

Caltech Officially Approved

Most professional, courteous, economical and efficient service for your **official** and **personal** travel needs. Free service to you. We deliver.

Airlines, Cruises, Tours, Hotels, Car Rentals. Individual, Commercial, Groups.

**(818) 577-8200**

468 S. Sierra Madre Blvd., Pasadena

## The California Tech

Caltech 40-58 SAC  
Pasadena, California 91125

Save up to 35%

# BURGER CONTINENTAL

Save up to 35%

TO ALL CALTECH STUDENTS, FACULTY AND STAFF:

All the time.  
Seven days  
a week.

## HEAR THE WEDNESDAY NIGHT JAZZ BAND

**BREAKFAST BUFFET Mon-Sat \$3.95**

**LUNCH** with soft drink \$4.95

**DINNER** with soft drink \$6.25

Breast of chicken, seafood, lamb, or the day's special

## SPECIALTIES

Shish kebab Shaorma Souvlaki steak  
Fresh fish and lamb Baklava  
Homemade pizza Gourmet hamburgers

We cater for all occasions

535 S. Lake Ave.  
(818) 792-6634

Mondays — Half price margaritas.

Tuesdays — Beer half price.

Wednesdays, Thursdays 3-7 P.M.