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 Chair Carl Larson and SURF Administrator Committee Chairman Terry Cole delivered opening remarks. Parents and students then rushed to the presentation rooms for the seminars.

The mini-conferences were grouped into various categories: Biological Chemistry and Chemical Engineering, Engineering and Applied Science; Geological, Planetary Sciences, and Social Sciences; Jet Propulsion Laboratory (JPL) Physics, Mathematics, and Astrobiology; Small Business Industrial Associates; and the Young Engineer and Science Scholars (YESS). Students spoke for approximately fifteen minutes and spent 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 Ansari on advanced semiconductor fabrication. Like most Techers, Scott described his goals and findings, mentioned difficulties and 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 educational programs 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 Macomber, and Doug Smith, designed curricula and experiments to promote enthusiasm in high school course.

Still other students worked on projects that directly affect industry.

Charles Sharma's work involved brain imaging for uses of 100g of free space on each of 140 commercial communications satellites. But SURF's benefits are not undervalued. 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 students and industry in the form of both money and time. Many of the seminar chairs are Caltech alumni 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 Ge.

Currently, the SURF administrator (see phone) are narrowing candidate lists for participation in a national undergraduate summer program for chemistry. The list of seminarians includes Jason Lee, Lin Ju, Jian Zhang, Michael Ru, Shani Raman, Roshan Kamat, Brian Kim, Jennifer Cormack, Ollie Marday, Dennis Haumann, Ken Walsh, Terry Shan, Robert Gersten, Nathan Scandella, Adam Kious, Marco Santos, Jeremiah Darling, Jose Miguel Hurtado, Tim Uy, Vance Bjorn, and Tom Macomber. John Joseph Carrasco has been named a finalist.

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—site of the MOSH's residence—has been one of the best places for student-faculty and student-administration interaction. Most faculty and student administrators should note that the administration is involved with students at least once on a daily basis; the administration has always been interested in students and students' opinions. Last year, for example, members of the Academic Policies Committee were present at student-supervised 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 members of the Academic Policies Committee. 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 Brain House across the street, and the future Aven­ce next door to the north. The in­formal and home-like atmosphere offered by Steele House is in contrast to the formal Athenaeanum, and dup­licates 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 an 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 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 B. Reylea

You may have seen an odd night 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 (Jeff and Lula). 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 contortionist I have ever seen in my life) turned out to be the best act of the show (they balanced on each other's hands 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 ran towards the usual notes: the wind seemed to pick up every time some­body was precariously balanced (on a large stack of chairs, on rings, and even while a 150 pound table was being foot-stretched). Perhaps the L.A. Circus Band's trombonist was named Steve Taylor. All in all, going to the circus is a waste of time.
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 on the next line as a write-in, enough ballots marked him as a write-in to become a challenger. Since each ballot has one vote, Eric acquired 33 additional votes.

---

** editors' corner **

From your Friendly (Hahn) Tech Editors

Okay, we finally got the election results. They're right up there. And it's not our fault; our correspondent was late.

Letters and announcements — 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

Art/Photo Submissions — 5 P.M. Thursday

---

** bridge without sam **

by Jeff Goldsmith

Botched

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

- DUMMY
- KQ9
- A72
- 043
- 076
- AQ3
- 74

Partner opens 10, I respond 1½, and he raises to 2½. 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 found myself on 6♣. This went down, but in the post-mortem I correct to 6♦, buy this dummy, and have a play problem:

---

** spring garden chinese restaurant **

Mandarin & Szechuan Cuisine — Best in Town!

10% discount with Caltech ID

Caltech Special Dinner Buffet

Open 11:30-10:00 (20:30 p.m. PTL)

Lunch Special

Monday-Fridays: 11:30 a.m. - 2:30 p.m.

CATERING & FOOD TO GO

Beer • Wine • Banquets

187 N. Sierra Madre Blvd.

PASADENA (Biltmore 796-2537)

---

** the california tech **
Last weekend the Caltech men's cross-country team back to La Mirada for the last SCIAC Multi-Dual Meet of the season. This was the team's final SCIAC meet of the season, and it was also the last meeting of the season for the Caltech water polo team. However, despite the fact that the water polo team will not be participating in any more meets next week, the team was ready to take on the opponent from La Verne with a strong showing. The team's performance was solid, and they were able to bring back repeat business.

Caltech Move Up the Pacific Coast to Victory

by Dan Kleinman

Hurt by missing runners and subpar performances, the Caltech women's cross-country team still managed to bring home a 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 four other schools. However, despite strong individual performances, the Beavers nearly reached the finish line without any subpar performances, the team was ready to take on the opponent from La Verne with a strong showing. The team's performance was solid, and they were able to bring back repeat business.

Cross-Country Looks Ahead to Conference Meet

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, falling out 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 finishes in the women's race, the team was able to put a strong showing in the women's race. This strong showing has put the team in a solid position for the upcoming SCIAC championships.

LAEMMLE THEATRES

COLORADO

2588 E. Colorado Blvd. (303) 796-9304

Two enthusiastic thumbs up!!

Siskel & Ebert

Hoop Dreams

Daily: 5:00, 8:30 p.m.
Sat: 1:00 p.m.

Starting October 26 at the Esquire:

The Last Seduction
Employment Opportunities in Asia: Open Presentation and Reception

Monday, October 24, 7:00 pm
Sheraton Grande Hotel, 333 South Figueroa Street / Dress is casual.

Undergraduate and Graduate Students Welcome
The communications satellites’
equator. Elementary stuff, I
working after years of faithful service
in orbit.
be on the lookout for this phe­
monic next spring, when the same
thing happens again.

Land site Chosen for Mars Path­
finder Mission
The Mars Pathfinder, set to land on
Mars in 1997, will touch down on
an ancient flood plain. This flat
 terrain 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
kilometer southeast of the Viking I land­ing
(1976). It is in an area known as Utopia.

The site was chosen because it
seemed like some thing on the mys­
tery of the ancient floods, and because
it should have a variety of rocks and
soil to analyze.

The Pathfinder craft will contain two
resources, a stationery weather station
and a tiny microscro to crawl over
the surface in search of interesting stuff
to look at. It will use a parachute to de­
send 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
a little like a flower and the rover will roll out.

Cute huh?

Of Contacts and Astronomers
So you are an astronaut and can’t
see what, you are going to do about it?
Glasses are a go-to for

that -- there is a chance that the satellite
will have to switch over to batteries.

This month, the Y, along with the Caltech Women’s Center and the Organi­
zon of Women at Caltech, is proud to present
Mary Kay Blakely, author of American Mom, at 7:00 in Beckman
Auditorium. Ms. Blakely will deliver her lecture entitled “An American Oural”,
discussing various issues confronting moth­
er and motherhood in the past two decades. In addition, Ms. Blakely will
also give a lunchtime discussion at noon on Tuesday in Ushney
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 lec­
ture entitled “Refugees” in Beckman Institute Auditorium. The time
is still to be determined, so call the Y for the 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 Exxon meeting in the Y Lounge
Tuesday afternoon: Mountain Biking trip
Friday: Good luck on midterms!

OLD Y.M. Barber Shop & Syling Salon
Mary Lee, Manager
Seniors $6.00 Others $7.00
Caltech ID: $1 OFF
3 Expert Barbers & Stylists
For Men & Women & Children
Open 7 Days
Weekdays 8am-6:30pm
Evenings Mon-Tue.
235 E. Holly, Pasadena, CA 91101
(818) 578-9119

BARBER SHOP SYLING SALON

40% Discount on women’s hair cut
with student faculty ID

Italian Restaurant PIZZA & MORE
524 S. Lake Ave.
Just north of California
792-5984

Special discounts for large orders

Family Feast $12.95
• Any Large Pizza
• Baked Spaghetti
• Garlic Bread
• Salad
All for one low price!
coupon not required for discount
not valid with any other offer
expires 12/28/94

DELIVERY SPECIAL
DINE-IN SPECIAL
All pizza pies on our regular menu are HALF-OFF!
drink is only
not valid with any other offer
DELIVERY SPECIAL
DINE-IN SPECIAL
All pizza pies on our regular menu are HALF-OFF!
drink is only
not valid with any other offer
HOW TO HANG ON TO YOUR DOUGH.
(WITHOUT CRAMPING YOUR STYLE.)

Separate “needs” from “wants.”
Hint: A bed is a need. A Mr. Microphone is a want.

Split the bill but only pay your share.
Why put in for someone else’s swordfish if all you got was soup?

Set aside money for emergencies.
Unless you'd rather call your parents for it instead.

Keep your eye on your wallet.
Have a Citibank Classic card in case you lose it. The Lost Wallet Service can get you emergency cash; a new card usually within 24 hours and help replacing vital documents.

*Based on available cash line.

WE'RE LOOKING OUT FOR YOU.
To apply, call 1-800-CITIBANK

Apply for the Citibank Classic card by completing the application in this issue or by calling 1-800-CITIBANK
*WH'TH PITCHFIRE* 

**W**ith *Pitchfire* and *Torches*, the most likely thing to happen is that your little brother could become one of the world's most widely read cartoonists. I'd be flattered, people would be beating down our door!

---

**What are I heard doing?**

The guy who draws "The Far Side," AND THAT'S WHERE YOU COME IN.

---

**DoGBERT THE FUTURIST**

Someday, keyboards will be replaced by touch-sensitive rings on your fingers.

---

**The Future**

Eventually the two groups will take different evolutionary paths.

---

**The Two-Year Lag**

... and that's why I'm here.

---

**The Special Sauce**

... to make "Pitchfire" a reality.

---

**The Leap Forward**

... that is that people aren't getting any smarter.

---

**The Future**

... that's where you come in.

---

**Accountability**

A year of Dilbert is available.

---

**The Future**

These developments will not enhance the image of technical professionals.

---

**The Future**

Therefore, when virtual reality gets cheaper than satellite, society is doomed.

---

**The Future**

Therefore, when virtual reality gets cheaper than satellite, society is doomed.

---

**The Future**

I can predict the future by adopting that mirror and make those lyrics are the driving forces for new technologies.

---

**The Future**

Therefore, when virtual reality gets cheaper than satellite, society is doomed.

---

**The Future**

I've given up on the whole eating scene. I'm going to have a remote controlled rubber dog in my office. I'll resemble a dog.
Cool Code Rules.

Come to Microsoft and write the code of your life.

On Campus Interviews
Full-time Technical Interviews
Monday, November 7, 1994
See Career Development Center for details.
Sign-ups begin October 24, 1994.

©1994 Microsoft Corporation. All rights reserved. Microsoft® is a registered trademark of Microsoft Corporation.
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 an adouble 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.

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

We are actively seeking highly motivated individuals from all majors, with outstanding academic records, exceptional analytic and quantitative skills, strong communication skills and demonstrated leadership capabilities for the following positions:

- Associate Consultant
- Associate Consultant Intern

Bain & Co. is one of the world’s largest strategic management consulting firms. We offer unparalleled opportunities for graduates to learn and apply fundamental business concepts and problem solving techniques to a broad range of industries.

Bain & Company

Opportunities in Strategic Management Consulting

Tuesday, November 1

Room 15

Student Activities Center

4:00 - 5:00 PM

All Majors Welcome

Mail or fax your resume with a cover letter to:

Kathleen McCarthy, Recruiting Manager, Bain and Company,
One Embarcadero Center, Suite 3400,
San Francisco, CA 94111
Fax: (415) 627-1380
Phone: (415) 627-1212

On Campus Interviews: February 7, 1995
Chandler's Fast-Food Salad: Yes, it's Donut Man and Fried Chicken: Popeye's.

Monday, 9 p.m., Monday

Salad Bar: Where's the best fast food? Well, by the time we had stopped writing, we realized that we had far more than could possibly fit into 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.

This piece of fiction won Honorable Mention in the 2004 International Imitation Chandler Writer's Competition. It is the story of an alumni of Caltech. He graduated in 1973 with B.S. degrees in Math and English.

Guidelines for Submissions:

1. All submissions must be 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 profanities. 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 Team after publication unless explicit instruction is given by the author(s) to the editors at the competition.
6. The submissions 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 submissions, or take exceptions to these rules.

Chandler's Fast-Food Salad: Yes, it's Donut Man and Fried Chicken: Popeye's.

Monday, 9 p.m., Monday

Salad Bar: Where's the best fast food? Well, by the time we had stopped writing, we realized that we had far more than could possibly fit into 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.

This piece of fiction won Honorable Mention in the 2004 International Imitation Chandler Writer's Competition. It is the story of an alumni of Caltech. He graduated in 1973 with B.S. degrees in Math and English.

Guidelines for Submissions:

1. All submissions must be 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 profanities. 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 Team after publication unless explicit instruction is given by the author(s) to the editors at the competition.
6. The submissions 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 submissions, or take exceptions to these rules.
**WATER POLO**

FROM PAGE 3

This was Caltech's leading scorer of the victory. Greene scores, this match is one of the T-.fast 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 UCSB. The middle 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 brother-attacks and some all around brilliant defense, Caltech fought back tough and rally until the score was 13-11 Slugs on Suketos 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 a broken tooth. Mike Greene ended up with 8 points and attempted to give back his two-pointer by saying: "Steve, I tipped in your shot, didn't you?"

With a road trip record of 1-1, the W. 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 9:00. See you all there.
**The California Tech**

**Events and Notices**

### notices

**12 October 1994**

**The Gay, Lesbian and Bisexual Support Group**

- **Wednesday, October 11, 7:30 p.m.**
  - The Gay, Lesbian and Bisexual Support Group presents Jon Garthwaite, former director of the National Gay and Lesbian Task Force. Garthwaite will discuss the current political climate of the gay movement in the U.S. and how to influence change. The presentation will be held in the Beckman Auditorium at 5 p.m.

**Close Reading Class**

- **Wednesday, October 11, 4:00 p.m.**
  - The Close Reading Class, led by Josephine de Karman Fellowships provide ten $5,000 awards to U.S. citizens or Permanent residents who have been full-time graduate students in the past two years and who have completed a research dissertation in the past year. Applicants must be currently employed in a college or university in the United States and must have been full-time graduate students in the past two years. The deadline for applications is January 31, 1995.

**The American Scandinavian Foundation of Los Angeles**

- **Wednesday, October 11, 4:00 p.m.**
  - The American Scandinavian Foundation of Los Angeles is awarding four $1,000 scholarships to students who are currently enrolled in a college or university in the United States and who have completed a research dissertation in the past year. The deadline for applications is January 31, 1995.

**The Northrop Grumman Corporation**

- **Wednesday, October 11, 4:00 p.m.**
  - The Northrop Grumman Corporation is offering one ACI-James Instruments Student Award of $1,000. The award is available to students who are currently enrolled in a college or university in the United States and who have completed a research dissertation in the past year. The deadline for applications is January 31, 1995.

**The Zonta Foundation**

- **Wednesday, October 11, 4:00 p.m.**
  - The Zonta Foundation is offering one ACI-James Instruments Student Award of $1,000. The award is available to students who are currently enrolled in a college or university in the United States and who have completed a research dissertation in the past year. The deadline for applications is January 31, 1995.

**The American Foundation for Children with Autism (ACFCA)**

- **Wednesday, October 11, 4:00 p.m.**
  - The American Foundation for Children with Autism (ACFCA) is offering one ACI-James Instruments Student Award of $1,000. The award is available to students who are currently enrolled in a college or university in the United States and who have completed a research dissertation in the past year. The deadline for applications is January 31, 1995.

**The California Tech**

**Burger CONTINENTAL**

**All the time. Seven days a week.**

**Hear the Wednesday night jazz band**

**Specialties**

Shish kebab, Shaurma, Seekewal steak, Fresh fish and lamb, Baklava

**PARIAN TRAVEL**

Most professional, courteous and efficient service for your official and personal travel needs.

Free service to you. We deliver:
- Airlines, Cruises, Tours, Hotels, Car Rentals. Investors. (818) 577-8500 468 S. Sierra Madre Blvd., Pasadena