



CALTECH SPORTS

All ready with new uniforms, the Caltech cross-country team blasts out of the starting chutes. See Page 3 for details.

## Tech SURF Day a Success

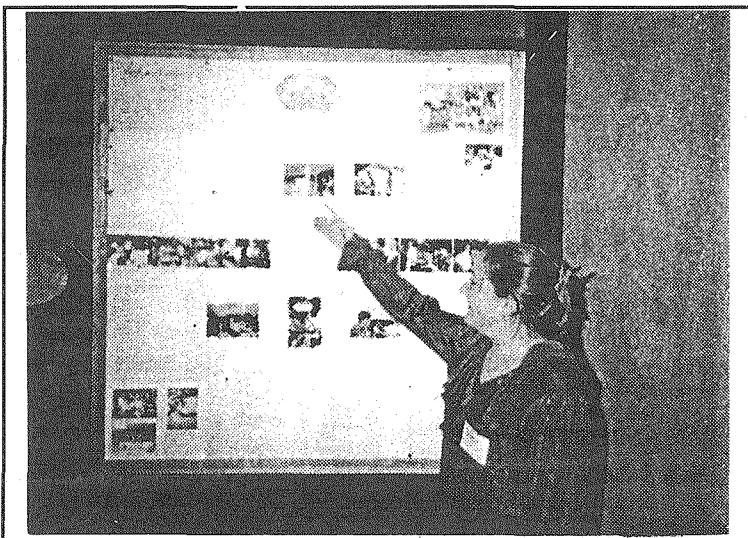
by Stephen Van Hooser

Caltech pride swelled Saturday as participants of the Summer Undergraduate Research Fellowship program showed off their discoveries during the annual SURF Seminar Day festivities.

After a semiformal, buffet-style lunch featuring subs and vegetables, SURF Board Chairman Carl Larson and SURF Administrative Committee Chairman Terry Cole delivered opening remarks. Parents and students then rushed to the presentation rooms for the seminars.

The mini-conventions were grouped into various categories: Biology; Chemistry and Chemical Engineering; Engineering and Applied Science; Geological and Planetary Sciences; Humanities and Social Sciences; Jet Propulsion Laboratory (JPL); Physics, Mathematics, and Astronomy; Small Business Industrial Associates; and the Young Engineering and Science Scholars (YESS). Students spoke for approximately fifteen minutes and spent about five minutes answering panel questions.

"My SURF project this summer has given me the broadened base of experience that I need to decide where I want to focus my research in the future" said Scott Van Essen, who worked with Professor Harry Atwater on advanced semiconductor fabrication. Like most Techers, Scott described his goals and findings, mentioned difficulties and



STEPHEN VAN HOOSER

Laura Brady discusses her SURF poster. Her project, "Teachers Touch the Sky," involved helping local teachers to promote space education and enthusiasm in their classes.

problems, and made recommendations to future scientists.

While most students worked on state-of-the-art research, some worked on educational projects. Professor Nate Lewis applied Caltech's quality summer manpower to his Chemistry Animation Project; students helped to create Chemistry videos that graphically demonstrate some of the most complex facets of chemical and atomic behavior. Other students, such as Topher Hunter, Tom Maccorone, and Doug Smith, designed curriculum and experiments to promote enthusiasm in high school courses.

Still other students worked on projects that directly affect industry.

Charles Sharman's work involved brainstorming for uses of 10kg of free space on each of 840 commercial communications satellites.

But SURF's benefits are not unidirectional. According to advisor Joan Horvath of the JPL, students are great assets in theoretical research because they have few preconceptions: "You can do a lot of innovative, high-risk science; the bad thing is they come in with no experience, and the good thing is they come in with no experience."

Also invaluable in the SURF process are the contributions of alumni and industry in the form of both money and time. Many of the seminar chairmen are Caltech alums who take great pride in watching the current Techers mature. "I participate because I like Caltech and it's fun to be a part of the program," said seminar chairman John Gee.

Currently, the SURF administrators (see photo) are narrowing candidate lists for participation in a national undergraduate research conference. The list of semifinalists includes Jason Lee, Lin Jia, Jian Zhang, Michael Ru, Anandi Raman, Roshan Kumar, Brian Kim, Jennifer Cormack, Obie Manley, Dennis Hausmann, Ken Walsh, Jerry Shan, Robert Granat, Nathan Scandella, Adam Kisor, Marco Santos, Jeremiah Darling, Jose Miguel Hurtado, Tim Uy, Vance Bjorn, and Tom Maccarone. John Joseph Carrasco has been named a finalist.



SURF OFFICE

The people who made the day possible: Susie Clark, Carolyn Merkel, Carol Casey, Mary Ann Smith, and Chairperson Terry Cole (pictured left to right) pose in the Athenaeum

## Doyle Sets World Rowing Record

by Michael Kantner

Caltech, known for its Nobel prize winning professors, now has a world record holding professor. CDS professor John Doyle won two gold medals for indoor rowing and set the world record in 2500m event at the World Masters Games in Brisbane, Australia.

The competitors rowed on specially calibrated ergometers with

video display that shows both position in the race and pace. After about 2000 of the 2500m, excitement mounted as John was on a world record pace. He was timed at 8 minutes, 10.6 seconds beating the world record for lightweight 40-49 year-olds by 1.2 seconds. He was 16 seconds ahead of his nearest competitor. John also won the 500m race.

The record was more astounding considering that this was his first indoor rowing competition. Doyle,

an avid triathlete, primarily used rowing as cross training. After a month of training at Caltech, coached by Michael Scott, a graduate ME student and former world class rower, John knew he was well prepared.

Surprisingly, he performed better in rowing than in the triathlon and cycling events. "I thought I should have a try at this because it was on in between my other events and the triathlon," Doyle said.

## MOSH May Have to Leave Steele House

by David Derkits

It appears (neither ASCIT nor the IHC has received any official notice or explanation) that an announcement was made at the last Faculty Board meeting that the Master of Student Houses (MOSH) is to be moved from Steele House to a renovated 550 S. Hill. Caltech needs a facility to house a new Vice-President for Technology Transfer. Rumors have it that Steele House was selected because it was unclear how much interaction the MOSH has with students, and the need for a large office facility. While it may unfortunately be true that the MOSH's interaction with students has declined significantly in recent years, the importance of Steele House goes beyond the diminishing responsibilities of the MOSH.

For over twenty years, Steele House — as the MOSH's residence — has been one of the best places for student-faculty and student-administration interaction. Most faculty and senior administrators should remember at least one occasion on which they were invited to dinner or a reception at Steele House to talk with students about some issue. Last year, for example, members of the Academic Policies Committee were brought together with students for discussion on the core curriculum changes. Every year, the new student leaders are introduced to the Faculty

and administrators at Steele. The informal dinner setting has been described as very productive by many of the participants. This year, the House has already hosted a reception for the new Director of Admissions.

Steele House offers spacious areas for receptions and dinners indoors and outside. It also holds a unique location at the physical center of undergraduate life: with the seven Houses to the immediate south, Keck and Braun Houses across the street, and the future Avery Centre next door to the north. The informal and home-like atmosphere offered by Steele House is in contrast to the formal Athenaeum, and duplicating the Steele environment in another building, especially one removed from the student areas of campus, may not be possible.

The consensus among undergraduates with whom I and other student leaders have discussed the situation is that moving the MOSH from Steele and transforming the residence into another office building will deprive the community of the unique advantages this House offers in fostering student-faculty and student-administration interaction. We urge that the opportunity be given for members of the Caltech community to discuss this important issue. Student Affairs has given indication that they will submit additional information on the move for next week's issue.

## L.A. Circus Comes to Tech

by David R. Relyea

You may have seen an odd sight on the Court of Man on Saturday night or Sunday morning. The circus "tent" (actually a large, inflatable housing) that intruded upon the otherwise still lawn was part of the L.A. Circus, which visited Caltech on Sunday.

The standard circus acts were on display, such as a trapeze artist and clowns (Jeffo and Lulu). Other acts, such as Matt Plendl, the Ten Time World Hula-Hoop Champion, were interesting but not truly thrilling, and the Vita family (with the greatest hairdos I have ever seen in my life) turned out to be the best act of the show (they balanced on each other and did semi-aerial acrobatics). It

was also pretty interesting to watch Dixie the elephant pick up her trainer in her mouth. Unfortunately, Genkie the Wonder Dog wasn't at the show, and the substitute dog just ran around.

As always, the Caltech ushering staff did a wonderful job of crowd control, even under such intense weather conditions as we have in California. Two brief notes: the wind seemed to pick up every time somebody was precariously balanced (on a large stack of chairs, on rings, and even when a 130 pound table was being foot-juggled); and the L.A. Circus Band's trombonist was named Steve Taylor. All in all, going to the circus proved to be a great way to ignore the homework (AMa 95) and responsibilities of life at Tech.

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### Features

### ASCIT Election Results

# 2

# Official Results of the ASCIT Presidential and Bylaw Election of October 10, 1994

Proposed Bylaw Amendment YES: 200  
(Voting Eligibility, etc.) NO: 70  
Abstain: 161 Passes (74%)

ASCIT President: Jonathan McDunn

T.J. Creath	David Derkits	Asif Hassan	Monwhea Jeng	Jeff Kirshberg	Jonathan McDunn	Eric Slayback	Write Ins	NO	Abs	Tot w/o Abs	Total All
50	57	22	40	73	88	40	12	24	25	406	431
+2	+2	+1	+1	+2	+4			Redis	+12		
52	59	23	41	75	92	40	12		37	394	431
+3	+1	+2	+1		+1		Redis		+4		
55	60	25	42	75	93	40			41	390	431
+9	+4	Redis	+3	+2	+3				+4		
64	64		45	77	96	40			45	386	431
	+3			+11	+7	Redis			+19		
64	67		45	88	103				64	367	431
+6		Redis		+12	+13				+14		
70	67			100	116				78	353	431
+11	Redis			+6	+17				+33		
81				106	133				111	320	431
Redis				+23	+44				+14		
				129	177				125	306	431
					58%						

Each number on the first row represents the total number of votes the candidate or option received on the first blank of the ballot. Note that Eric Slayback is included. Although he was not on the ballot, he appeared as a write-in on enough ballots that he became a challenger. Since there was no clear majority, the NO votes were redistributed, that is, the ballots with NO marked on line 1 were redistributed among the other options according to line 2. In each subsequent row, if there is no majority, then the ballots of the candidate with the least votes are redistributed to the next highest ranked candidate whose ballots have not already been redistributed. Finally, on the eighth line, Jonathan McDunn obtained a majority and the victory. (There was an error of 1, meaning there was one case in which the number of ballots and the number of names were off by 1). If there are any questions regarding this tabulation or election procedure in general, please contact Cedric Hobbs, Election Chairman, at 568-0001, MSC 260, or cedricit@ugcs.

# Bridge Without Sam

by Jeff Goldsmith

## Botched

Playing in a midnight swiss teams with a new, but strong, partner and woeful teammates, I pick up

♠ A  
♥ K943  
♦ A765  
♣ AQJ3

Partner opens 1♦, I respond 1♥, and he raises to 2♥. I would like to bid 3♣, a splinter bid, but partner is not fond of artificial bids when a natural one will do, so I foolishly jump to 6♥. This goes down, but in the post-mortem I correct to 6NT, buy this dummy, and have a play problem:

DUMMY

♠ KQ9  
♥ AJ72  
♦ Q432  
♣ 97

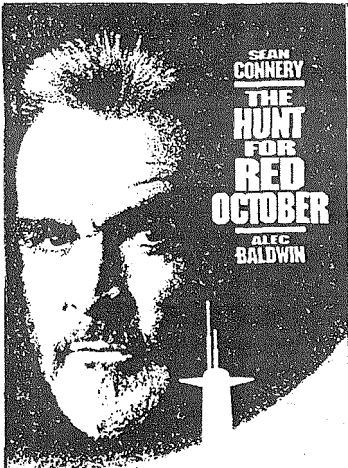
DECLARER

♠ A  
♥ K943  
♦ A765  
♣ AQJ3

West leads a small spade and I find that I am in a bad contract. I have three spade tricks, two heart tricks, one diamond, and one club for a total of seven. Even if I bring in the hearts and the club hook is on, that is only eleven tricks, so I need either a diamond trick or a squeeze. I need to either rectify the count or play for a club-diamond strip squeeze, which, while possible, seems unlikely. It must be right to duck a diamond now, which will rectify the count and maybe even acquire my twelfth trick. If East has four clubs and the diamond King, ducking in both hands will work to rectify the count for a simple squeeze instead of the strip-squeeze, and I might drop the ♦K doubleton, or West might rise with it.

I win the spade and play a low diamond. West finches (this is a zip swiss, after all, and we have already lost a match,) and hops up with the King. She exits with a spade, which I win, pitching a diamond. I take this opportunity to finesse clubs, which I am happy to see win, and cash the ♦A. All follow, so I have eleven tricks without hearts. Given the quality of the defenders, running my tricks now is a huge favorite, so I am not willing to try the heart hook. After a few rounds of diamonds and spades, East is clearly under pressure and gives up a club, alleviating the need for a trick twelve decision which I would be sure to get right.

Now if only I had been able to impress partner with this at the table instead of the post-mortem....



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Next week:



## Editors' Corner

### From your Friendly (Hah!) Tech Editors

Okay, we finally got the election results. They're right up there. And it's not our fault; our correspondent was late. We're pretty cramped on space this issue, so we won't yammer on. We still have our deadlines if you're interested in writing for us, though:

### 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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## The TAMING of the SHREW

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Beckman Auditorium  
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SATURDAY, OCTOBER 22, 1994 / 8 PM  
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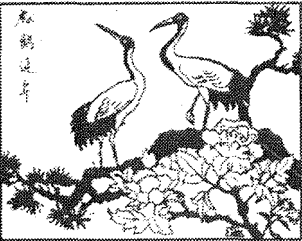
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# ADAM VILLANI: MEDIA GUY

by Adam Villani

## Pulp Fiction

When director Quentin Tarantino (*Reservoir Dogs*) took the podium to receive the Palme D'Or (Grand Prize) for *Pulp Fiction* at the Cannes Film Festival in France earlier this year, a woman in the back of the room stood up and began protesting loudly. So he gave her the finger. Can you blame him? *Pulp Fiction* may be a violent, vulgar genre piece, but it is also one of the liveliest and most clever movies in years, skillfully directed and full of great characters, dialogue, and acting.

Pulp Fiction follows several linked, yet independent storylines but never becomes confusing or hard to follow. The protagonists of one line can turn up as antagonists from the point of view of another story. The stories are tied together enough to give a sense of shared space, but are kept to a minimum, avoiding any sense of cutesiness in the links.

Critics of Tarantino's work accuse him of just rehashing old movie situations and clichéd characters. While he may use the crime picture conventions as a jumping off point and stuff his films wall to wall with humorous references to pop culture, he turns movie conventions on their head. Tarantino neither whitewashes the violence, as in *True Lies*, nor revels in its gore like Oliver Stone; instead the violence is shocking in its banality. People miss bits of conversation, they go to the bathroom, they snack, and they do things accidentally sometimes. Even for characters with relatively little screen time, one gets a sense that a real history exists behind them. Of course, all the quality writing wouldn't have done the job if the actors hadn't been up to the task. Fortunately, the incredible ensemble cast is universally top-notch, led by gangster hitmen John Travolta and Samuel L. Jackson. This ought to be a great comeback for Travolta and the role that finally puts Jackson's name in the books. The supporting cast includes Uma Thurman, Harvey Keitel, Christopher Walken, and many others, all of whom just ooze coolness from their pores. While the violence and language may not be to everyone's tastes, Pulp Fiction is a thoroughly engrossing landmark achievement that is sure to bring back repeat business.

## Quiz Show

While some may be offended by the grittiness of Pulp Fiction, Robert Redford's *Quiz Show* serves as a great tribute to storytelling that should appeal to just about everyone. *Quiz Show* is an entertaining film with a moral message, yet never seems manipulative, simplistic, or treachy like the monster hit *Forrest Gump*. *Quiz Show* is sure to deservedly pick up an armful of Oscar nominations, not the least of which should be for lead actor Ralph Fiennes (best known as the Nazi in Schindler's List), an incredible actor who gives a great deal of depth to his role as academic Charles Van Doren, who appeared before millions of Americans on the television show *Twenty-One* in the Fifties, winning hundreds of thousands of dollars before it was revealed that the program was fixed. Fiennes gives us a complex portrayal of how an upstanding person can slowly be lured into the comfortable arms of dishonesty, and the difficulty of admitting one's mistakes and facing the consequences of one's actions. But Van Doren is not the only complex character in the film; everyone from John Turturro (*Barton Fink*, *Do the Right Thing*) as his brainy working-class Jewish opponent to Van Doren's Pulitzer Prize-winning father to the chairman of NBC is tempted by money and the glitz of television. *Quiz Show* flows like a well-oiled machine, dragging only slightly in the third act. This is the best sort of film that the craftsmen of Hollywood can make, and is certainly the type of movie the Academy loves to honor with awards in March. See this movie; you'll be glad you did.

## The Orb's Little Album: Pomme Fritz

The Orb is not an everyday band. Their style of music is referred to as ambient techno, a form that takes electronic beats and melodies and molds them into a trance-inducing wash of sound that can serve equally well as background music or the focal point of a mind-numbing experience. *Pomme Fritz* leans closer to *musique concrète* than any of their previous works, relying more on sound effects and more organic, less electronic-sounding rhythms than the somewhat more dance-oriented music on *The Orb's Adventures Beyond the Ultraworld* (with "Little Fluffy Clouds") and *U. F. Orb*. It's very difficult to make a recommendation for a recording like this, since many people will be immediately turned off by the unusual sounds coming from their stereo, while others will be open to the Orb's fantastic palette of sound.

A side note: *Rolling Stone* magazine gave this album an average review, and claimed that it's more style than substance. Well, I've got news for *RS*: 99% of the bands their review don't have any substance either, but they at least have lyrics so it's less obvious. OK, Public Enemy has substance, and R.E.M. has their moments, but Bruce Springsteen, the Rolling Stones, and Nirvana all just talk a lot without saying much. Note that that's necessarily a bad thing; in its pure form, music is there to move you with its sound. But to reject the Orb as somehow inferior because their music is electronic and instrumental is just elitist.

# SPORTS

## Matters Left Undecided as XC Heads for Bahamas

by Tom Meyer

Last weekend took the Caltech men's cross-country team back to La Mirada "Frisbee Golf" Park for the important SCIAC Multi-Dual Meet, the first of two meets that determine conference standings for this season. Despite strong individual performances by several team members, Caltech came away with several unexpected defeats and a 1-6 record for the meet. Hopes are set on the conference championship meet that is still another weekend away, when the team hopes to have said its final farewell to Adams States and anything (workouts in particular) related to it, as well as benefiting from a full complement of healthy, uninjured runners.

A light precipitation the night

before the race prepped the turf at La Mirada to sodden perfection for the day's struggle, but Caltech was to figure poorly against their opponents. Dan "Tip of the Iceberg" Kleiman jogged through an incredibly-paced 26:44 race, taking down all but three men by the time he entered the finish chute. But Schuyler "Who needs shins?" Cullen didn't quite pick up the slack between Kleiman and the entire scoring team of La Verne University. His victory over their sixth runner was significant for team morale, however, even if it didn't put fear into the hearts of Caltech's old nemesis. Tom Meyer and Francisco "Darwin" Gutierrez added to the score, finishing within fractions of a second each other around 29:51, and Ron "I run the 800" Stieger completed the scoring

for Caltech seconds later. Although Meyer broke 30:00 for a personal first, and Gutierrez for a first this season, the pack performance wasn't enough to compete with the impressive times both La Verne and Whittier presented. Only Cal Lu succumbed, although that victory was muted by the fact that Cal Lu didn't even field a full team.

Workouts in these intervening weeks between meets will focus on "doing grass" (in Lacy Park) as well as concentrating on "kicking —" (at Prado Park). Coach O'Brien intends to pursue more ingenious workouts in an effort to push a new and improved! pack under the thirty minute mark. Keep in mind that practices are open to any interested KELROF runners.

## Caltech Moves Up the Pacific Coast to Victory

by B.R. Doughn

In case you missed last week's article, the Varsity team managed to squeeze past the dirtiest, trickiest, and the team voted most likely to cheat - the alumni. The final score was 11-10 in overtime. This provided an exciting climax for a game that was a tug-of-war throughout. Chris "Beard" Buchner scored the winning shot with less than a minute left in the second and final overtime period. Russ Barnes, the Alumni goal keeper, was heard to exclaim, "Somebody get him" as the shot found the lower corner. Mike "F—" Greene was the

team's defensive standout with 9 steals. Coach Dodd, commenting on the game, said "I got much sleep this weekend."

After a tough win under the belt, the Caltech water polo team was ready for their road trip to Northern California. Laden with parkas, suits, and homework (for the frosh); the team sped away in Caltech Motor Vehicles (while following all traffic laws). The team's first destination was the Campus (Refrigerator) Hotel. With a night of reflection and close quarters, the team was ready to take on the opponents from Cal-Poly. San Luis

Obispo. The Chargers from SLO were ready for a contest. Taking advantage of their weak goalie, the Beavers concentrated on the two pointer from the beginning. This shooting combined with Caltech's smothering defense ended the first quarter at 5-0. Caltech then went into its famous prevent defense which allowed the Chargers to come back. The score became 11-8 before Chris Buchner scored a crucial half court 2 pointer to stop the SLO attack. When the dust settled, the final score was 15-9 Caltech. The team was buoyed by

SEE WATER POLO, PAGE 11

## Cross-Country Looks Ahead to Conference Meet

by Dan Kleiman

Hurt by missing runners and subpar performances, the Caltech women's cross country team still managed to place fifth out of eight schools at the recent SCIAC multi-dual meet. The multi-dual, held last Saturday in La Mirada, pitted the Beavers against each conference school one by one, instead of scoring everyone together, the way that the upcoming SCIAC championships will be tallied.

Beaver hopes rested largely on the two lead runners, sophomore Cailin Henderson and freshman Sara Beaber. Henderson has been consistently beating conference competition all season, while Beaber, after appearing unsure in her first races, has come on strong lately. On Saturday, hopes for a top-half finish by

Caltech lay in the possibility of putting two women in front of the first finisher from several other schools. However, after a strong start, Henderson did not maintain the fast pace and finished sixth over the 5 kilometer course in 19:30. Beaber continued her recent trend of weaving her way up through the pack, eventually moving all the way up to co-captain Henderson. Beaber placed seventh, in a personal best time of 19:31.

The meet was by no means a disappointment for the Beaver women. With the two top-ten efforts being backed up by clutch races from senior Ginger Garcia (32nd, 21:42), frosh Karen Bletzer (55th, 23:17) and sophomore Radhika

Reddy (58th, 23:40), Caltech finished fifth with a dual meet record of 3-4. The Beavers nearly reached their goal of a top-half finish, losing to conference rival Occidental by only 3 points.

Heading into next week's SCIAC championships, the women have several reasons to be looking forward to another conference race. Last Saturday's fifth place finish was done without senior Tobe Corazzini or Junior Ali Boehm, both of whom should race next week. With the addition of those two runners, Caltech has four legitimate contenders for all-conference honors. The Beavers aim for more than just a top four finish next weekend at the conference meet.

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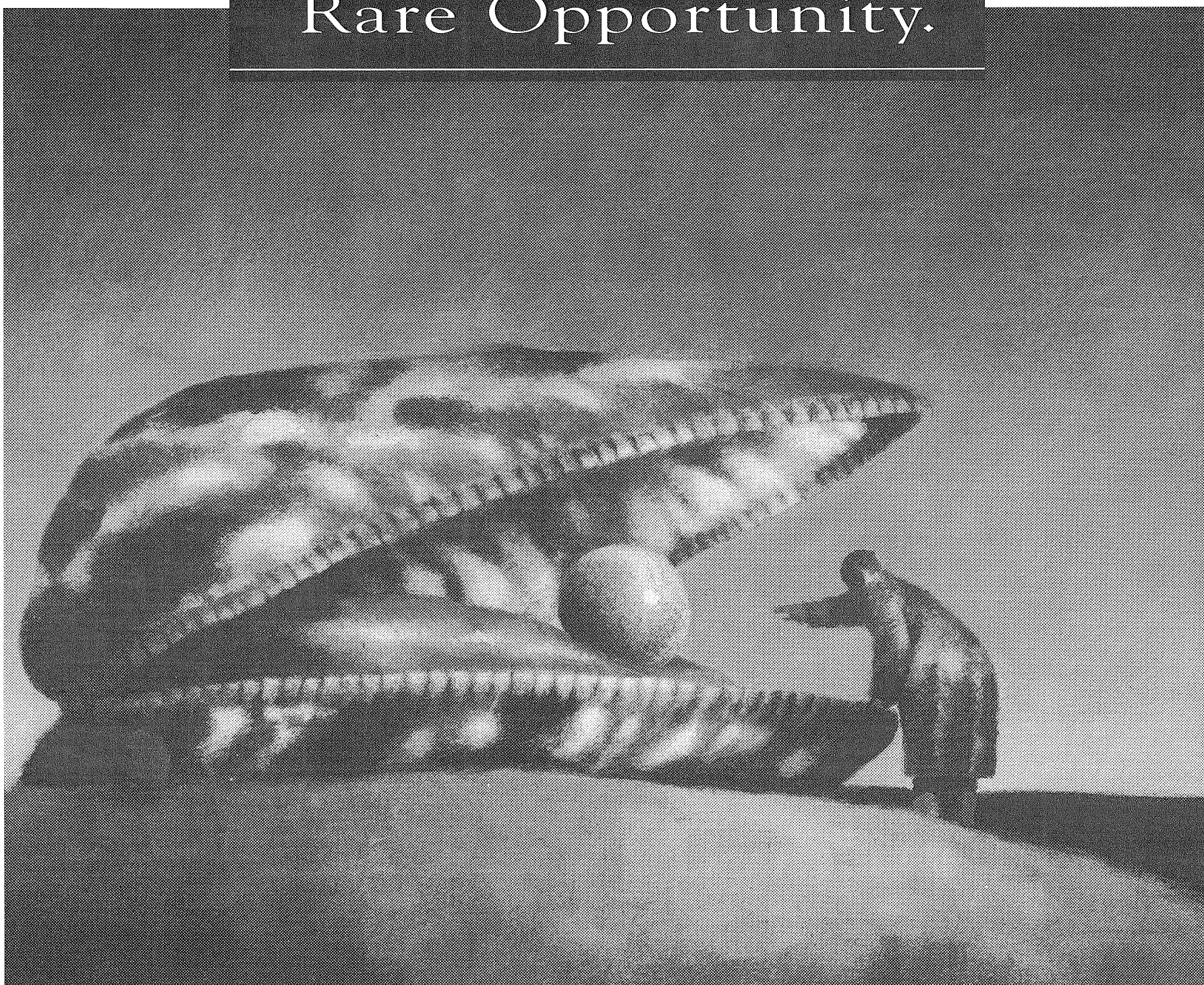
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# Rare Opportunity.



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# CSS Space News

by Ross Brown

## Cable Blackout

Were any of you watching TV last Monday? Were you watching a cable channel? Did it mysteriously go haywire? The cable company could do nothing about either.

What happened?! Well, since we are nearing the winter months, and since the Earth's axis is inclined by 23° off the vertical plane of the solar system, we here in North America are moving farther and farther away from the apparent celestial equator. Elementary stuff, I know, but it affects more than the weather.

The communications satellites' orbits take them directly between the Earth-bound receiving stations and the Sun at this time of the year. When your cable company's dish antenna looks up at the sky expecting to hear "I Love Lucy" reruns, it gets a megadose of microwave (and other wavelengths as well) radiation from the sun. While the communications satellites' power cells can only pump out a few watts of transmitting power, the sun can pour out thousands of watts of raw energy. Naturally the sun is going to win at these times.

Also, about 12 hours later, the satellite will find itself in the shadow of the Earth. Since it runs on solar power most of the time, the satellite has to switch over to batteries. Hopefully the relays and batteries are still

working after years of faithful service in orbit...

Be on the lookout for this phenomenon next spring, when the same thing happens over again. Landing Site Chosen for Mars Pathfinder Mission

The Mars Pathfinder, set to land on Mars in 1997, will touch down on an ancient flood plain. This flat land is the site of what look like great floods of water. These features are rather mysterious as there is little or no water on Mars today. From space, these flatlands look like riverbeds or places where water has rushed through.

The landing site itself is 850 km southeast of the Viking 1 landing site (1976). It is in an area known as Ares Vallis. The site was chosen because it should shed some light on the mystery of the ancient floods, and because

it should have a variety of rocks and soil to analyze.

The Pathfinder craft will contain two parts, a stationary weather station and a tiny microrover to crawl over the surface in search of interesting stuff to look at. It will use a parachute to descend to the surface, where airbags (like your car) will inflate and cushion the fall. After bouncing across the surface like an inflated ball, the craft will open like a flower and the rover will roll out. Cute 'huh?

Of Contacts and Astronauts

So you are an astronaut and can't see to well, what are you going to do about it? Glasses are a no-go on the

shuttle or even the space station, if it gets launched. Can you wear contact lenses in space?

Only if you are a payload specialist or a visitor (read: influential congresscritter), and then only hard contact lenses are allowed. The problem with soft contacts are that they dry out a lot quicker in micro-gravity because of their delicate fluid balance.

The bright side is that gravity induced eye problems like astigmatism could possibly be helped by prolonged missions in space. Who knows?

For more information about CSS or its activities, email [css@cco.caltech.edu](mailto:css@cco.caltech.edu) or call 568-8028.

## YNEWS

by Topher Hunter

It's lecture week! No, P. G. Saffman isn't going to be doing special 7:00 AMa 95 lectures in Beckman Institute Auditorium for you, but we've got a great line-up of speakers and panels for your enjoyment and enlightenment.

This Monday, the Y, along with the Caltech Women's Center and the Organization of Women at Caltech, is proud to present Mary Kay Blakely, author of *American Mom*, at 7:00 in Beckman Institute Auditorium. Ms. Blakely will deliver her lecture entitled "An American Outlaw", discussing various issues confronting mothers and motherhood in the past two decades. In addition, Ms. Blakely will give a lunch time discussion at noon on Tuesday in Dabney Lounge. Attendance to the Tuesday lecture is limited, so drop by the Women's Center to sign up.

Wednesday, Amnesty International and the Y will have a lecture entitled "Refugees" in Beckman Institute Auditorium. The time is still to be determined, so call the Y at x6163 for details.

On Thursday, the Caltech Y and Pacific Clinics are presenting a lecture and panel discussion entitled "What Message is the Media Sending Us." Tickets are \$25 each, but the Y has a limited number of free tickets for students. Drop by the Y for more details and ticket information.

Random other goodies this week:

Monday, 12 noon: Y Excomm meeting in the Y Lounge

Tuesday afternoon: Mountain Biking trip

Friday: Good luck on midterms!

## ASCIT NEWS

21 October 1994

David R. Derkits

### ✓ APPOINTED OFFICES

- The appointed position of ASCIT Staff Recorder is now open. This officer assists with the taking and distribution of minutes from Board of Directors meetings. Interested undergraduates should contact David Derkits, ASCIT Secretary, at [dderkits@cco](mailto:dderkits@cco) or x1402.

### ✓ FROM THE BOC

- The atmosphere of trust under the Honor System allows undergraduates to enter into agreements with other members of the community. It is expected that students be careful to carry out these agreements in good faith. Party arrangements made with the Residence Life Office fall under this category and should be treated with the same care.

### ✓ CLUB FUNDING

- The Board of Directors will hold a budget meeting on Sunday 23 October for the purpose of funding clubs for first and second terms. Funding applications were due on Thursday. Questions should be directed to Gina Serraiocco at [ginas@cco](mailto:ginas@cco) or x3760.

### ✓ PUBLICATIONS

- The *little t* and *CLUE* are being distributed. Copies may be obtained in the Deans' Office.

- The on-line *CLUE* is now activated. It can be reached on the Web through the ASCIT Page: <http://www.cco.caltech.edu/~ascit/>  
- The *Big T* (yearbook) has arrived and is being distributed through House secretaries.

### ✓ MISC ANNOUNCEMENTS

- Flora Ho is looking for co-editors for the 1994-1995 *CLUE*. Interested undergraduates may send e-mail to [floho@cco](mailto:floho@cco).

- Concerns about the homework, test, or collab policies of a class may be directed to any Director. The Board of Directors is monitoring the situations in Ch1 and Ch41.

- Salaries and bonuses for the 1993-94 *Big T* Editors were approved in full.

- Meetings of the Board of Directors are held at 9:00 PM on Mondays in SAC 64, the ASCIT Office. Special event funding requests and new business are handled at the beginning of the meeting.

- WWW: <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 or [dderkits@cco](mailto:dderkits@cco). The Minutes are also available on [caltech.ascit.announce](http://caltech.ascit.announce) and in House lounges.

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4pm-6pm

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Contact your placement center for an appointment, or send your resume to Applied Materials, 3050 Bowers Avenue, M/S 1826, Dept. CCT1122PW, Santa Clara, CA, 95054. EOE



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-  **Split the bill but only pay your share.**  
Why put in for someone else's swordfish if all you got was soup?
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Unless you'd rather call your parents for it instead.
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\*Based on available cash line.

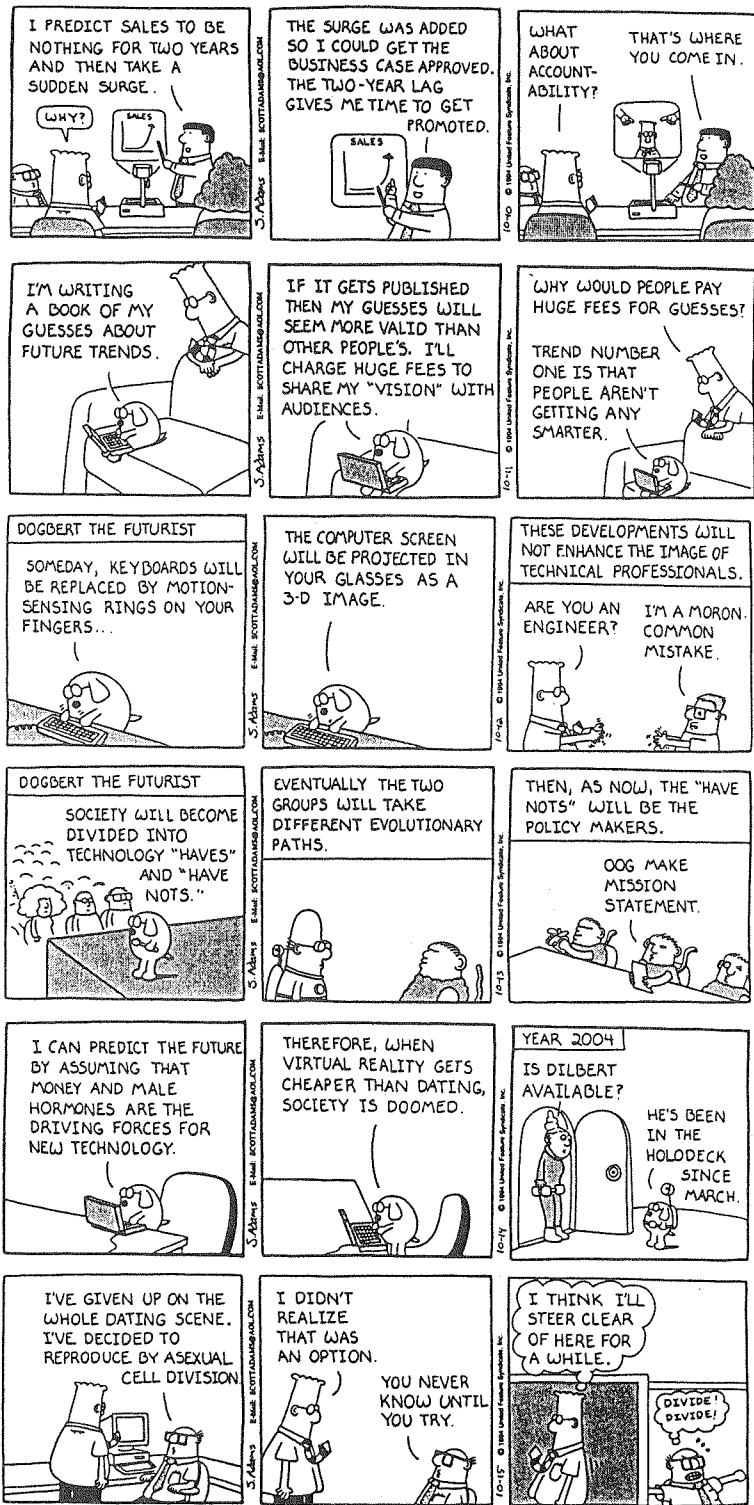
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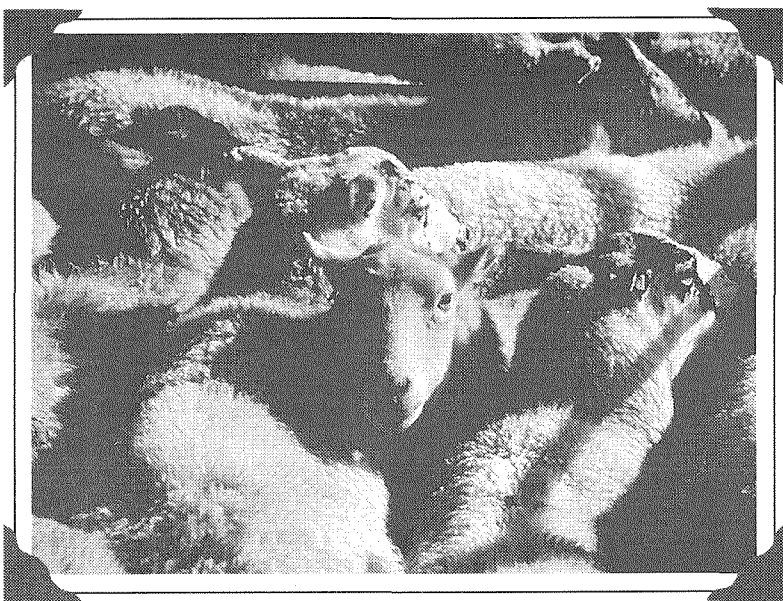
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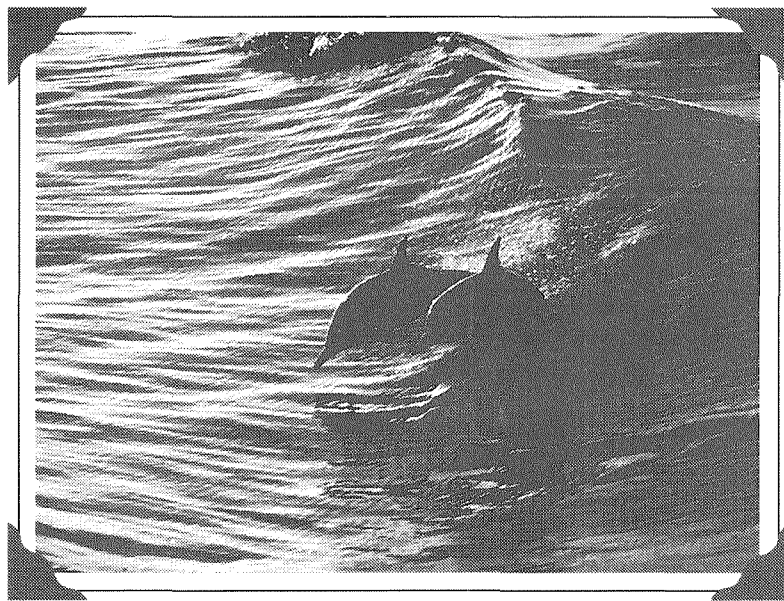
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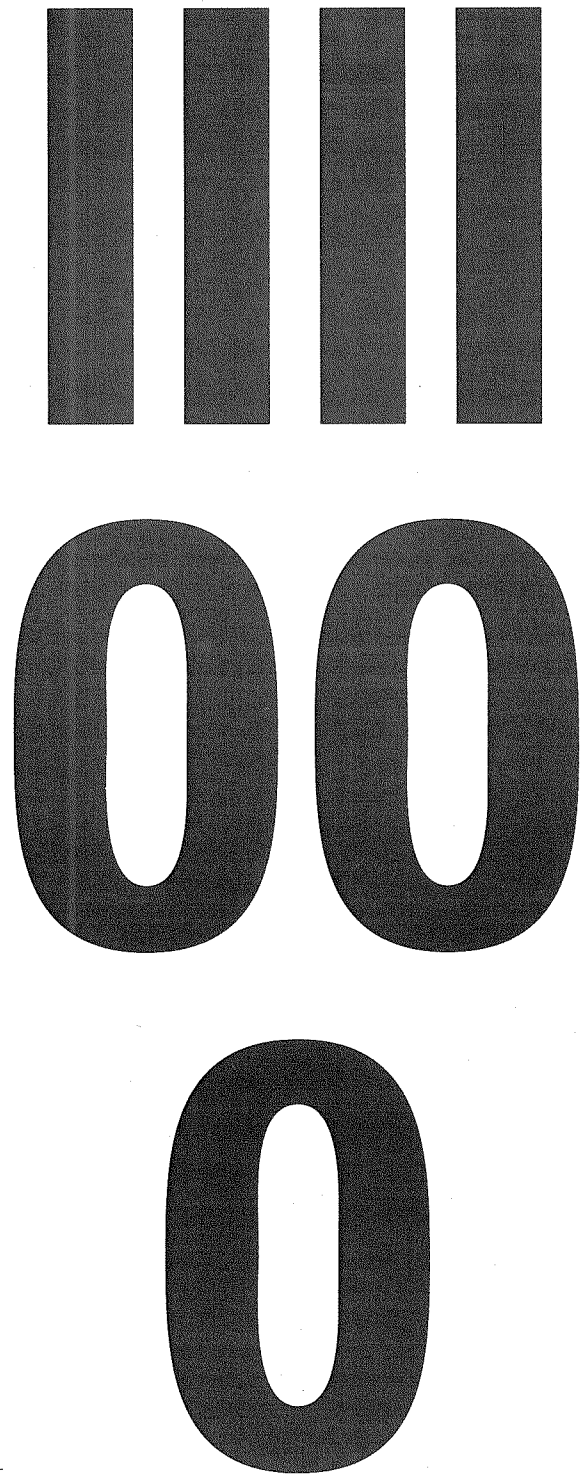
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# Cross-number

edited by Wei-Hwa Huang

1	2	2	3		4	2	5	6		7	8
9		7	10	10	7	10	11		2		5
4	5	12	2	2	10		13	14	14	2	14
	7		15		11	2		7		8	
1	14	5	3	13		16	5	17	13		2
5		16		5	12	12		13		9	6
15	18	5	10	15	13		13	14	5	4	13
3	13	19		18	5	12	12		15		10
1	13		13		8		20	5	21	5	
2	12	7	17	13		12	13	21		4	2
10		15	13	10	21	13	14		18		9
13	19	13		20	2	11		16	13	4	21

## Code List

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21

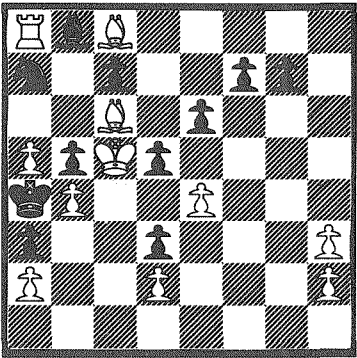
## Mystery Word

10	2	17	13	12	7	4	21
----	---	----	----	----	---	---	----

You are looking at a Japanese-style crossword. Each letter is represented by a unique number. Your mission, should you choose to accept it, is to figure out which letter each number stands for and fill that in the Code List. The Mystery Word of 8 letters can also be discovered while doing the puzzle. Each entry more than two letters long is a valid English word. Good Luck!

# Chess

edited by Wei-Hwa Huang



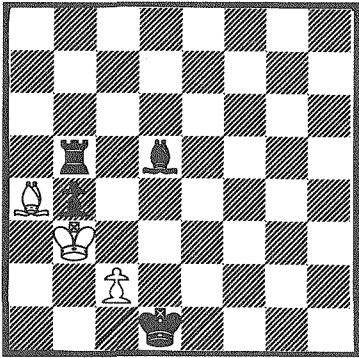
White to Play and Mate Black In One Move (With Proof)

This problem is from Raymond Smullyan other chess book, *The Chess Mysteries of Sherlock Holmes*. Now that you've solved last week's puzzle, try this one. After you've solved it, prove your answer.

## Answer to Last Week:

The white king must be on QB3. This conclusion can be arrived at by the following argument: Suppose that Black is not in check. Then the white bishop cannot be checking the black king, and so the white king must be on QN3 or QB2. QB2 is impossible since the kings can never be adjacent in a legal game, and QN3 is impossible since black then has a double check that he could not have administered. Therefore, Black is in check and White has just created a check from the white bishop. This check could not have been made by a bishop move, since the bishop could not have come from a place that it did not already check the black king

on that spot on which it now stands. So the only other possible way is if White had discovered this check by the white king. The white king could not have been on QB2 last move for reasons mentioned above, so it must have been on QN3 last move. We seem to have reached the same "double check" contradiction that we saw before, right? Wrong! The white king could have captured a black piece for his last move, enabling the double check by Black. In fact, White must have just captured a black pawn on Black's QB6, which in turn had just captured from Black's QN5 a white pawn on White's QB4 *en passant*. Whew!



The critical position, 3 moves earlier.

## Last Week's Answer:

In an effort to get his name published in this article, Wayne Broughton submitted his solution to the cross-number puzzle, even though I didn't ask for any. Well, Wayne, you got your wish. Wayne also supplied these values of interest:  
number of laps = 26  
length of a lap = 1680 m  
Lloyd's speed = 40 m/s  
Lloyd's time per lap = 42 s  
Radika's initial speed = 42 m/s  
Radika's initial time per lap = 40 s  
P.J.'s speed = 45 m/s  
time of P.J.'s crash = 546 s  
Lloyd's total time = 1092 s  
Radika's total time = 1104 s

So Lloyd won the race by a mere 12 seconds!

3	8	4		1		4	0	4
7		2	4	5	7	0		2
8	4		2	2	5		2	0
	3	1		0		5	2	
1	6	3	0		1	4	9	0
	8	0		1		6	3	
4	0		1	0	5		2	6
9		2	4	5	2	5		0
2	2	5		0		7	2	0

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On Campus Interviews: February 7, 1995

# Kreative Korner

## Raymond Chandler's Hamlet

by Jonathan Vos Post

Something was rotten in Denmark, rank and gross, as rotten as a dame named Gertrude in bed with her husband's killer while the caterer recycled the funeral baked meats for the wedding reception, at which bride did not wear white.

Hamlet was a sharp prince, good with a knife, but not sharp enough to handle his old man kicking the bucket with an earful of murder.

My name's Horatio, Hamlet's gumshoe buddy, trying to stay clean in a dirty castle. A grizzled ghost pleaded the Fifth when I game him the third degree, then split the scene when the cock crew, like a guilty man before a marshal serving summons.

King Claudius, cool as a cucumber after offing his brother, twisted nephew Hamlet's arm not to return to college at Wittenberg, Caltech not having yet been built.

The air bit shrewdly, it was very cold, when the ghost came again. It was Hamlet's father's spirit. His tale would freeze blood, pop out eyes, and make you hair stand on end like porcupine quills. He demanded revenge for murder most foul. The snake that killed him wore the crown. Me and Hamlet took the case.

Hamlet's main squeeze, Ophelia, a green girl, griped that hamlet was as pale as his shirt, in dirty sox, acting weird. Fortinbras was gangbanging Polacks. The sun bred maggots in a dead dog.

Hamlet played mad, but when the Santa Ana blew, he knew a hawk from a handsaw. A bunch of non-Guild actors showed up for the castle venue.

"To be or not to be," mused Hamlet,

thinking of a one way ticket to the morgue.

At the play, "The murder of Gonzago," an actor dumped poison in the play-King's ear. The real King freaked. Polonius hid behind Queen Gertrude's bedroom curtain, but Hamlet smelled a rat and stabbed him dead.

"I'll lug the guts into the neighbor room," he said, the corpse where worms ate brunch and didn't leave a tip.

I heard Ophelia do the hey-nonny-nonny gig, singing about flowers and valentines, but a Valentine's Day Massacre was more like it. Laertes found his sister Ophelia, poor wretch, in the weeping brook, drowned in muddy death. It is time for the great axe to fall.

A couple of clowns found a skull a scream, when they tipped Ophelia into the grave. Hamlet jumped in on top of her. Hamlet and Laertes got down to business with a couple of long knives while the Queen gulped down some poison Pinot Noir the King meant for Hamlet.

The Queen fell. Hamlet and Laertes cut each other up, then Hamlet swigged from the deadly cup and stabbed the killer King stone cold dead. Instant Karma, I guess.

Rosencrantz and Guildenstern were snuffed. Fortinbras stomped into Denmark with his gang, and lots of drums.

I was the last guy left. I heard a gunshot. I looked off into the distance, toward beautiful La Jolla, a solid heavy man like a rock.

*This piece of fiction won Honorable Mention in the 1994 International Imitation Raymond Chandler Writing Competition. Jonathan vos Post is an alumnus of Caltech. He graduated in 1973 with B.S. degrees in Math and English.*

# S & M

by Sharon & Marc

No, this is not going to be a reprint of our first column from last week. Inspired by the recent "Best Of" issue of the Pasadena Weekly (that 'other' weekly newspaper), we decided to put out a "Best of S & M", in which we give our own opinions of what's good, and maybe not so good, in the City of Roses and thereabouts. Well, maybe "Best" is too strong a word, since we might be (slightly) fallible in deciding some pretty subjective categories. On the other hand, "Best" is much easier to type than "Preferred". So for the rest of this column, "Best" will actually mean "Preferred". Also, "Worst" will stand for "Really, Really Bad", "Diet" will NOT mean "The Action One Takes To Lose Excessive Weight", and "the" will translate to "Send Us Money".

Well, by the time we had stopped writing, we realized that we had far more than could possibly fit in a weekly column, so we decided to split it into two parts. This week, we tackle an important part of any "Best" list, a compilation of our favorite foods. Next week we'll cover everything else in the universe.

**Best Burger:** Selecting this staple of any health-minded diner's diet is an awesome responsibility, not only because of the massive variety of sizes, styles and shapes (okay, not shapes) involved, but also because there's a patty out there for every inflection of mood. But few people are better qualified than we are. We found that for snacking satisfaction, the good-ol' classic Mickey-D's cheeseburger can't be beat. A good meal-size, double-decker comes from Pete's Blue Chip in Eagle Rock (same block as Tommy's Burgers, the old Techer hangout which, since Mr. Tommy passed away, has just slid downhill faster'n a greased toboggan). However, our all-around favorite is just a few blocks from Caltech, the cheeseburger from Pete's Grandburger on South Lake. It is very filling, and very tasty. Their Grandburger was voted "Best Over-Sized Thing" in last year's Pasadena Weekly (back when it had nifty categories such as "Best Pink Thing"), but we've never had the guts to try to eat one.

**Best Burrito:** This one is a tough call, since even more than with our previous category, different moods necessitate different burritos. We like the ones at La Salsa (Grande Burrito), Burrito Express (JVC), Rancheros (Rancho Grande), and Super Burrito (El Burrito-o Super-o). Actually, we're still on the prowl for the definitive, everything-but-the-kitchen-sink Mexican bellyfiller.

**Best Chicken Sandwich:** Glad you asked. We really like the new

chicken sandwich at Rally's Burgers in south Glendale. It's chickalicious! And we're not just saying that because they interviewed us, and may use us for TV and radio spots (no autographs, please).

**Best French Fries:** The best classic (read: plain) french fries are indubitably those thin oily wonders from McDonald's, even despite their recent 'health-conscious' recipe change. But for fries which will keep you comin' back for more, try spicy battered fries—like the ones they USED to serve at Popeye's (before some corporate MBA doofus decided it was cheaper to serve plain fries), and such as the ones which now enjoy prime status at Rally's. Go to Rally's, in south Glendale. You'll love their French fries. And their new chicken sandwich! We wouldn't say it if we didn't believe it.

**Best Fried Chicken:** Popeye's. Their chicken is just the right combination of crunch and spices. Unfortunately, the one on North Lake has spotty management quality (good thing franchises are starting to pop up all over), and once they dumped their fantastic fries we found ourselves much less inclined to drop by.

**Best Fast-Food Salad:** Yes, occasionally one of us attempts to go on a diet, so we've actually sampled a fast-food salad or two. Top honours go decisively to Burger King's side salad, believe it or not. Try it, it's surprisingly good!

**Best Salad Bar:** Where's the contest here? No mere mortal salad bar can top the offerings of Souplantation. Clean, fresh, and bursting with variety, the only drawback is that one stomach just can't hold enough. In our next life we're hoping to come back as cows!

**Best Pastrami:** We admit, we haven't yet given Top's mountainous offering a try, but after the freakish dreams incurred from a particularly grisly encounter with Lucky Boy's grease-saturated, Gargantuan, man-eating pastrami sandwich, we'll stick with the (merely) very greasy pastrami dip at The Hat.

**Best Sushi:** For quick and inexpensive sushi, Kabuki delivers (though the ambiance has suffered dramatically since Steve the sushi-sensei moved on to rarer pastures). However, if neither price nor waiting time is an issue, then by all means trek out to Enshino, in Encino. You'll be rewarded with giant portions of very fresh, tasty fish (including toro and albacore).

**Best Pizza:** Well, call us pedestrian, but we usually eat (and enjoy) Pizza Hut. Of course, the constant stream of coupons doesn't hurt.

**Best Steak:** Ruth's Chris in Beverly Hills. Their steaks are real killers! Really! Delicious, but they'll coat your arteries for the rest of your life.

**Best Thai:** Well, we don't know if it's really the best, but since it's new and we discovered it and it's good, we'll plug it here anyway. It's Classic Thai, on Colorado in Eagle Rock.

**Best Shrimp:** Killer Shrimp in Marina del Rey. All they serve is shrimp. Served in a big bowl of spicy Louisiana-style broth, with lots of French bread for dipping. It's truly awesome! A closer location is Studio City, across the street from the CBS studios.

**Best Barbecue:** Burnett's, a hole-in-the-wall in Altadena, features the best ribs this side of the Mississippi (we checked in an atlas).

**Best Donuts:** Yes, it's Donut Man in Azusa, still known among old-timers as 'Far Foster's'. What evening revelry is not complete without a 2 A.M. run to the center of the donut universe?

**Best Something:** We don't know how to classify it, but they serve it at Dinah's on Sepulveda, near the 405 in West L.A. It's their Apple Pancake, and it could kill a diabetic, but it's mmm-mmm-delicious! Be prepared for a severe sugar low after one of these. Dinah's is also known for their fried chicken.

**Best Home-Cooked Meal:** How the heck should we know?

Next week: *The Best of S & M, the Inedible Years.*

## 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.
3. Submissions may not contain vulgarities. The editor has judgement on what constitutes a vulgarity.
4. Submissions must be turned in by e-mail, Macintosh disk, or 3.5" high-density IBM compatible disk.
5. All submissions will be submitted to the *Totem* after publication unless explicit instruction is given by the author(s) to the editors to the contrary.
6. 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.
7. The editor reserves the right to edit, shorten, disallow any submission, or take exceptions to these rules.

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# Games & Puzzles

by Wei-Hwa Huang

## The Return of the Contests

Sigh. Due to some complaining by some people, I've been forced to restart the \$10 contests. Anyway, send your solutions by e-mail only to gp@tech by 8:00 p.m. Wednesday. The winner (determined by random draw from those with the most correct answers) will win \$10. You must be part of the Caltech Community to join. Remember, not too many people actually send me solutions, so you don't have to do so well!! Today we've got four tough nuts to crack....

1. If 5-4 is IRON, what is 6-9?
2. I'm thinking of a word X. X happens to be an anagram of a homophone of an antonym of a homophone of an anagram of something some of my friends X. What's X and what do my friends X?
3. Which letter will complete all of these words?

GY\_ES  
LO\_DE  
TI\_NESS  
CA\_ZE

4. If X is a word, let X<sub>n</sub> mean the nth letter of X. For instance, WORD<sub>3</sub>=R. If L is a letter, let NL mean the numerical value of the letter, with NA=1, NB=2, NC=3, ..., NZ=26. So, if X=WORD, then NX<sub>3</sub>=18.

Now, solve for the English word X:  
NX<sub>NX<sub>2</sub></sub> + NX<sub>NX<sub>NX<sub>2</sub></sub></sub>  
= NX<sub>NX<sub>NX<sub>NX<sub>2</sub></sub></sub></sub>  
8 + NX<sub>8</sub>  
= NX<sub>NX<sub>8</sub></sub> + NX<sub>4</sub>  
NX<sub>1</sub> = NX<sub>NX<sub>NX<sub>1</sub></sub></sub>

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**RATES.** ..... \$4.00 for first 30 words; ..... 10¢ 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.

## WATER POLO

FROM PAGE 3

the victory. Caltech's leading scorer was the Beard.

After eating at the Chinese food/donut shop, the squad continued up US 101 to Monterey. In Monterey, we decided to attempt to learn from our sea faring friends some tricks that would help out our season. Unfortunately, the aquarium closed before we could suit up for our scrimmage against the otter/stringray team. Maybe next time.

After a night of "CHUD," the team headed to the pool to play the University of California at Santa Cruz. As Greene says, this campus is one of the "F—ast campuses in the country". As the game started, the speed of the Banana-Slugs was apparent. Quickly the game was 6-1 in favor of UCSC. The multitude of Caltech fans did not give up even though the score had fallen to 10-2. All of a sudden, Mike the scoring machine erupted. Led by his counter-at-

tacks and some all around brilliant defense, Caltech fought back tooth and tail until the score was 12-11 Slugs on Sooketoo Bhuta's shot. With the game heading for the wire, Caltech pressed on but could not stop the hat switching offense of the Santa Cruz team. Caltech scored again but could not score in the last minute. The Slugs ended up with the victory and all the Beavers took home was a broken tooth. Mike Greene ended up with 8 points and attempted to give back his two

pointer by saying "Steve, you tipped in my shot, didn't you?"

With a road trip record of 1-1, the Wet Beavers came home to a rousing night of Ma 2, 95, and beer. However, the team had many memories about winning and sharing the middle of the back seat, while listening to the best of the 80's and Sheryl Crow. The next Caltech game is Saturday at 11 am at Whittier and the next home game is Wednesday vs. Redlands at 4:00. See you all there.

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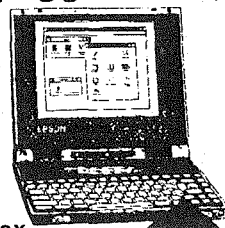
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Notices

◆If you are now afraid of petting poor little Mazel, Coba for a fact has no traces of Typhus and would very much appreciate your affection: pet her, she's a sweet cat! Or, for the more sadomasochistical, try petting Underfoot: you'll usually find her lazing on the Dabney stairs.

Attention all CLUE-users! Yes, it's true—the CLUE is now on-line in xmosaic! You can access it either through the ASCIT Home Page, or by logging in and typing: mosaic <http://www.cco.caltech.edu/~ascit/> Also, the Dean's Office still has plenty of CLUEs, so the requirement for bringing in a CLUE request slip has been lifted—just go ahead and grab one if you don't plan on using the xmosaic version (which is still strongly encouraged, by the way). Enjoy!

The 1995 Elie Wiesel Prize in Ethics Essay Contest, with awards totaling \$10,000, is now open to junior and senior undergraduates who are enrolled full-time at an accredited college or university in the United States. The deadline for submitting an original 3,000-4,000 word essay is January 13, 1995. The theme for this year is: "Creating an Ethical Society: Personal Responsibility and the Common Good." For entry forms and guidelines contact: The Elie Wiesel Foundation for Humanity, 1177 Avenue of the Americas, 36th Floor, New York, NY 10036. Phone: (212) 221-1100.

The County of Los Angeles Department of Health Services' Immunization Program has declared October 23-29 as **National Adult Immunization Week**. The tetanus-diphtheria immunization is available at the Health Center. This important booster shot should be updated every 10 years. The charge is \$4. This service is available to students only.

**Flu Shots**—The Health Center has arranged to offer flu shots to students. People in this age group are not generally thought to be at risk unless chronically ill, but because of the high stress and close living conditions at Caltech these are risk factors to be considered. Dr. Miller also wishes to remind students that flu shots are a *preventive* measure and need to be given *6 to 8 weeks* prior to the time of a predicted outbreak in order to be effective. The flu shot is of no value once the symptoms have developed. The best time to be vaccinated is between Oct. 3 and Nov. 15. Shots given during this slot should provide maximum protection throughout the entire flu season. Cost for this service is \$5, which may be charged to the student account. Flu shots will be available to students only.

**Give Blood**—Two-day blood drive in the Winnett Student Lounge, Monday, November 21 from 9:15 - 2:30 and Tuesday, November 22 from 12:15 - 5:30. Please contact Veronica Kirton at x6374 for an appointment, although walk-ins are welcome.

**Dances and music** of many nations is the *what*. Every Friday evening from 7:45 p.m. to 11 p.m. is the *when*. Throop Unitarian Church at 300 Los Robles at Del Mar is the *where*. You and all your friends that are interested in an atmosphere of friendship, relaxation and yet a challenge to your mind and feet is the *who* and *why* offered by the Pasadena Folkdance Co-op. The Co-op, a fifty year old club that has offered folks the opportunity to enjoy International Folkdancing, will continue that tradition throughout the month of October. To protect the wooden dance floor all are asked to use soft soled shoes. A \$1.50 contribution is requested from all participants. October 28-30 many Co-op members will participate in Folkdance Camp Hess Kramer. For more info on this camp call 310-478-6600.

◆The Caltech Bookstore will be holding the **Giant Pumpkin Raffle** on Monday, October 31st at 4:00 p.m. at the front of the bookstore. You can get tickets free with a purchase of \$2.00 or more from the store, and you need not be present to win. So make sure to drop on by and get a key chain or something this month.

Work-Study Job Openings

◆Work-study wanted for **general office support and data entry**. Ten (10) hours per week in the International Student Program's Office. \$7.00 - \$8.50 an hour. Please inquire via e-mail to [chris@pcmail](mailto:chris@pcmail).

Events and Notices

◆ denotes a new announcement.

From the Counseling Center

**Attention Women Graduate Students**—A new women's group is forming designed to help women examine a range of issues relevant to their lives and experiences. We will explore the barriers for women in achieving success, balancing career and personal goals, and challenges in professional or personal relationships. These and other concerns raised by group members will be discussed in a confidential group setting over the academic year. Each group member needs to meet with the group leaders for a pre-group interview. If you would like more information or to schedule a pre-group interview, please contact the Counseling Center at 818-395-8331. The group will meet weekly on Tuesdays at the Counseling Center beginning late October.

**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 Great Canadian Train Ride,"** Beckman Auditorium, 8 p.m. Doug Jones personally narrates this Armchair Adventures travel film, which covers the travel of the luxury train "The Canadian" as it crosses Canada. Admissions: \$8.00-6.50. Call (800) 423-8849 or (818) 3954652 for more information.

◆**The Monkey Wars**—The Controversy Over the Use Of Primates in Research—Deborah Bloom, the Pulitzer Prize Winning Author of the *Monkey Wars*, will be addressing the animal testing controversy in Caltech's Baxter Lecture Hall. Donations of \$5.00 are asked from the students

◆**"From Plains, Pueblos and Tundra,"** Beckman Auditorium, 8 p.m. Native American music and dance is offered by the Cellicion family from the Zuni tribe of New Mexico, the Locke family of the Lakota tribe of the Great Plains and Chuna of the Yup'ik tribe along the Bering Seas. Cherokee storyteller Gayle Ross will serve as master of ceremonies. Admission: \$8.00 for students beginning one-half before the performance. Call extension x4652.

◆**Frances Black**, Beckman Auditorium at p.m. This Irish folk singer, whose style is heartfelt and romantic, is making her debut solo tour of the United States. Admission is \$8.00 for students willing to come half an hour early. Call extension x4652 for more information.

Free Tickets

◆**NOON Concert Series**—The Y's Noon Concert Series kicks off the new school year on October 21st with a performance by "fishs Eddie" in the Winnett Quad, so come "eat lunch outside and listen to some music." Future performers are yet to be announced.

◆**Dr. Lucy Jones**, Beckman Auditorium, 8 p.m. Dr. Lucy Jones of the U.S. Geological Survey will give an E.C. Watson Caltech Lecture entitled "The Northridge Earthquake-Why Didn't We Predict It?" Admission: Free. (800) 423-8849 or (818) 395-4652.

◆The Trio Fontenay will give a Coleman Music Concert on Sunday, October 23 at 3:30 p.m. in the Beckman Auditorium. Included on their program will be Hadyn's Trio in C major, Op. 121a; Schubert's "Notturmo" in E-flat Major, D. 897; and Dvorak's Trio in E minor, Op. 90 ("Dummy"). This series will be continued by the **Britten Quartet** on Sunday, November 6 at 3:30 p.m. in the Beckman Auditorium. Included on the program will be Ravel's Quartet in F major; Britten's Quartet No. 2; and Schubert's "Death and the Maiden" Quartet, promising to be a performance to die for. Only fifty free tickets to

these concerts are available to Caltech students with current I.D. (limit two free tickets per I.D.) and are available at the Caltech Ticket Office, located just north of the Beckman Auditorium parking lot, beginning October 17th and 31st, respectively. The tickets are normally sold for a range of \$22.50 to \$12.00, so rush on down to the ticket office now.

The Caltech-Occidental Concert Band will present a free concert on Saturday, November 19th. The concert will begin at 8:00 p.m. Guest soloist with the bands that night will be tenor, Robin Reed. Robin will sing well known arias from famous operas, including Pagliacci, Rigoletto, and Tosca. The concert band will be featured in music from around the world. Admission is free and open to the public. There is also free parking near the auditorium.

**Free Film Program**—The Pasadena Public Library shows films every Wednesday afternoon at 1:30 p.m. in the auditorium of the Central Library, 285 E. Walnut St. The program for the rest of October is: Oct. 19—*The Zoo Gang* (96m); Oct. 26—*Baby Boom* (103m). For more information, call the Adult Services staff at (818) 405-4037.

The Caltech Y, the Caltech Women's Center, and the Organization of Women at Caltech present **Mary Kay Blakely** will present her lecture "**An American Outlaw**." Author of *American Mom* (1994), she will be discussing issues confronting mothers and motherhood in the past two decades on Monday, October 24, 1994 at 7:00 p.m. in the Beckman Institute Auditorium.

Club Announcements

There will be a **Halloween Party** held by the Caltech Folk Dancers on October 25, 1994. If you have questions call Nancy at (818) 797-5157. There will be live music (by Miamom Miller & Pals) and more. "Be there or be rectangular."

◆The Caltech Swedish Club will meet at 3 p.m. on Sunday, 13 November, at 200 S. Catalina apt G. Anyone interested in Scandinavian culture or in speaking Swedish is welcome. For more information, please call Rustan or India Leino at 584-7162 (or email [rustan@cs](mailto:rustan@cs)), or Matt or Karin Johnson at 568-8596 (or email [msj@caltech.edu](mailto:msj@caltech.edu)).

Internships and Competitions

◆The **Sacramento Bee**, a 270,000 circulation McClatchy newspaper located in California's capital city, is offering summer internships in reporting, sports, copy editing, photo-journalism and infographics. The internships are full-time for 12 weeks and pay \$375 a week, though you'll be responsible for your own housing. Apply by December 1, 1994 for internships in News, Sports Reporters, Copy Editors, Photographers, and Graphic Artists to The Sacramento Bee, P.O. Box 15779, Sacramento, Ca. 95852 or call (916) 321-1001 for more information.

◆**NSF Fellowships**. NSF fellowship applications are available in the Fellowship Office in Lloyd House and in Career Development. Note that NSF Fellowships can be used to do graduate work abroad. Call Lauren Stolper at x2150 if you have questions. The postmark deadline for part 1 of the NSF application is November 4, 1994. This is a short application. Upon receipt NSF will send you part 2 which is due on December 2. Seniors and 1st year grad students are eligible to apply. Must be U.S. citizen.

◆**NDSEG Fellowships**. The National Defense Student Educational Grants are sponsored by the Dept. of Defense and are very similar in value and requirements to the NSF awards. No military service is required to win these awards and they can be used at any U.S. university. The application forms for these awards will be available from the Fellowship Office in late October or early November. Seniors and 1st year grad students are eligible to apply. Must be U.S. citizen.

◆**Josephine De Karman Fellowships** provide ten \$6,000 fellowships. Students in any discipline (graduating seniors who will start grad school next

fall through grad students who will be entering their final year of study in 1995 -no post-docs) can apply. The grant is for one year only. While special consideration is given to students in the humanities only a small group of universities are invited to have their students apply for this award so scientists/engineers are competitive. Note that international students already enrolled at Caltech as undergrads or grad students may apply. Applications must be requested by each individual in writing by January 15, 1995. Send your request for an application to: Mrs. L. Hays, Secretary, Josephine de Karman Fellowship Trust, P.O. Box 3389, San Dimas, CA 91773. Application postmark deadline is January 31, 1995. So request an application now. Don't wait until the Jan. 15 date as you'll have to rush to complete the application.

◆**Cera Foundation Poetry Award**. Win \$300 for an original poetry composition. To enter send your poem, with your name, mailing address, phone #, and school name by OCTOBER 31 to: The Cera Foundation Poetry Scholarship, 14854, Fremont, CA 94539. Entrants must be currently enrolled in a college or university.

◆**Awards for Study in Scandinavia**. U.S. citizens or permanent residents, graduating seniors through post-docs may apply for a fellowship to do advanced study or research in Denmark, Finland, Iceland, Norway, or Sweden. Awards are made in all fields. It is desirable to have some ability in the language of the proposed host country. November 1 is the application deadline. Applications are available in the Fellowship Office.

◆The *California Tech* has recieved information on the **Dow Jones Newspaper Fund** offering all college graduate students the opportunity to apply for one of 70 **\$1,000 scholarships** that are being offered as part of the **1995 Newspaper Editing Intern Program**. Interested persons should contact Wei-Hwa Huang in the *Tech* office ASAP in order to pick up one of three application packets and make certain arrangements before November 1.

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. Our office is located at 515 S. Wilson, second floor.

The **Northrop Grumman Corporation** is offering three \$3000 scholarships at Caltech for the 1994-95 academic year. Scholarships are available to all students (including freshman) enrolled full-time and majoring in electrical engineering, mechanical engineering, aerospace engineering, computer science/engineering, or manufacturing engineering. A GPA of at least 3.0 is required. Students must show evidence of a strong academic record and a career interest in the aerospace/defense industry. Applicants must be U.S. Citizens and may be a concurrent recipient of another company's scholarship. Resumes and academic transcripts must be received by the Financial Aid Office at 515 S. Wilson by 5:00 p.m., Friday October 21, 1994.

The **Organization of Chinese Americans—Greater Los Angeles Chapter** (OCA-GLA) is offering scholarships of up to \$1000 to students who have become involved in the Chinese American community. Scholarships will be awarded primarily on the basis of community or leadership activities in the community and on academic achievement. To be

eligible to apply, students must: be of Asian-American heritage; be a resident of Los Angeles County; be a U.S. Citizen or Permanent Resident; and be currently enrolled in a college or university. (graduate students are also eligible) Applications are available in the Financial Aid Office and must be received at OCA-GLA no later than October 31, 1994.

The Los Angeles Chapter of the **Data Processing Management Association (DPMA)** is offering at least one scholarship for \$1000, provided by the **Bert A. Monaghan Scholarship Fund**. Eligible students must be majoring in Computer Science, must have filed a FAFSA application and have demonstrated financial need. Application forms and guidelines for additional requirements are available at the Financial Aid Office. Completed applications must be received at the Financial Aid Office at 515 S. Wilson no later than 5:00 p.m., Wednesday November 23, 1994.

The **American Concrete Institute (ACI)** is offering several awards. The Peter D. Courtois Concrete Construction Scholarships are two \$1000 awards for undergraduate study in concrete construction for the 1995-96 academic year. Eligible students must be enrolled at least half-time and must be seniors in 1995-96. The application, available at the Financial Aid Office, with all required supporting documents is due **January 10, 1995**. ACI Committee is also offering one **ACI-James Instruments Student Award** in the amount of \$800, for original student research on nondestructive testing of concrete. Applicants must submit a technical paper describing the research. The award is open to undergraduates or graduates, and the research work must have been completed within two years of the submission date. Completed technical papers must be received by ACI Committee no later than **November 30, 1994** at the following address: c/o Dr. Allen Davis, STS Consultants Ltd., 431 South 300 East, Salt Lake City, UT 84111. ACI is also sponsoring three different competitions: the Concrete Cube Competition, the Concrete Egg Protection Device Competition, and the Concrete Projects Competition. For complete rules, call the ACI Education Department, at (313) 532-2600.

The **Association of Former Intelligence Officers San Diego Chapter 1** announces the establishment and offering of the **Annual Lieutenant General Eugene F. Tighe, Jr., USAF, Memorial Scholarship**. The scholarship is in the amount of \$1000. It will be awarded based on the judged quality and suitability of a 1,000-1,500 word essay on the topic of: **What role should the United States Government's Intelligence Community play in supporting American business interests worldwide?** Completed applications/essays must be postmarked no later than **December 15, 1994**.

**Zonta International Amelia Earhart Fellowship Awards** for women for graduate study in aerospace-related sciences and aerospace-related engineering in the amount of \$6,000 are available for academic year 1995-96. Applications are available in the Deans' Office, 102 Parsons-Gates and are due by **November 7, 1994** to the Zonta Foundation.

**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, 1994**.

◆The **American Scandinavian Foundation of Los Angeles (ASF/LA)** is awarding four \$1,000 scholarships to undergraduate and graduate students with 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, 1995.



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