

## Lyttle Wins ME72 Contest

by Scott Kister

Mark Lyttle won the sixth annual ME72 Engineering Design Contest yesterday with a unique defensive device. In the final round, Mark defeated Chris Ho's device in the most thrilling match of the day. Ramo auditorium was filled with students, faculty, and even news crews to watch the event.

The object of the contest was to build from a "bag of junk" a device to climb a twelve foot tall rope and get to the top. The first device to get there, or the highest device after 35 seconds is the winner.

Other contestants used various strategies to climb the rope, including several basic climbers, a few catapults that attached to the rope and shot a piece up, a "walking climber" by Bill Swanson, and some extending lazy tongs by Annetta Papadopoulos.

When asked how he came up

with the idea for his device, Mark said, "I didn't think I could build a better climbing device than everyone else. Instead, I tried to prevent them from climbing." Originally, he had built a wall which shot and attached to the opponents rope, preventing them from climbing.

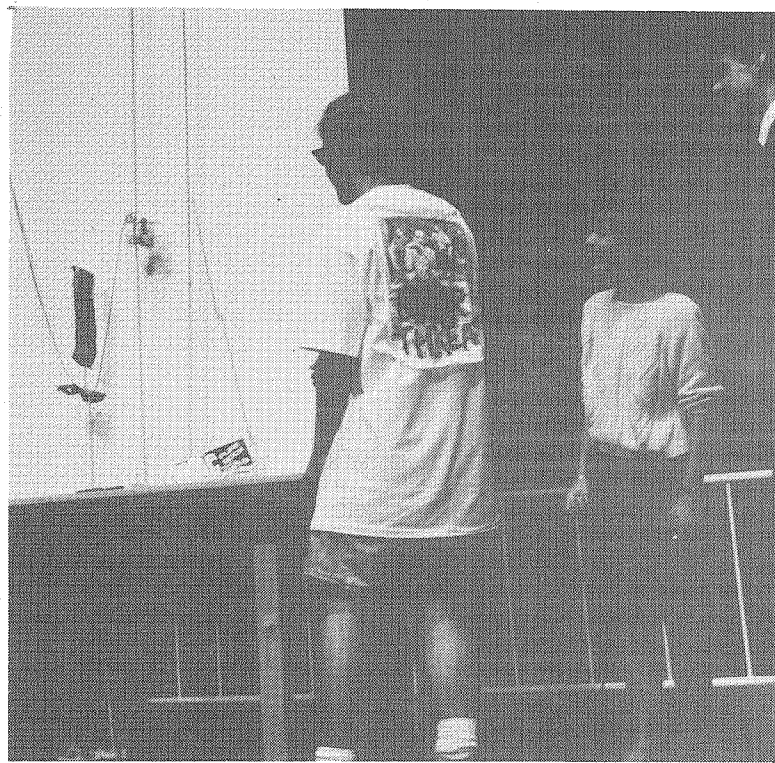
However, despite shouts of "We want the wall" from the audience, Mark never used his device. He said his wall only worked nine out of ten times, so his strategy during the competition was to use his car as a wall, driving it between his opponent and the rope.

There were 21 competitors in the double elimination contest. Each device had to start in a 20 by 40 centimeter rectangle. They were given power for 30 seconds. The first device to reach the top of the rope won. If no device got there, then the highest device five seconds after the power ended was the winner.

In the first round, six devices made it to the top. Several contestants had problems getting their climbers attached to the rope. Many of the devices which made it through several rounds lost in the first or second round because of this.

In some exciting early round action, Mark Lyttle took on Chris Ho's device in what was to be a preview of the finals. Chris had a job interview in Michigan and had to find someone to drive his device. Both Mark and Chris's device had antennas which rose up. At the start, Mark charged forward, blocking Chris from the rope. Mark's antenna got stuck on a banner of Chris's device.

Mark needed to get his antenna higher than Chris', so he backed up. As his antenna rose, Chris' machine took advantage of the opening and got to the rope. It then easily climbed to the top, giving



Mark Lyttle's antenna reaches just above Chris Ho's entangled ME 72 device.

Mark his only defeat.

Steve Jun's device was not attaching to the rope properly, so he used Mark's strategy of blocking the other opponent. When Steve ran into Bill's device, Bill's fell on top of his and remained higher than Steve's.

In the third round, Bill's slow walker went up against Annetta's slow extending lazy tongs. Annetta had the early lead, but Bill kept chugging and made it to the top with just one second of power left.

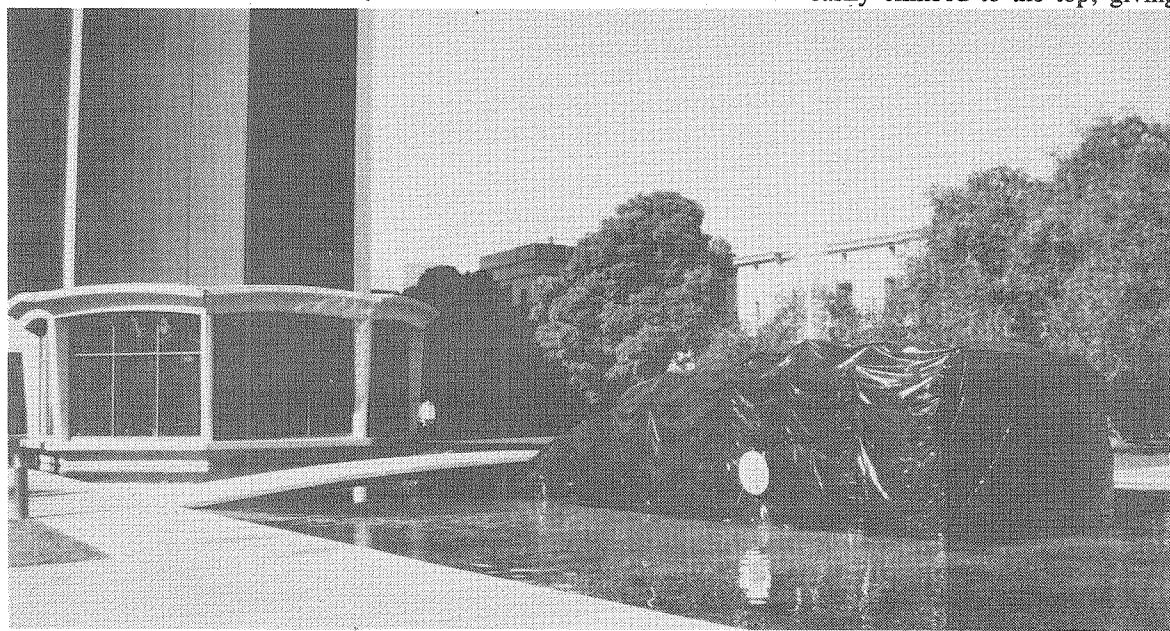
Alex Lin was the only one of the catapult devices to work properly. It shot almost to the top

of the rope, but Ben Masek's device climbed by it at the end to eliminate him.

Mark got a scare in the third round. While competing against Scott Harris, a small piece of his machine fell off the table. According to the rules, a device cannot leave the table, but Mark's antenna was higher than Scott's device, Professor Antonsson declared the match a tie.

In the fourth round, an exciting duel took place between undefeated Randy Pollock and Greg James. Greg's device had a unique way of

continued on page 4



Petunia, the wooden whale washed up in Milikan pond this week. The creation of Blacker House, the whale even has a spout and moving eyes. About 35 Blacker students worked on the whale during the term, and assembled it overnight.

## New Caltech Gym by '92-93

by Jason Lee

The funding for the construction of Caltech's proposed new gymnasium has been approved; and the Braun Athletic Center will open at the beginning of the 1992-93 academic year.

According to Dan Bridges, athletic director, this has been a top priority project for him during his one and a half years at Caltech.

"It is absolutely wonderful that we have the gym facility approved. The entire staff and I have been focused on what it took to get this project funded," said Bridges.

The first step in the project was convincing the administration that a new facility was necessary. "This was not very difficult because they saw the value in a new gym," Bridges added.

A donor was then needed to fund the project. John Braun of Braun Foundation was the first to be approached, because he had funded the Caltech swimming pool and girls locker room/weight room (Braun Building) six years ago. Bridges sees the new gym facility as an extension of the work that Braun had already begun.

The Caltech athletic department presented to the Braun Foundation the plans for the so-called "expansion" of the original Braun Building.

The new gym will be a multipurpose facility, and it is designed to meet the needs of the Caltech community for many years to come. Jeanne Noda, vice president of student affairs, said, "We hope it will meet our needs for the next 25 to 30 years."

The plan calls for a modification and expansion of the current Braun Building to include: "open entry and lounge area, larger women's locker room, larger men's locker room, dance and aerobics multipurpose room, larger weight room, two full-sized basketball courts in the main gym that will also serve as volleyball courts, larger visiting team locker room, classroom/conference room, women's equipment room, training/first aid room, four racquetball courts, and three squash courts."

The gross size of the currently proposed facility is 42,000 square feet. According to Bridges, however, the old gym will still be

used in conjunction with the new facility.

"We will add a lounge area where offices are currently," said Bridges. "Administrative offices will be moved to the second floor of the new center. Increased office space will also allow us to give desk space to our expanding staff, including part-time coaches."

The main objective of this entire new complex is revolved around social interaction. "We want the new gym to enhance student life. It will become a social center," said Noda.

"We were trying to get away from the typical gymnasium feel when designing the facility," said Bridges. "The underlying reason behind the new center is to provide as many possibilities for social interaction as possible."

At this time, the actual construction of the new gym is still in the planning stage. Mechanical drawings and plan checks still need to be made. Pricing, proposal to the city, and city approval are ni the next year.

Bridges is optimistic that

continued on page 8

photo by Hampden Kuhns

## CRIME AND INCIDENT BEAT

Crime Tip: If you plan to do Christmas shopping, make sure that your money and packages are secure and cannot be stolen from you. Don't leave items in the front of your car. There have been several more robberies reported in the vicinity of Caltech.

11/28 There was a small fire on the porch of the Property Management house at 327 S. Holliston. A security officer reported he had the fire under control and later called the Pasadena Fire Department to make sure the fire was out. The fire started from a pile of newspapers and mail that had accumulated over several months.

11/29 A bicycle was stolen from the Ricketts House bicycle rack. The student had locked his bike, and last saw it on the 19th.

11/30 A staff member left her wallet in her mail box at Arms Lab. The Security Pacific National Bank told her that a suspect had cashed on of her stolen checks and had attempted to cash another the next day, when the suspect was frightened away by questioning. The suspect left his drivers licence at the bank when he left. The Pasadena Police Department was notified.

11/30 A staff member left his camera, that he had been using in lab work, on the bookcase in his office in Thomas. When he returned a day later on Saturday, the camera was missing. The office is usually locked, but it is on South Master.

12/1 Security found that a small pane of glass in a door of the house at 1227 S. Arden had been broken. There was no sign of entry, and the door was still secure.

12/3 An unknown person entered the Jorgensen Lab over the weekend and poured water and Coca Cola into a Next, a Sun, and a keyboard. The equipment was in rooms 160A, 164, and 170. There was no evidence of forced entry.

12/4 A large group of ex-convicts who had escaped from a minimum security prison reportedly disrupted a physics lecture in Gates. Pasadena Police officials stated that the offenders would soon be re-incarcerated where they belong.

12/4 An officer responded to a call that fire alarm pull boxes on the 2nd and 3rd floors of Baxter had been pulled. An alarm indicated that someone was trapped in the elevator. The suspect was found in the elevator, and he stated he was a student at Caltech and PCC. Kim West was asked to identify the suspect, and she did not recognize him as a student. The suspect was taken into custody by the police.

Total value stolen or missing this week: \$620.

INSIDE

Photos From the  
ME72 Contest  
pages 4 and 5

A Christmas Tree  
for Beckman  
page 2

Jim's  
Journal  
page 8

# Women In Science

by Jerri Martin

During Caltech's centennial, 1991, the Centennial Committee plans to have a focus or theme for each month, celebrating a particular group of people or aspect of life at Caltech. March is going to be "Women in Science" month.

The undergraduate members of this committee are trying to provide some activities that will, we hope, directly involve the entire undergraduate community, both men and women. We are planning to get together during the last week of winter break to work on activities for this month.

One of our ideas is to make a giant time-line to place outside the student houses, showing some of the contributions notable women undergraduates have made to the community and some of the ways the community has changed in the last 20 years. We could include inter-

esting quotes from interviews with alums and appropriate excerpts from the *BigT* or the *Tech* that show how House traditions, sporting events, clubs, and other aspects of undergraduate life have changed or evolved. Our goal is to create something that will emphasize the ways in which women have truly become part of the undergraduate community, and which will be interesting to everyone.

If you are interested, or if you have any questions or suggestions, please get in touch with Catherine Hafer, x6236, Fl no.5 Celia Ng, 578-9923, Ru no.236 or Taletha Derrington, 578-9504, Fl no.34

We're planning to get together a couple times during the last week of break to work on the timeline, and are planning to combine this with a barbecue and a hot tub party.

photo by Hampden Kuhns



Reviving a tradition of putting a Christmas tree on Throop Hall (this ended after 1972 when Throop was destroyed in an earthquake), three undergrads decorated a Christmas tree, complete with lights and tinsel on top of Beckman Auditorium.

## Caltech Centennial Music Series

by Dan Ko

No birthday parties can do without music. The rich folks hire a live band or a chamber group to create a more festive mood. For the same purpose, an average American Joe blasts his stereo. If none of the above are heard at a birthday party, at least a short and the least musical rendering of "Happy Birthday" tune can be expected.

For the Caltech centennial celebration, nobody will be singing "Happy Birthday to you..." Instead, the finest Caltech musicians and some of the internationally well-known instrumentalists and vocalists will bring to Caltech campus jazz and the music of Mozart, Bach, Prokofiev, Dvorak, and even the Simpsons'.

Unlike the previous Dabney Lounge series, which have featured guest artists, five programs of the series will present Caltech musicians, mainly students, as special centennial events. They are David Koerner, Monica Kohler, Stanley Grant, Mary Rowe, and Julian Chen. Also the three musical instructors, Delores and William Bing and Darryl Denning, will participate in the series. Each of them will have solo recitals throughout next year.

The Caltech chamber groups, consisting of trios, quartets, quintets, and sextets of wind and string instruments, will perform

music that hold some relevance to the centennial.

On Jan. 25, the concert, by the title of "Centennial Lecture Recital: Some Musical Events of 1891" will present Dvorak's Dumky trio, composed in 1891, and compositions by Brahms and Prokofiev, who were born that year, and Mozart whose death was celebrated in the same year. Delores Bing will explain the background of each music between the presentations. Another lecture recital will take place on May 19, but this time the performers will be the lecturers. The event will be noted for playing music composed by scientists, including Dr. Les Deutsch, the organist for Caltech graduation ceremonies, and Dr. Richard Bing, the father of the Caltech jazz band director, William Bing.

The jazz bands will also give special centennial performances, the first of which is expected to be held on Feb. 2. The repertoire will range from the most popular jazz of a certain period like swing or Dixieland to that of another period.

The jazz version of "the Simpson's" theme song will be played as a contemporary jazz. On March 9, the Caltech wind ensemble will be joined by the wind ensemble from Occidental college in "An Old Style Band Concert" that will recreate the outdoor jazz concerts of the previous century.

The jazz bands and the Caltech-Occidental wind ensembles will present the 13th Annual Bandorama on May 11. The event will be distinguished by the guest clarinetist Eddie Daniels, about whom late Leonard Bernstein remarked, "Eddie Daniels combines elegance and virtuosity in a way that makes me remember Arthur Rubinstein. He is a thoroughly well-bred demon."

The preview of Caltech centennial celebrations cannot be complete without mentioning Special Centennial Concert, to be held on May 17 in Beckman Auditorium, which will have extensions augmented to the stage for the occasion. A special organ will be imported and installed to the building. Furthermore, the event will bring Caltech-Occidental Symphony Orchestra and Glee Clubs together for the first time, and it will be an opportunity for Caltech musicians to "demonstrate their musical talent" according to Allen Gross, the conductor of Caltech Occidental Symphony.

Caltech students should recognize the privilege of attending Caltech during the centennial year, and they should show some appreciation of this privilege and the institute itself by attending at least a few of these events, especially when they are all free. After all, no birthday parties can do without the people who show up to congratulate the birthday boy.

Free Christian Science Lecture  
You are invited to attend a free Christian Science Lecture, "Mankind Blessed, Not Cursed", will be held on Sunday, January 13, 1991, 2:00 P.M. at the Arcadia Christian Science Church, 100 W. Duarte Road, Arcadia.

## IHC Minutes From Dec. 5

December 5, 1990

Present: Dave, Pete, Bill, Randy, Bappa, John, Richard Song, Sam Dinkin, Kim and I.

Jack fled to an unknown destination before the meeting began. So tonight wasn't quite as brutally efficient as usual, but we managed.

KIM'S STUFF:

1. Southern RAP 1991 is a leadership conference going to be held on Saturday, February 23 at Cal State Northridge. Kim is going to reserve 14 spaces so that each house will be able send up to two students.

2. Damage appeals. Starting with the next report, all damage appeals will be considered at one meeting. This will take place about two weeks after the reports are sent out and will allow prompt and direct communication between the students and housing office.

3. Food contract bidding! The food committee has been busy trying other caterers over the last couple of weeks. Early in January there will be a pre-bid conference, where ten to twelve contractors will be invited. They will be shown the facilities and told what we expect and want from a food service. Bids will be shown the 21st of January. During the following couple of weeks, students will visit those contractors still interested and rate them. The contract will be awarded early in March. Caltech is also looking into the cost of setting up its own service.

Meanwhile, we are still looking at ways to improve the dinners now. Some new alternatives to waited dinner have been discussed and might be tried early next term.

continued on page 8

## THE CALIFORNIA TECH

Volume XCII • Number 10  
December 7, 1990

EDITORS

Scott Kister  
Emily Wen  
Lindee Goh

CRIME BEAT EDITOR

Rob Ellis

WRITERS

Sam Dinkin  
Chris Dunn  
Jason Lee  
Dan Ko  
Jerri Martin

PHOTO EDITOR

Michelle Tseng

PRODUCTION

Nick Smith

BUSINESS MANAGER

Sonny Arcilla

OFFICE MANAGER

Gavin Claypool

CIRCULATION

Peyjen Wu  
Ayman Awad

THE CALIFORNIA TECH

40-58 SAC  
California Institute of Technology  
Pasadena, California 91125

(818) 356-6154

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

Letters and announcements are welcome. All contributions should include the author's name and phone number and the intended date of publication. The editors reserve the right to abridge and edit material for literacy, expediency, or else.

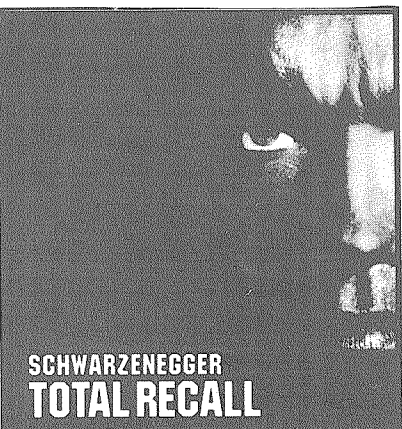
Turn in copy (preferably in ASCII format on an IBM-compatible floppy disk) to the *Tech* mailbox outside SAC room 40 or through the Network email to TECH.CITIago or TECH.Iago.Caltech.edu. The deadline for copy is Wednesday at noon; for announcements, Tuesday at 5 P.M.

Subscription requests should be directed to the office manager. Subscriptions are \$3.50 per term, \$9 for one year, \$17 for two years.

Printed by News-Type Service, Glendale.

ISSN 0008-1582

### FRIDAY NIGHT ASCIT MOVIE



Baxter Lecture Hall

Friday  
December 7  
7:30 and 10:00 p.m.  
-and -  
Saturday

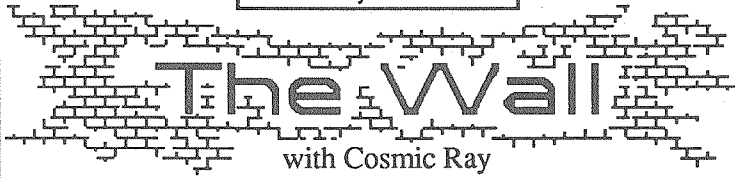
NOT

\$1.50 ASCIT members  
\$2.00 all others

With  
"For Sentimental Reasons"

### LATE NIGHT NAIR MOVIE

...it'll take your hair off...



Baxter Lecture Hall  
Fri. Nite/Sat. Morn 1:00 am \$1.50 for ASCIT members  
& Sat. night: midnight \$2.00 all others

### ACADEMY BARBER SHOP

27 N. Catalina Ave., Pasadena  
Open Tues.-Sat., 8 A.M.-5 P.M.  
449-1681

### Attention Aero Students!

Applications for the AIAA/Industry Scholarship program are now available. These are \$1000 renewable scholarships. Last year odds for getting a scholarship were 1 in 2! Check the AIAA table or call 792-1513.

### PASADENA SCIENTIFIC & TECHNICAL BOOKS

We Stock Scholarly & Professional Books in:

ENGINEERING · HANDBOOKS · SCIENCES · MATH  
AEROSPACE · COMPUTERS · BUSINESS · CODES  
NURSING · PSYCHOLOGY · ARCHITECTURE · DESIGN

— We Specialize in:

FAST DELIVERY · SPECIAL ORDERS  
PHONE ORDERS

Mon-Fri 9:30 a.m.-5:30 p.m.  
Saturday 10 a.m.-5 p.m.

794-4499

1388 E. WASHINGTON BL. - PASADENA

# Bridge Corner With Sam

by Sam Dinkin

♠ QT98643  
♥ K762  
♦ 83  
♣ 4

♠ 7            ♠ AJ  
♥ J5           ♥ Q83  
♦ AQJ6       ♦ KT42  
♣ AK8762    ♣ QJ53

♠ K52  
♥ AT984  
♦ 975  
♣ T8

Vul: East-West

North	East	South	West
Pass	1♦	Pass	2♣
2♠(?)	2NT	Pass	3NT
Pass	Pass	Pass	

Opening lead: 2♠

One of the fundamentals of card play is the positional value of high cards. If you have already mastered this, skip to the anecdote in the second to last paragraph. Whether bridge, hearts, or Euchre is your game, saving your high cards to capture your opponents honors often nets an extra trick.

For example, if you hold the AQ in a suit, when the king is on your left it usually does not matter

if you lead the suit or not. However, if the king is on your right then to lead the suit is to surrender a trick. The lead of either the ace or the queen allows right hand opponent to score a trick with her king. Yet, if you wait for the opponents (possibly including your partner) to lead the suit for you, you win tricks with both the ace and queen. Keeping positional value in mind, it is possible to figure out how to play most suit combinations.

Look at the heart suit in today's hand Jx opposite Qxx. If South plays hearts, then East has a heart stopper and can take a heart trick after North returns the suit. East has no chance to take a heart trick when the heart honors are split if he plays the suit first.

Another example comes when you can see the cards on the board. If your partner leads low and you have KJxxx and the dummy has QT, when the dummy plays the ten, you can safely play the jack because upon seeing the queen, the jack becomes equal to the king. A good rule of thumb is to play the lowest of equals when playing to

your partners trick.

The penultimate example is QJxx opposite Axx. If the queen is played and covered, then only two top tricks can be taken in the suit and three if the suit breaks 3-3. In the other hand, a lead toward the QJxx will give three tricks whenever the king is in front of the queen and whenever the suit breaks 3-3. If you can play this combination right as Heubert Dubb does, you are doing better than most recreational players.

Sometimes there needs to be a penalty card in order to give your honor some value. In this week's hand, East won the opening lead and started to run the clubs. North played the three of spades and then exclaimed, Oops, I revoked, before the trick was turned. The three of spades became a penalty card. East knew that everyone in the room would be in three no trump. He also knew that this was his only chance for a second overtrick. If I were East, I would plop the jack of spades on the table confident that North held the king of spades. Since North would be forced to play the three at his first legal op-

portunity, the jack of spades would win the trick.

Instead of East's rosy prediction of a top board coming true, South

took the king of spades and the defense cashed six spades and two hearts for down four. South rubbed it in by saying, Oink.

## EUREKA Research Conference

As part of Caltech's Centennial Celebration, Caltech will host EUREKA, the Fifth National Conference on Undergraduate Research, on March 21-23, 1991, the first three days of spring break. Caltech is an especially appropriate place for this conference, since Caltech was the site of the first undergraduate-run research program, an NSF-funded pollution program organized by ASCIT in 1968.

We expect approximately 1000 students and 500 faculty and administrators from over 250 colleges and universities nationwide to participate in the conference. The conference incorporates all disciplines including the natural and physical sciences, mathematics, engineering, humanities, arts, social sciences, business, education. Students will present results of their independent research projects in oral or poster sessions.

In addition to the student presentations, four world-renowned speakers will address the conference: Dr. Leroy Hood, Bowles Professor of Biology and Director, NSF Center for Molecular Biotechnology at Caltech; Dr. Evelyn Fox Keller, Director of Women's Studies and Professor of Rhetoric, UC Berkeley; Mr. Ray Bradbury, author; and Dr. D. Allan Bromley, Assistant to President Bush for Science and Technology.

Mr. Robert C. Cowen, Natural Science Editor, *The Christian Science Monitor*, will lead a panel on global warming. Other panel members include: Moustafa Chahine, Chief Scientist, JPL; Richard S. Lindzen, Center for Meteorology and Physical Oceanography, MIT; Richard Stroup, Political Economy Research Center; James Huffman, Northwestern School of Law; V. Ramanathan, Scripps Institution of Oceanography.

Caltech undergraduates are invited to participate in the conference!!! Any student who would like to speak at the conference should pick up the Program Announcement and Call for Papers in the SURF Office, Rm. 3, Dabney Hall. It is not required that students have done their research projects under the SURF program to participate in the conference. Abstracts are due by December 17.

The registration fee for members of the Caltech/JPL community will be \$30 (the fee is \$40 for students and \$60 for faculty from other institutions) which includes

admission to all plenary and student sessions, the program and abstract book, and lunches on Thursday and Friday. Priority seating for plenary sessions will be given to presenting undergraduates, their research sponsors, and student session chairs. Students who volunteer to help with the conference may participate in the conference without paying the registration fee. The SURF Program will pay registration fees for a limited number of student presenters.

We have many opportunities for students to volunteer to help during the conference and in the four months prior to the conference. We are looking for approximately 90 faculty, postdocs, graduate and undergraduate students to chair the 30 parallel student sessions (a 2-3 hour commitment). We need students to assist with registration, meals, the communications center, etc., during the conference and with other tasks that arise between now and March. If you want to volunteer, please sign up in the SURF/EUREKA Office.

Faculty and students who have participated in previous conferences report that the interdisciplinary nature of the National Conferences on Undergraduate Research provides opportunities for students to see the results of scholarly work in a variety of disciplines. The diversity of methodologies, styles of presentation, and of analytical work causes students in all disciplines, particularly those in science, to critically review the assumptions they have made about the meaning and nature of scholarly activities. We believe that students come away from the meetings with a stronger sense of

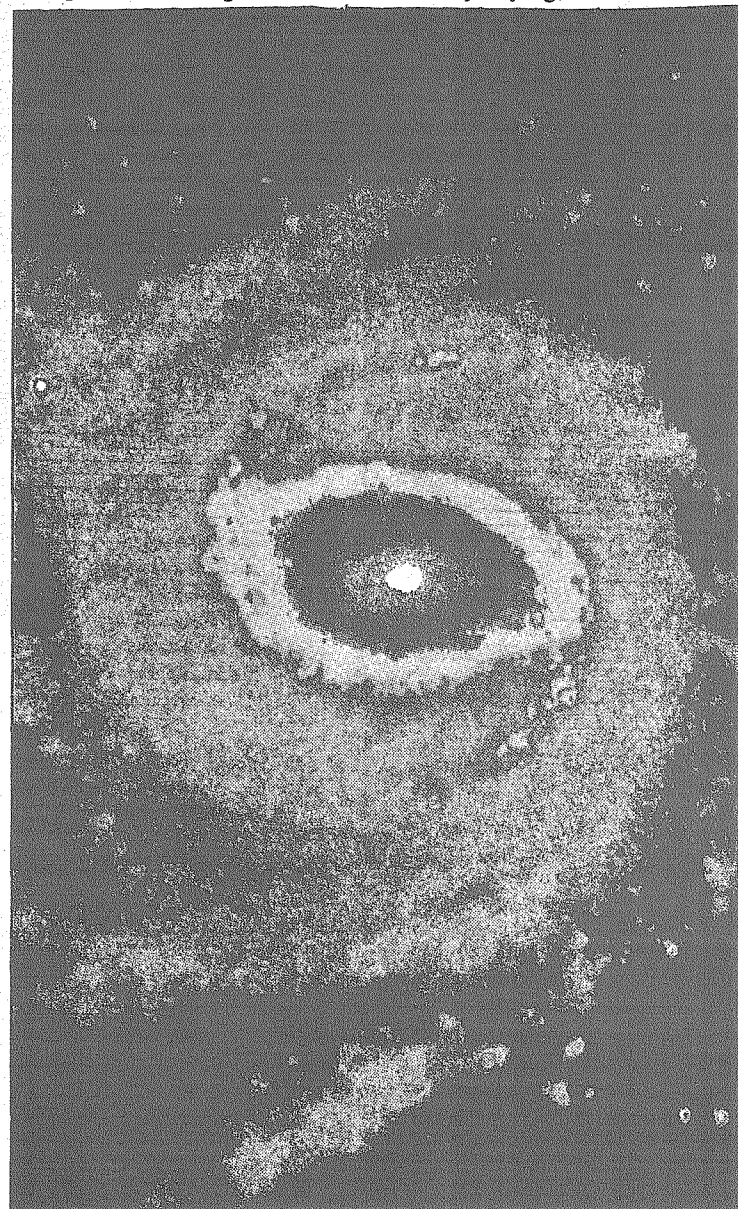
how scholarly work in their disciplines represents a specific choice of methodology and approach. Students leave the conference broader and more diverse in their approaches to their own work and in their understanding of it. No other national conference open to undergraduate students offers this breadth and diversity.

The conference will hold the Undergraduate Network Research Symposium to allow faculty and administrators involved with developing undergraduate research programs to meet, attend workshops, and discuss the many issues which arise in establishing their programs.

Professional societies will hold meetings and activities in conjunction with NCUR. The Council on Undergraduate Research will participate with the Undergraduate Research Symposium. Sigma Xi, the Scientific Research Society, which has supported the Conference for several years, is tentatively planning an initiation of Associate Members from among undergraduate participants who have been nominated for membership by their faculty mentors.

The University of North Carolina at Asheville established the conference in 1987 and hosted the second conference in 1988. Approximately 400 students from colleges and universities nationwide participated in that first conference. Trinity University and Union College hosted the third and fourth conferences, respectively. In 1990, over 800 students participated from almost 200 institutions.

Contact the SURF/EUREKA Office at x8471, or mail code 101-40, Rm. 3 Dabney Hall.



California Assn. for Research in Astronomy

## First Images From Telescope

The galaxy NGC 1232-65 million light years away—is seen in its first celestial photo taken with partly completed Keck Telescope in Hawaii, which will be the world's largest.

When construction is complete

next year, the telescope will be the largest optical telescope in the world. It's design makes use of a unique segmented mirror, in which 36 square mirrors work together as a single mirror with effective diameter of 10 meters.

## FOCUS Conference

The FOCUS discussion group (not to be confused with the FOCAL bookworm group) plans to animate the campus with a student-faculty conference next term.

The current concern is the improvement of Caltech life. While ideas have been simmering in the discussions, the group has been composing an agenda for a seven-house tour that would educe ideas from all undergraduates.

In the houses, a few students and faculty members will stimulate the discussions, which are yet to be scheduled. Expect some to ride the entire circuit and others to join when possible. Particularly, no single faculty member is likely to attend on all seven evenings.

Graduate students will be part of the conference, but no specific plans have been made to encourage their participation.

Some tentative topics:

**Food:** The Burger Continental contract is being negotiated, and the conference may occur before agreement.

**Honor System:** Rumor has it that apathy has tarnished Caltech's most sacrosanct tradition.

**Housing:** For many, funds for room improvements have been difficult to secure.

**Communication:** The only glimpse of student life that most faculty receive is through this publication.

**Apathy:** Students seldom debate or speak publicly.

The next FOCUS meeting will be on Tuesday, January 15, at 4:30 PM in the Caltech Y. Interested students are urged to discover whether the F stands for "Fru" and to stare suspiciously at the skelipped old man who sometimes admits himself.

### LAEMMILE THEATRES

<p style="text-align: center;"><b>ESQUIRE</b> 2670 E. Colorado Blvd. (818) 793-6149</p> <p style="text-align: center;">Philip Kaufman's erotic drama</p> <p style="text-align: center;"><b>Henry and June</b></p> <p style="text-align: center;">Daily 4:45, 7:30, 10:00 p.m. Sat-Sun matinees 2:00 p.m.</p>	<p style="text-align: center;"><b>COLORADO</b> 2588 E. Colorado Blvd. (818) 796-9704</p> <p style="text-align: center;">A serious comedy about women and food.</p> <p style="text-align: center;">Henry Jaglom's <b>Eating</b></p> <p style="text-align: center;">Daily 5:40, 8:00, 10:15 p.m. Sat-Sun matinees 1:00, 3:20 p.m.</p>
--	---

• A KALEIDOSCOPE OF ENTERTAINMENT •

**CALTECH public events**

**SHANGHAI ACROBATS & IMPERIAL WARRIORS OF THE PEKING OPERA**

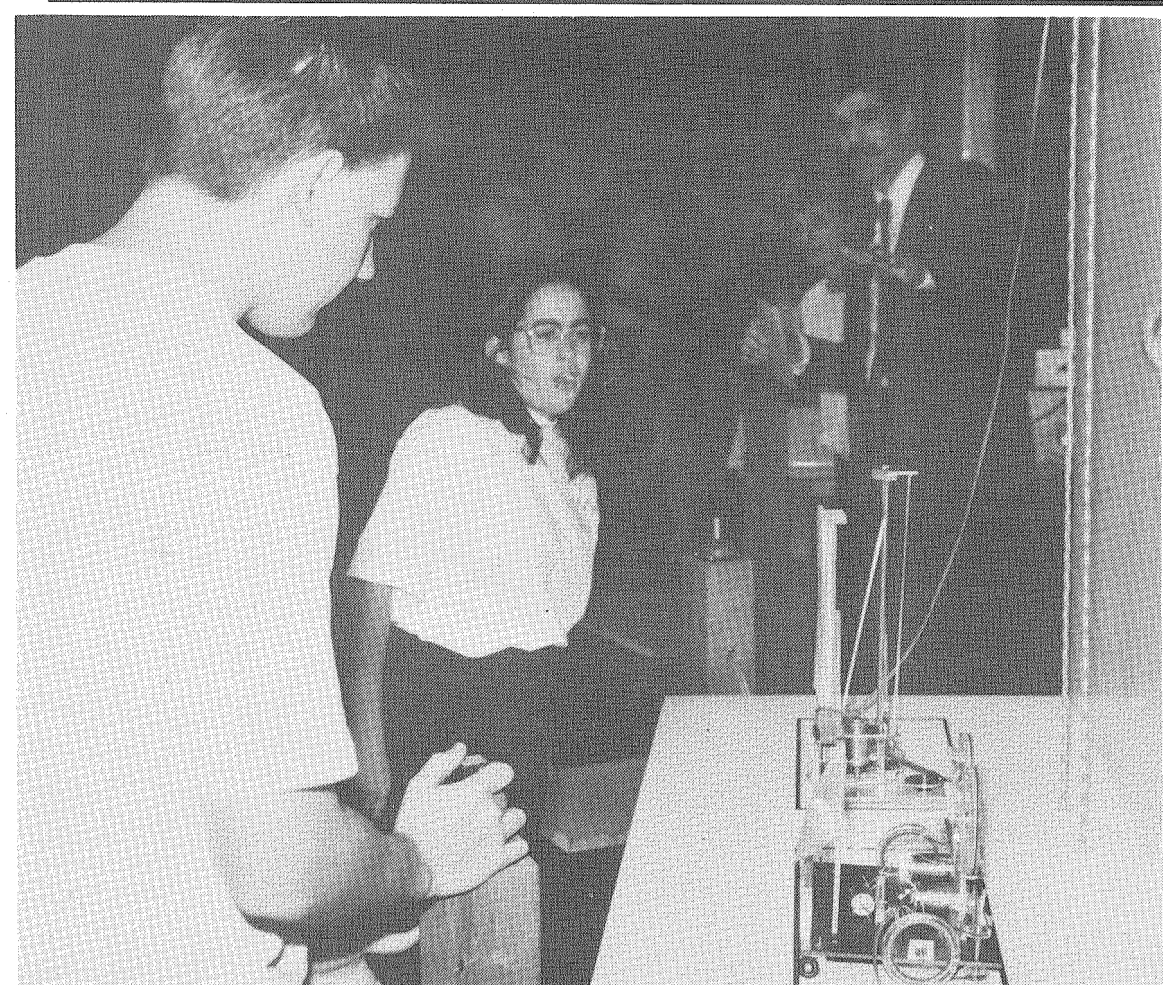
**Friday, December 7 at 8 p.m.**

Beckman Auditorium

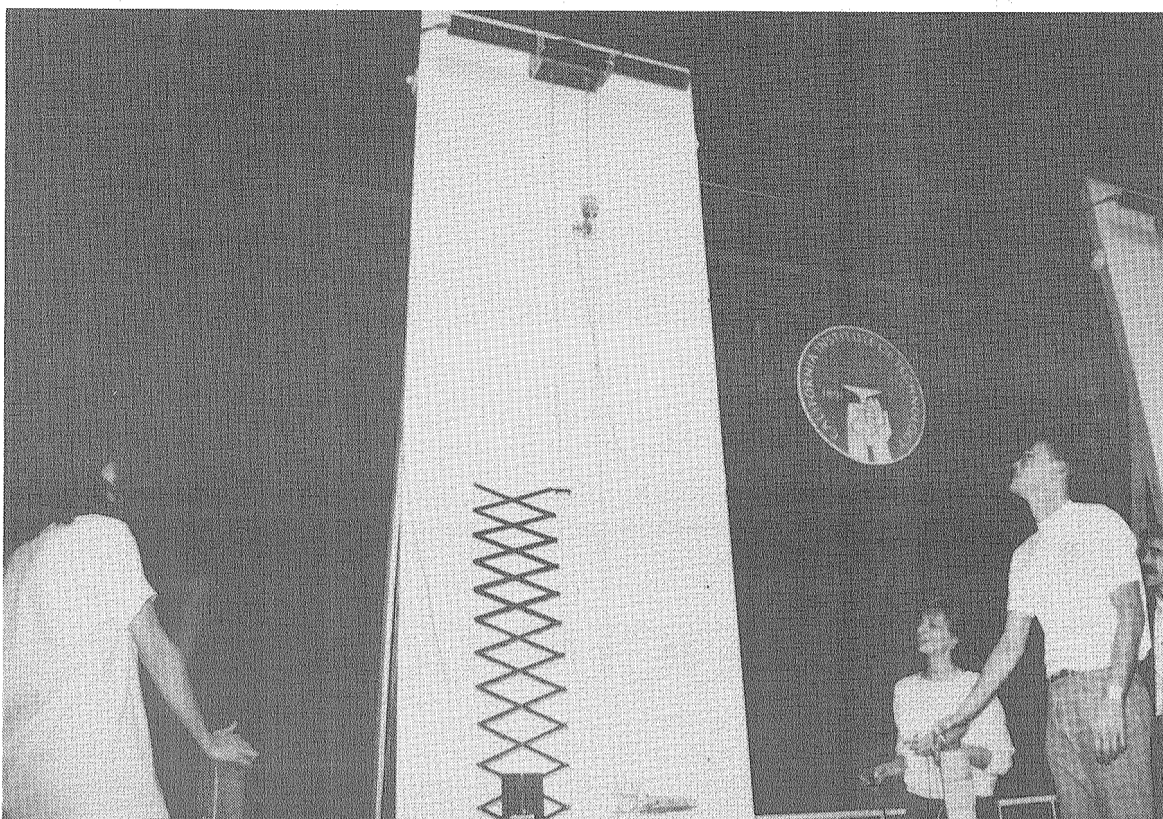
**TECHTIX & CIT STUDENT RUSH TICKETS GO ON SALE FRIDAY, DECEMBER 7**

CIT Faculty & Staff: 12.50 - 11.25 - 10.00  
CIT Students: \$7.50

**Call campus extension 4652 for information**



Golda Bernstein looks sick as she watches Scott Harris' device climbs to the top of the rope to beat her in the first round.



Bill Swanson's slow moving bug-eyed walking climber pulls away from Annetta Papadopoulos' extending Lazy Tong.

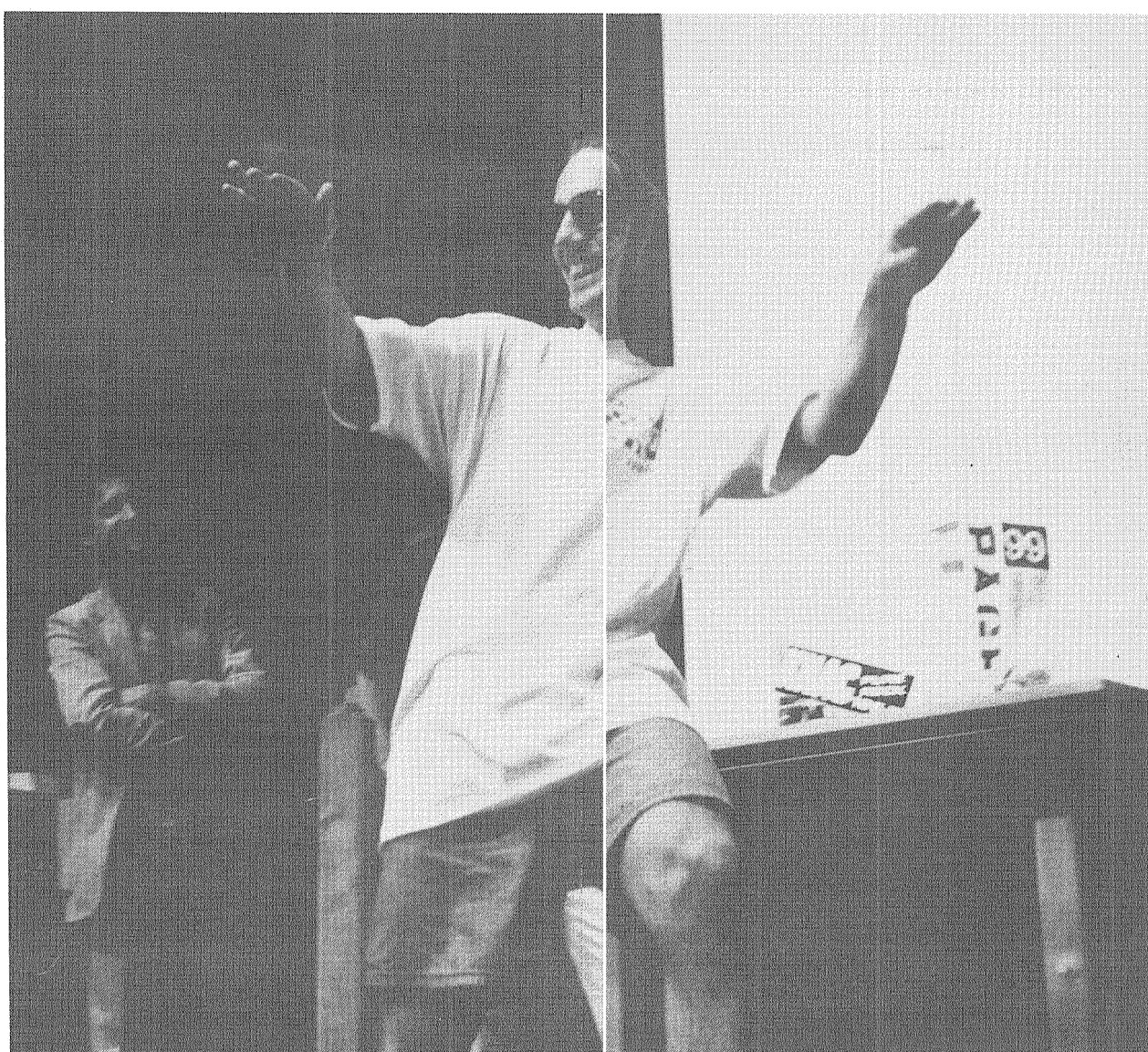
**ME72 Contest**

from page 1  
getting his climber onto the rope. It raised a boom like a crane, and then turned into the rope and attached.  
This took quite some time, however, and Randy's device was halfway up before Greg had started climbing. Greg's was by far the fastest climber in the competition, however, and he went flying up the rope and passed Randy near the top to win.  
After four rounds, there were nine devices left, and Chris Ho's was the only undefeated machine.

In the first matchup, he went against Greg's device. Chris had left four pages of written instructions for his substitute controller. In the instructions were to ram a stationary device, then climb.  
He did this to Greg's device, knocking it away from the rope. He then easily climbed to the top, eliminating Greg.  
Dave Park was also ramming other people's device. His first loss came when he drove his vehicle halfway off the table. It was still higher than his opponents, but he lost for being off the table. This time, he rammed Allen Corcorran's device, which had only lost to Chris Ho. A piece of Allen's device

fell off, and bounced off the table. Professor Antonsson declared this match a tie.  
The final matchup of the round was Mark against Bill. Bill's device sort of fell onto the rope and got there quickly. Mark was quicker, though, and pushed Bill's machine away to eliminate Bill.  
There were just six machines left in round five. Dave Park advanced by preventing Scott Harris from getting to the rope until time had almost run out. Scott didn't have time to climb at all.  
Facing Mark Lyttle, Randy Pollack raced to the rope, but missed, and could not maneuver onto it. Chris Ho won easily

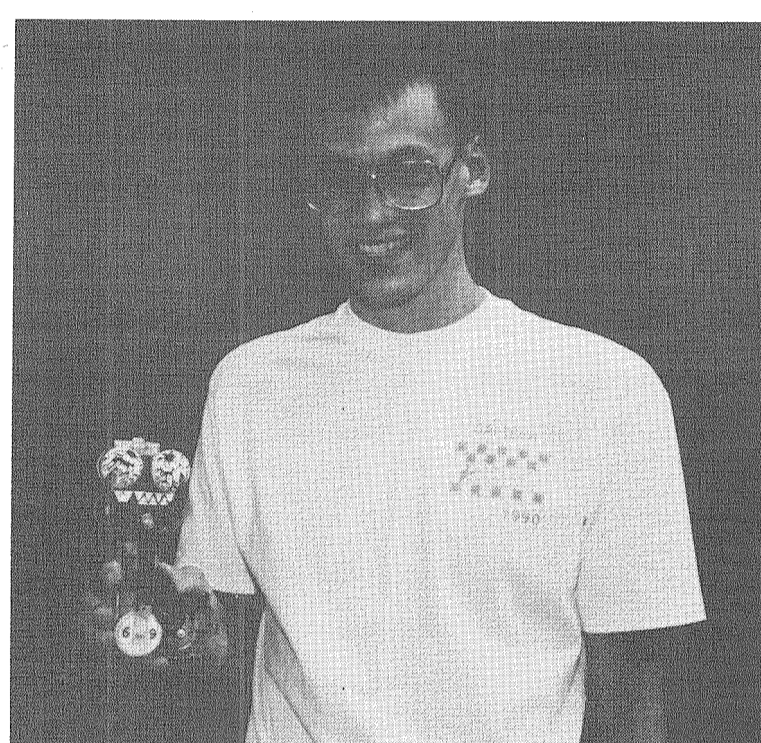
**Sixth Annual ME72 Contest**



Mark Lyttle shows off his Chicken Dance and his cools shades as offensive machine finished off Tal Schwartz' catapult machine.

against Allen Corcorran. Allen's device was not hooked up correctly, and wouldn't move.  
This eliminated all but three competitors. Mark randomly drew a bye, which meant undefeated Chris Ho was going against Dave Park. Dave hit Chris' machine and prevented him from climbing, but Chris's antenna was taller. Although Dave hadn't needed it in the last few rounds, his machine could climb. With just a little time left, he backed his machine next to the rope, and his climber rose above the machines to hand Chris his first defeat.  
All three competitors advanced, but Chris Ho was no longer undefeated. He did get the bye for this round, however, pitting the two ramming machines, Dave and Mark. Mark's antenna was much taller, meaning Dave would have to climb to win. Mark held him off for the win to advance to the final round.  
In their first matchup, Chris won because Mark's antenna got stuck on his banner. This time, he would lose because of the banner.

Both machines raised their antenna this time. When Mark tried to block Chris from the rope, he deflected off Chris' machine to the side. Chris' device reached the rope and started climbing. Mark backed away, facing sure defeat. But wait, Chris' device had stopped climbing! The cable attaching his climber to the power was caught on the same banner that helped him before.  
The driver raised and lowered the climber, trying to free it from the cable, but this was to no avail. When he climbed as high as he could, he was about one inch above Mark's antenna. But the cable was stretched, and when the power turned off Chris' device fell back down and Mark leaped in the air in victory.  
Channels 2 and 5 were on hand to cover the event, as well as a reporter and photographer from the Star News. Several Scurves were on hand to pond Mark after the event.  
Although there was only one contest winner, several other contestants deserve awards.

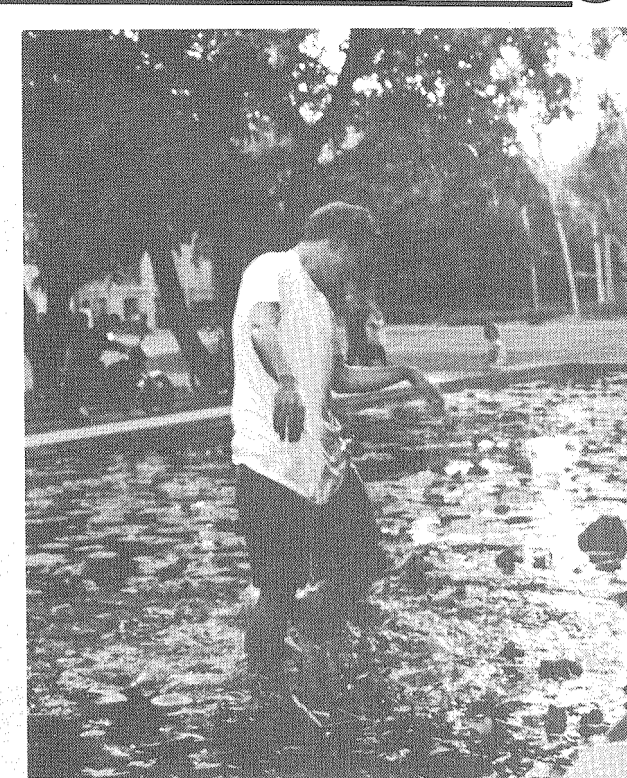


Do you notice a resemblance between Bill and his machine, or is it just me?

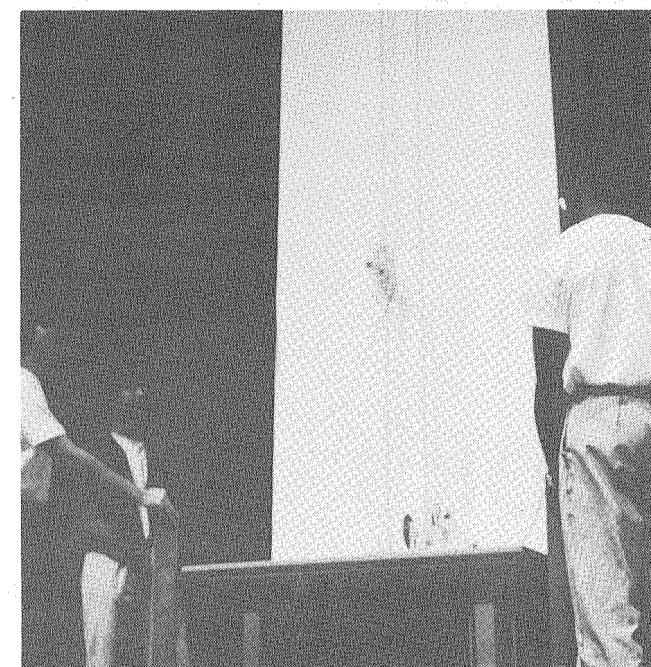
Sportsmanship Award: Larry Cheng, who pointed out to Jim Caron that he forgot to plug his device into the power.  
Best Decorated Entry: Although I personally liked Mark's KNAC vehicle of death and destruction, Bill's bug-eyed walking climber wins this category.  
Most Unique Device: A tie between Bill's and Annetta's lazy tongs.  
Added Entertainment: Brian Biswell for writing a top ten "Reasons I Didn't Win the ME72 Contest" for entertainment between rounds.  
Most Stylish Operator: Mark Lyttle, who had a different set of sunglasses for each round.  
Most Entries: Fleming House with seven. Lloyd and Ruddock had three each.  
Best Winning Percentage: Ricketts 7-3  
Fleming 19-14  
Page 5-4  
Blacker 4-4  
Ruddock 5-6  
Lloyd 4-6  
Dabney 0-4



Mark Lyttle struggles under the weight of the winner's trophy.



The Scurves wait for Mark to finish his TV interviews before they throw in Baxter pond.



Randy Pollock got his climber halfway up the rope before Greg James' crane could attach his climber to the rope (picture on left). But Greg had the fastest climber of all competitors, and was able to catch and pass Randy before the finish.

photos by Hampden Kuhns, Celina Mikolajczak, and Emily Wen.

**CLASSIFIED ADS**

**FOR RENT-**

PASADENA CONDO FOR RENT. 2 bks. from campus. 2 br/2 ba, 1199 sq. ft. 9 ft. ceilings, pool, spa, patio w/ BBQ. \$1050/mo. Stove & C.A. incl. For appt. call (818) 577-0676

**PERSONAL-**

Single Female Hi-Tech PhD. Loving, fun, pretty, Taiwan born. Good researcher, dancer, writer. Desire to meet nice, handsome, cultured, loving prof. 35-50. PO Box 60744, Pasadena, CA 91116.

**HELP WANTED-**

TEACHING ASSISTANTS NEEDED to tutor students by phone. Teaching Assistants needed in Computer Science and Computer Engineering and Electrical and Mechanical Engineering. Tutor students by phone at your convenience to supplement your income. Send resume & transcripts to Carina del Uno, Kennedy-Western University, 28310 Roadside Dr., Agoura, CA 91301, 1-818-889-8443.

RECEIVE \$20 FOR PARTICIPATING in a study on work and marriage. Dual-earner couples wanted in which at least 1 spouse is a graduate student. (213) 326-6869.

RATES: \$4.00 for first 30 words; .10¢ for each additional word.  
Send written ad with payment to 40-58. Deadline is 5 p.m., Monday before issue. No charge for on-campus lost & found.

1. What is the pressure exerted on the average Caltech student by a column of textbooks of density  $\rho$ , height  $h$  and cross-sectional area  $A$ ?  
Answer: The force is due to the weight of the texts,  $F = mg = \rho(A)gh$ . Hence the pressure on the student  $P = F/A = \rho gh$ .

2. If the student leaves all the textbooks on his desk and goes to Decompression, by what percentage will his volume increase, assuming he has a compressibility  $K = 2.5 \times 10^{-4} \text{ m}^2/\text{N}$ ? Let  $g = 10 \text{ m/s}^2$ ,  $h = 0.2 \text{ m}$ ,  $\rho = 10^3 \text{ kg/m}^3$ .  
Answer:  $\Delta V / V_0 = -K \Delta P = -K(\rho gh) = 5\%$ .

Must be all the terrific food he ate.

**Decompression**  
Saturday and Sunday  
8:00 pm 'til  
Midnight  
WINNETT STUDENT CENTER  
Saturday: Movies,  
Magic with Gerry Hart, 10:00 p.m.  
and Bugs Bunny Cartoons  
Sunday: More Movies,  
and the fabulous  
Dating Game 8:00 p.m.  
(featuring your favorite Teachers)

Sponsored by



ASCIT

and the Caltech Service League

**Gateway Travel**

3452 E. Foothill Blvd., Ste. 428  
(818) 577-2730

Caltech Approved

Professional Staff, lowest available fares, free service.

Tickets Delivered Free to You on Campus

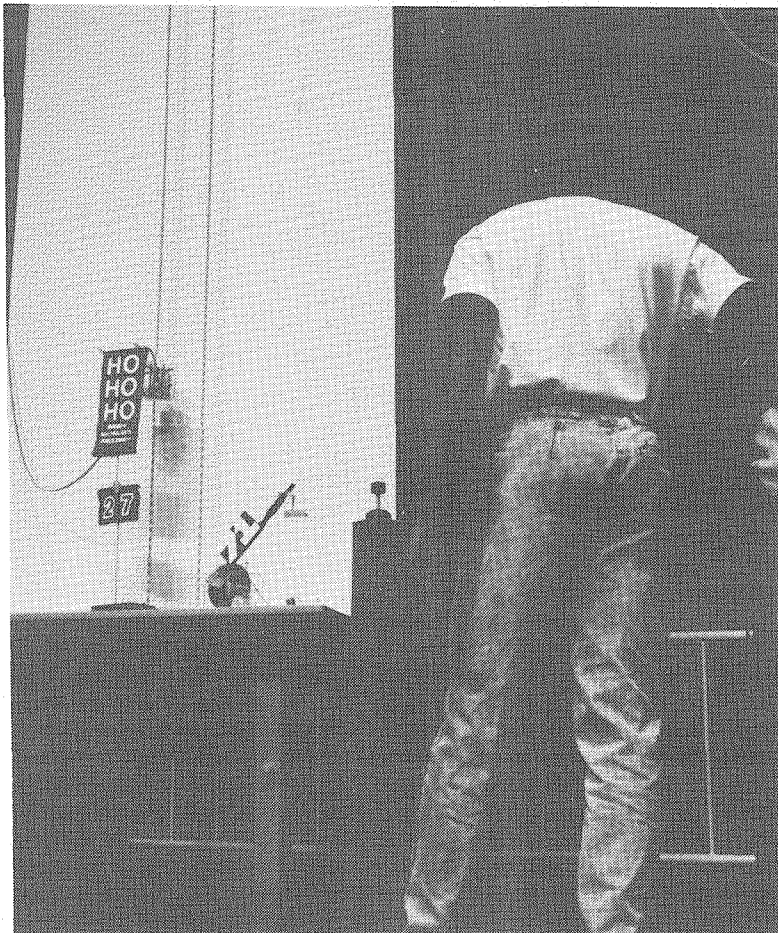
*The Haircutters* STUDENTS -  
GET \$4.00 OFF  
WITH THIS AD  
Shampoo, Style Cut  
MEN Reg. \$20.00 NOW \$16.00  
WOMEN Reg. \$25.00 NOW \$21.00  
449-6967  
1009 E. COLORADO • PASADENA  
Offer valid only Monday-Friday, expires June 30, 1991

## Greg James Wins NSF Prize

Gregory James, a Caltech senior, has received a National Science Foundation (NSF) Incentives for Excellence Scholarship Prize. As a mechanical engineering major, James was honored last month at a special luncheon at the Athenaeum. His prize is connected to the NSF Minority Graduate Fellowship program.

"Gregory is an outstanding student, with a 3.5 grade point average," said Dr. John H. Seinfeld, the Louis E. Nohl Professor and chairman of Caltech's Division of Engineering and Applied Science. "We very much appreciate this opportunity to recognize the achievement of one of our underrepresented minority students at Caltech."

James, 21, grew up in Phoenix, Arizona, where he was educated in the Mesa public schools. With both of his parents in the education profession, he focused his studies on science and has worked during the past three summers at Garrett Engine Division of Allied-Signal Aerospace doing lab testing and engine design work. He intends to attend graduate school next year to study aeronautical or mechanical engineering.



It just so happens that Greg James was also in the ME72 contest, so we have a picture of him going up against Chris Ho's device.

## "A Christmas Carol" at Caltech

Patrick Stewart will give two dramatic readings of Charles Dickens' *A Christmas Carol* next weekend in Beckman Auditorium.

The Saturday, Dec. 15 performance at 8 p.m. was nearly sold out earlier this week, but a matinee on Sunday, Dec. 16 has been added. Tickets for the 2:30 p.m. performance are now available from the Caltech Ticket Office.

A classically trained theater actor, Stewart is well known currently for his role as Captain Jean-Luc Picard in "Star Trek: The Next Generation." An associate artist with The Royal Shakespeare Company for more than 20 years, he has played such roles as King Henry IV, Cassius, Oberon, and Prospero. His earlier television work includes Sejanus in the classic "I, Claudius" and Karla to Alec Guinness's Smiley in the adaptations of John Le Carre's spy novels.

Tickets to "A Christmas Carol" as priced regularly at \$25.00-\$22.50-\$20.00, but Caltech students can buy them now at half price. Rush tickets at \$7.50 will be available next Friday to Caltech students at the Ticket Office, and one half-hour before the performance to other students and seniors. If you're already planning to be gone on break by then, consider sticking around a few more days. You won't be sorry.

-Gavin Claypool

### Folk Dancing On Campus

The Caltech Folk Dancers invite you to come and join us for folk dancing on Tuesday nights in Dabney Hall Lounge. Dances are taught from 7:30 pm to 9:00 pm, with dancing from 9:00 until 11:30 or midnight.

Submit announcements for *What Goes On* on forms available outside the Tech office (SAC room 40A) and in the copy/mail room (SAC room 37), or use a plain piece of paper. Send announcements to 40-58, or put them in the IN box outside the Tech office. Indicate the date(s) the announcement must run. Announcements for the current issue *must* be received by 5 pm Tuesday and should be shorter than 75 words. Announcements will be published as space becomes available and will be chosen according to size and interest to the Caltech community. Announcements for commercial events unrelated to Caltech will not be published.

### Geology \$\$\$

Undergraduates in the Division of Geological and Planetary Sciences are encouraged to apply for the Fritz B. Burns Prize in Geology. The award(s) will be made for amounts up to \$2,500 for the best proposals for undergraduate research in the fields represented by the Division.

If you are interested in this opportunity, please write a short statement (less than one page) describing the research you would like to do. Selections will be made in February, 1991. The proposed research can be loosely or closely tied to that of a Division faculty member. Deadline: January 15, 1991. Send proposals to Professor Kerry Sieh, Divisional Academic Officer, Division of Geological and Planetary Sciences, Mail Stop 252-21.

### New Course in Aero

During spring term, engineers from Boeing Vertol company will give seminars on the V-22 Osprey Tiltrotor aircraft. The organizational meeting will be held in 269 Lauritsen on Monday, January 7 at 4 pm. Please note that undergraduate students can register for units (graduate status is *not* a requisite—the Caltech catalog is *wrong* again). For information, call Patrick, x4789.

### See the Rose Parade

The Caltech Women's Glee Club is selling seats with a continental breakfast for the 1991 Rose Parade. Enjoy the parade from Colorado Blvd. across from Pataya Cafe. For tickets, send your name, address and phone number and number of tickets at \$25 each, along with your check to WGC—Rose Parade, Caltech 2-58, Pasadena, CA 91125. Deadline for ticket orders is Dec. 20.

# THE COLLEGE BOOK COMPANY OFFERS YOU CASH FOR BOOKS

**SAMPLE TITLES:**  
Albert's Molecular Biology of the Cell  
Binney's Galactic Dynamics  
Chow's Econometrics  
Hecht's Optics  
Jackson's Classical Electrodynamics

# 50%

**SAMPLE TITLES:**  
Purcell's Electricity and Magnetism  
Stryer's Biochemistry  
The Riverside Shakespeare  
Shu's Physical Universe  
Zirin's Astrophysics of the Sun

On books needed by the Caltech Bookstore for next semester's use

# 10%-40%

(NATIONAL WHOLESALERS VALUE)

On books not needed by the Caltech Bookstore

Although we cannot guarantee to be able to buy all books sold by the Caltech Bookstore, we can offer you money on most. So, come by and see us!

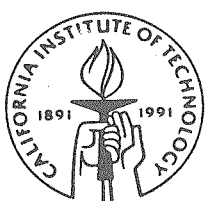
**BUYBACK DATES:**

Thursday, December 13  
Friday, December 14

**HOURS:**

9 a.m. - 4 p.m.

**IN FRONT OF THE BOOKSTORE**



## LORENZO'S BARBER SHOP

Unisex Hairstyling	Ask for Your Caltech Student Discount!
Regular Cut (men) \$ 9 <sup>00</sup>	\$1 off
Regular Cut (women) \$ 9 <sup>00</sup>	\$1 off
Style Cut \$12 <sup>00</sup>	\$2 off
Permanent Wave \$40 <sup>00</sup>	\$5 off

9 a.m. - 6 p.m., Monday - Saturday  
14 N. Mentor Avenue, Pasadena

(818) 795-5443  
No Appointment Needed

**SERVING CALTECH SINCE 1945**

**Authorized Agents for Airlines, Hotels and Steamships**



(818) 795-0291  
(213) 681-7885

CAMPUS EXTENSION  
5091

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



## what goes on

## scholarships

## Bicycle Resource

Unbeknownst to many people, there is a bicycle shop in the SAC basement available (for a small fee) to anyone who wants to do repair on his or her own bicycle. For information, contact Stephen Heise (Dabney House, Rm. 16, 356-9314) or Mark Huie (Blacker, Rm. 20, 578-9370). Tools, workstands, and manuals are available.

## The Nutcracker

Celebrate the holiday spirit with the Joffrey Ballet's performance of "The Nutcracker" on Thursday, December 20, 1990, 8:00 pm at the Dorothy Chandler Pavilion. Tickets are \$12.75 (reg. \$15) and available at the Caltech Y. Students have until Friday, Dec. 14 to pay before sales open to the entire Caltech community on Monday, December 17.

## Decompression

Better watch out, better not cry, better not pout, I'm telling you why: Decompression is coming to town this Saturday and Sunday, Dec. 8 & 9 from 8:00 pm to midnight at Winnett Student Center. There will be tons of FREE food, live entertainment (Saturday 10:00 pm, Gerry Hart, magician/comedian; Sunday - The Dating Game) and of course a smattering of movies. Don't be late, bring a date (optional) and decompresserate.

## Stranded Students Party

If you are not going home for Christmas break, then stop by the Caltech Y on Friday, Dec. 21 from 4:00-8:00 pm for food, fun and films. The annual Stranded Students Party promises to fill your stomach, relax your mind and entertain your soul. There is no charge for this event. Brought to you by your friends at the Y.

## Y Tree Trim

Stop by the Caltech Y on Wednesday, Dec. 19th from 1:00-4:00 pm to decorate our tree, enjoy great Christmas cookies and celebrate the holiday season.

## Ph 103b: Study For Money!!!

For those of you who don't read your course catalog closely enough, listen up! Drs. Phinney and Goldreich will be teaching Ph 103b second term, a course on order-of-magnitude physics, emphasizing the use of basic physics to understand complicated problems (weather, geophysics, cosmology, and stuff like that). The course will provide training for a special exam open to ALL Caltech students (in the course or not) offering \$5,000 in prize money. The course is described by Dr. Phinney as "somewhat serious, but highly rated... lots of fun." The course is described as "accessible to Juniors with a good physics background, Seniors and grad students.

## Caltech Float—Final Flowering

There are still plenty of opportunities to participate in the decoration of the Caltech float in the 1991 Rose Parade. If you are interested in participating, please call Lenore Freise at x2188.

The final flowering of the float in the large tent south of the Rose Bowl is scheduled on December 26-30. There will be two shifts each day: 8 am-4 pm and 4 pm-11 pm. On December 31, decorating will begin early and last until the float is completed in the afternoon.

In addition, there will be "dry days" for cutting and separating base materials, such as leaves and seeds, on December 8 and 15 from 8 am to 4 pm. This will occur at the Rosemont Pavilion on the corner of Seco and Rosemont, south of the Rose Bowl.

## Sam Custom Tailor

3519 E. COLORADO BLVD  
PASADENA

(818) 793-2582

Hours: 9:00 a.m. - 6:30 p.m.

Special rates for Caltech/JPL community

Rag Time  
on Green

RESALE CLOTHING  
for  
WOMEN

1136 E. Green St. • Pasadena  
(818) 796-9924

Wed 10-6 • Mon-Tue-Thu-Fri 10-5 • Sat 10-3

## Work in Japan?

A Caltech alum is offering two jobs in his Japanese factory for the summer. Travel, room and salary are provided. Students will be doing basic factory work. Preference will be given to ME and/or students with machining experience. A presentation will be made by last year's participants on Wednesday, January 9 at 7:00 pm in Clubroom 1 of Winnett Center. All interested undergrads welcome. Refreshments will be served.

## Last Chance To Go Hollywood

There are still a few of the original "Caltech Hollywood Sign" T-shirts available at cost (all size medium). We still have a few of the posters as well. If interested, contact Joe Jensen at 449-8306.

## EUREKA!

EUREKA, the fifth national conference on undergraduate research, will be held at Caltech March 21-23, 1991. Students who would like to speak at the conference should pick up a Program Announcement and Call for Papers in the SURF Office, Rm. 3 Dabney. Abstracts are due December 17!!!

## The Holiday Blues

The holidays can be a time of renewal and rest from academic and work stress but the demands of the holiday season may also leave us feeling disappointed or pressured. Being with family can lead to unfulfilled expectations and tension; being alone may make us feel isolated or lonely. To help cope with the upcoming holidays, come to a lecture entitled "Conquering the Holiday Blues" cosponsored by the Student Consultation Program and the Staff and Faculty Consultation Center on Tuesday, December 11 in Winnett Clubroom 1 from 12-1 pm. The program is open to all and refreshments will be provided.

## Coffeehouse Christmas Closing

The Coffeehouse will be closed during the holidays, from Saturday, Dec. 15 to Sunday, January 6. It will reopen on January 7, 1991. Have a Happy Holiday. Try not to starve.

## Summer Undergrad Research

Opportunities in Chemistry and Materials Science, Physics, Environmental Research, Biomedicine, Engineering, Technical Information, Computer Science and Earth Sciences available at Lawrence Livermore National Laboratory.

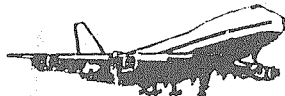
If interested, please stop by the SURF office, Dabney Rm. 3 for more information. Deadline for applications is December 31. U.S. Citizenship required.

## Let The Games Begin

Every Friday night, the Caltech Gamers meet to enjoy role-playing and board games. Friday meetings are in Winnett Clubroom 1 or in Rm. 33 of the SAC at 8:00 pm. Meet others who share your interests. All welcome! Most common Friday games are fantasy role-playing, but it's a good time to find players to share whatever games you like. There WILL be meetings during Christmas break, so stop by if you're in town.

## LOWEST AIR FARES

Atlanta	\$298.00 RT
Chicago	\$258.00 RT
New York	\$330.00 RT
Phoenix	\$ 48.00 RT



Bangkok	\$796.00 RT
Bangladesh	\$1146.00 RT
India	\$1165.00 RT
London	\$488.00 RT
Paris	\$668.00 RT
Tokyo	\$635.00 RT

More lowest fares are available.  
Prices are subject to change.

Call (818) 794-0210

FREE WORLD TRAVEL

## It's That Time of Year Again...

The Caltech Glee Clubs present "A Holiday Concert—Festive Music of the Season." Come and listen to the sounds of the season on Friday, Dec. 7 or Saturday, Dec. 8 at 8:00 pm in Dabney Lounge. Tickets are available at the Caltech Ticket Office or from any men's or women's glee club member. Admission is \$7.00, but if students purchase presale tickets from Glee Club members, the price is only \$5.00.

## B.F. Goodrich Wants Inventors

B.F. Goodrich is sponsoring a collegiate inventors competition to promote American invention and technology. The program will reward up to three entries \$5,000 each for submitting the best inventions. Faculty sponsors for each of the three winning student inventions will receive \$2,500 each. Winners may be selected from one or more of the three categories (which the Dean's Office forgot to give us).

Administered by the National Invention Center, the competition is open to all full-time U.S. college students.

Inventions will be evaluated by a panel of nationally recognized engineers, inventors, mathematicians, scientists, environmentalists, biologists, medical doctors and patent attorneys.

Students are welcome to enter the competition individually or in teams. Patent rights of each entry will be closely protected.

All entries must be submitted by December 31, 1990.

For more information, contact the Dean of Students, 102 Parsons-Gates, x6351.

## Arizona Honors Academy

As an exceptional undergraduate you are invited to participate in a remarkable interdisciplinary summer session entitled "Seeking National Security in an Insecure World." If selected, you will spend three weeks in an intellectually challenging seminar with nationally and internationally distinguished experts, thirty students from throughout the U.S., and faculty from Arizona Universities.

Topics studies include U.S. foreign policy, East-West relations, the environment, regional crises, arms control, proliferation, and overpopulation.

Deadline: February 15, 1991. For information, contact the Dean of Students Office, 102 Parsons-Gates.

## Student Shop Rekeying

The Student Shop will be rekeyed the week of December 10. Get your new keys and memberships from Mike Mossey, 103 Ruddock, 578-9696. Membership fees are \$25 for the year plus \$10 key deposit. Also, let Mike know if you would like to be a committeeman.

## Scholarship Listings

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

The National Space Club will award a \$7,500 scholarship for the academic year 1991-92. The scholarship is in memory of Dr. Robert H. Goddard, America's rocket pioneer. Applicants must be U.S. citizens in at least their junior year and have the intention of pursuing undergraduate or graduate studies in science or engineering. The deadline to apply is January 4, 1991.

The Josephine de Karman Fellowship Trust has announced the availability of ten fellowships of \$6,000 each for 1991-92. The fellowships are available to students entering their senior undergraduate year and graduate students entering the terminal year of graduate school in the fall of 1991. The deadline to apply is January 31, 1991.

The Society for the Advancement of Material and Process Engineering has two undergraduate scholarship awards programs. One program is for the engineering student and the other is for the engineering technology student. Applicants must be full-time students and recommended by their department head or advisor. The deadline to apply is February 1, 1991.

The American Society of Naval Engineers has available scholarship awards of \$2,000 each for the 1991-92 academic year. Undergraduate awards are limited to a student's final one or two years of undergraduate education. Graduate support for studies leading to a master's degree are limited to one year. Applicants must be U.S. citizens and demonstrate a genuine interest in naval engineering. Deadline for application is February 15, 1991.

The Society of Women Engineers (SWE) is pleased to announce their 1991 Spring Scholarship Program. All qualified women engineering students are encouraged to apply. There are several scholarships with different qualifications. The deadline to apply is February 1, 1991.

## SWE Spring Scholarships

SWE Spring \$1000-4000 scholarships. Open to sophomore, junior and senior women in engineering, with a minimum 3.5 GPA. Applications due February 1, 1991. Interested? Call Celia Ng, 1-55, 578-9923.

The Chinese-American Engineers and Scientists Association of Southern California, CESASC, has announced the availability of two types of awards. One is the CESASC Scholarship Awarded on the basis of academic achievement as well as demonstrated financial need. The other is the Academic Achievement Award, which is based on academic performance and extracurricular activities. Deadline to apply is January 15, 1991.

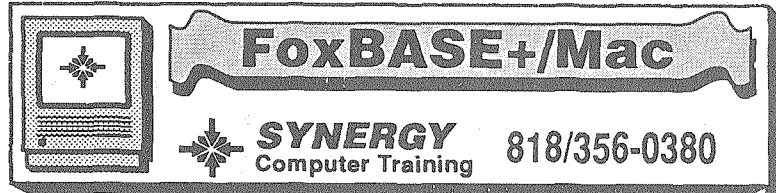
The College Women's Club of Pasadena is offering scholarships for 1991-92 to full-time undergraduate students. You may apply for a \$2,000 award which may be used for tuition/fees, textbooks, and lab fees. Full-time graduate students may apply for fellowships of \$3,000. Application forms and instructions are available in the Financial Aid Office. Completed applications, including an academic transcript, current course list, and three recommendations are due in the Financial Aid Office by February 1. One graduate and one undergraduate will be selected from the applicant pool and then submitted to the College Women's Club by their March 1 deadline.

The American Electroplaters and Surface Finishing Society (AESF) has scholarship awards available for undergraduates in at least their junior year in a chemistry, chemical engineering, environmental engineering, metallurgy, or materials science program and graduates enrolled in a program leading to a master's or Ph.D. degree. Award selections will be based on, but not limited to: career interest in surface finishing technologies, scholarship, achievement, motivation, and potential. Awards are not necessarily based on financial need. Applications must be postmarked by April 15, 1991.

If you have any questions, please come by the office or call x6280.

## SWE Engineering Competition

SWE Technical Presentation Competition (paper related to engineering). Must be undergrad SWE student member. Winners get free transportation to SWE national student conference. Applications due by March 1, 1991. Interested? Contact Celia Ng, 1-55, 578-9923.

TEACH FOR AMERICA  
application deadline for  
spring interviews

January 4, 1991

Teach For America is a national teacher corps of talented, dedicated individuals from all ethnic backgrounds and academic majors who work for two years in urban and rural schools that have persistent teacher shortages.

Applications are available at Placement and Career Development

## HAPPY HOUR at the dentist?



See Dr. Richard S. Phillips, D.D.S.  
1302 North Altadena Drive  
Pasadena • 797-6778

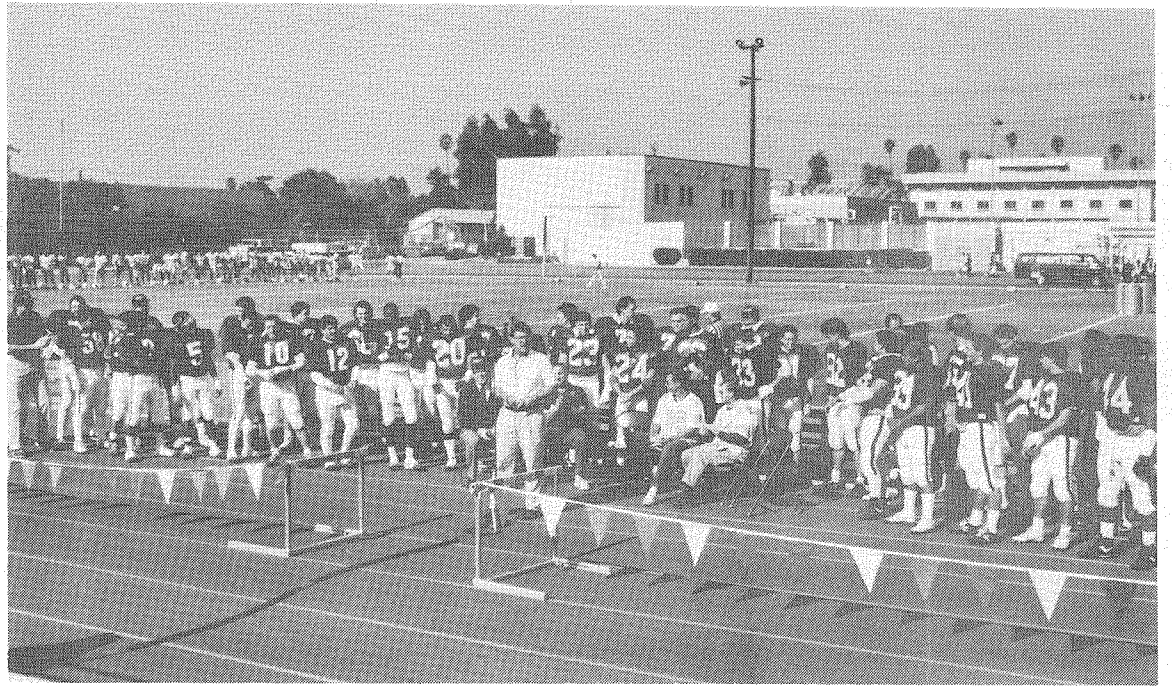
New Patient HAPPY HOUR SPECIAL (Tues. & Thurs., 2-6 p.m.)  
Cleaning/Exam \$18.00 (reg. \$70.00)

expires June 1991

## New Gym

from page 1  
groundbreaking will begin by the latest, mid-June of 1991. The plan calls for one entire year of construction. "All of this construction will be concentrated mainly at the west end of the current facilities, where the outdoor basketball, sand volleyball, and parking lots reside." The construction should be completed by mid-June of 1992, and thus Braun Athletic Center will be ready for operation by the opening of the 1992-93 school year. "The new gym will do a great deal to enhance our athletic, recreational, and interhouse programs. It will be a big addition to our college, and it will give the Caltech basketball team a bright outlook," said Gene Victor, head coach of the basketball team. Overall, the benefits of the new gym facility will be apparent. In a

report, Bridges listed many of these benefits. "It will most positively affect our intercollegiate program, undergrad/graduate intramurals, recreational, and instructional," he said. Specifically, as listed in the report, the number of indoor P.E. course offerings will be nearly doubled; major facility conflicts among sports teams and instructional activities will be eliminated. The intramural program will be greatly enhanced. Open recreation time will be more than doubled. The locker shortage problem will be solved. "I am very optimistic about the whole project and its benefits," said Noda. "And we need to give most of the credit to Dan Bridges. We have been talking about getting a new athletic facility in the six years I have been here, and we made no significant movement on it until Dan became director of athletics."



Football players and athletes from all sports went to the Toy Bowl to dedicate the new bleachers and press box.

## Jim's Journal

by Jim

Today I got some glow-in-the-dark stickers in my box of Rice Krispies.

I got really excited by those things when I was a kid.

Today I was making some toast.

When it was finished, it popped out of the toaster hardly toasted at all.

So I put it back in the toaster.

When it popped up again, it was completely burnt.

I worked at the copy store today.

Hal put me to work with some one reorganizing boxes of paper.

We started stacking boxes and she said, "You're new here."

I told her that I suppose you could say I'm new even though I've worked there almost a month.

Today when I fed Mr. Peterson, she just moped and walked away.

She normally gets really excited when it's time to eat.

At the copy store today I had to make a whole bunch of copies of something.

They were an 8 1/2" x 14" paper.

## Jim's Journal

by Jim

# WEEKLY SPORTS RESULTS

Day	Date	Sport	Opponent	Results
Fri.	11-30	Basketball	Santa Cruz	37-71
Sat.	12-1	Basketball	Cal Maritime	43-45
Sat.	12-1	Football	Pasadena Police (Toy Bowl)	31-6

# WEEKLY SPORTS CALENDAR

Day	Date	Time	Sport	Opponent	Location
Fri.	12-7	7:30 pm	Basketball	LIFE College	Caltech
Tue.	12-11	7:30 pm	Basketball	West Coast Christian	Caltech
Fri.	1-4	7:30 pm	Basketball	Arizona Bible School	Arizona Bible School
Sat.	1-5	2:00 pm	Basketball	International Bible College	International Bible Coll.

## IHC Minutes

from page 2

### WINTER PARTY

The plans for the party second term are finally getting settled. The security logistics (how many guards, locking entrances, taking care of safety hazards) will be taken care of sometime this week. The initial date was th Sunday before President's Day, but APOSH is that Saturday. To avoid conflict, the date was moved to the following Saturday evening. The party is planned to take place between Blacker and Dabney and include Filippino courtyard and some areas of the SAC. Final approval will hopefully take place very soon.

The houses have been asked to choose a small group of people who will help coordinate the party. The plan is for the groups from each house to meet as early as possible next term to start gathering ideas and planning events. For example, the houses need to decide who wants to build and where, who should get a band, who will volunteer for security, who will do decorations, what the themes will be, and a name.

One very important aspect of this party is to have all of the houses involved. It's going to take a great deal of cooperation and

### Report of the Food Committee December 6, 1990

Present: Jon Lange (Da, Secretary), Jessica Barnett (Fl), Chris Myers (Ll), Wayne Davis (Pa), Debi Tuttle (Ri).

#### Good things:

We finally got our grape juice, and it's great!

#### Wish list:

It would be nice if the hamburgers weren't quite so dry.

Wednesday's dinner wasn't one of the better ones that we've seen. The chicken was awfully greasy, and the rice was awfully crun-

planning. However, above all, each house should feel it's able to express itself as a house, even though the space will be smaller. For example, if every house would like to build on a different theme, part of the two courtyards could be blocked off into separate areas. Or one house could choose to take care of the music or the decorations. By keeping in touch, the entire plan will be flexible enough for people to come up with new ideas of change focus. It's just going to take a little effort.

There's also interest in having some of the activities start early in the evening and inviting members of the community. A dinner for everyone has also been suggested, perhaps catered by several different outside people. The final decision on ideas like these and those above should come from the students, and that's why it would be good for the committees to meet as soon as possible. Two months isn't really that long, and a lot of things still need to be settled. If you have any ideas, comments or concerns, please let either your president, Jack, or myself know. As soon as I know more details, I'll pass them on. Until then, start thinking of ideas!

Have a good vacation everyone!

—Andrea Mejia  
IHC Secretary

chicken and rice in the future.

Cheese in the salad bar would be a good thing.

Please, PLEASE, PLEASE! We don't want leftovers this finals week. Finals week shouldn't be an excuse to clean out the freezer. We'd like fresh food.

#### Other things:

Snake nights will be Monday, Tuesday, and Wednesday (Dec 10-12) from 9:30 to 10:30 PM in the North Kitchens. Stop by for a snack.

**THE CALIFORNIA TECH**  
40-58 SAC CALTECH  
Pasadena, California 91125



**PARIAN TRAVEL**  
Caltech Officially Approved

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

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

**(818) 577-8200**

468 S. Sierra Madre Boulevard, Pasadena

**SPEEDY RESEARCH**  
Reports: \$5.00 per page

Over 50,000 topics and clippings. Materials for research assistance use only!!

6546 Hollywood Blvd., 2nd Floor, Room 209  
Los Angeles, CA 90028

Mon-Fri 10:00-5:00 • Sat 11:00-4:00

Custom Research Available

AmEx • VISA • MasterCard

Call Today! (213) 463-1257