



Photo by Anoop Sinha.

The Voices of Zoe Choir performed in Ramo Auditorium Monday to celebrate Martin Luther King, Jr. Day.

## Nai-Chang Yeh Receives Packard Fellowship

Jay Aller

Caltech physicist Nai-Cheng Yeh has received a five year Packard Fellowship in Science and Engineering to further her pioneering research in high temperature superconducting materials. The award, worth \$100,000 per year, recognizes Yeh as one of the most promising young scientists in the nation.

"Many of the most important technological contributions of this century have come from university faculty members who began their research early in their careers and have worked in their areas of interest over a long period of time," says David Packard, president of the foundation and cofounder and chairman of Hewlett-Packard Company. "We want to nurture this kind of research."

Yeh, a 31-year-old assistant professor of physics at Caltech, has opened up new areas of research in the burgeoning field high temperature superconductivity. Specifically, Yeh pointed out that no one had done theoretical work on the behavior of high temperature superconductors in powerful direct current magnetic fields and high frequency electromagnetic fields. Yeh wrote several papers on the theory of these subjects, even though she is trained as an experimentalist, and her innovative work has inspired much new activity among other scientists in the field.

"She promises to be one of the outstanding experimental physicists of her generation," said Gerry Neugebauer, chair of the division of physics, mathematics, and astronomy at Caltech.

## Aspiring Leaders Retreat

Catherine Hafer & Hans Hornstein

Last weekend, January 15-17, 15 undergraduates attended the Residence Life Leadership Retreat at Capra Ranch. The retreat focused on developing leadership skills, building a sense of community, and increasing awareness and understanding of the diverse needs and experiences of fellow students. Irene Kendall, a consultant from USC, guided the group through a 2-day series of presentations and exercises on the personal, as well as the public, aspects of leadership. She encouraged people to take risks, fostering an open atmosphere. As a result, participants learned more about each other and about themselves. Kim West, the Director of Residence Life, who planned the retreat and funded it through her office, joined the group for structured as well as purely social activities, giving the students an opportunity to see a different side of her. Even though the subjects were serious, the relaxed setting and the company of other Techers made the whole weekend enjoyable for everyone.

The students also worked in small groups of 3 or 4 to identify ways to improve undergraduate life at Caltech, and each group presented their ideas at the end of the retreat. One group suggested that the Houses create a dinner exchange program, where two Houses would eat together, seated every-other one at the table (e.g. Rudd, Flem, Rudd, Flem). They also suggested roommate exchange programs, where people could host students from other Houses for a day and a night, similar to pre-fresh weekend. These activities would give undergrads a chance to meet new people and to learn more about other Houses.

Other groups addressed the social malaise many people experience at Tech. They felt that weekly campus-wide (or at least undergraduate-wide) social activities would ease the boredom and provide a way to relax. Greater contact and coordination between the House social teams, the ASCIT social director, and the Y could help make this (recurring) dream a reality. A retreat, similar to this one, for a couple members from each House's social team, the ASCIT social director, and other interested students, would give these people an opportunity to get to know each other, set group goals, learn each others' strengths, and work with a professional in planning social activities on college campuses. With this basis, they might have more success working together and coordinating events

than students have in the past.

The last group addressed the need for a balance of viewpoints on campus. They suggested several things that might encourage openness, honesty, tolerance and respect. *The Tech* could be encouraged to solicit and publish thoughtful pieces from minority viewpoints on issues facing (some subset of) the Caltech community. After-dinner discussion groups in the Houses, modeled after the Counseling Center's programs or the Honor System Talks in the Spring, could create forums for discussing difficult or controversial issues, so that students could share their thoughts and experiences with each other in a somewhat structured setting. Finally, everyone could take a more active role in questioning or challenging the derogatory, stereotypical, or otherwise hurtful remarks that they hear, rather than passively accepting them.

The Residence Life Leadership Retreat gave participants a chance to meet people (from other Houses!) with a desire to contribute to student life and to build stronger community ties, and Capra Ranch (in Fallbrook, near San Diego) is beautiful, even in the (torrential) rain. The group seemed to agree that the weekend was well worth its price in all-nighters, and several people said that it was the best weekend they had had since coming to Tech. Kim West plans to sponsor more retreats like this one, so don't miss your chance to go next time!

## Quake Damaged Big Bear Solar Observatory Reopened

Jay Aller

Caltech's Big Bear Solar Observatory, damaged by the June 28 Landers and Big Bear earthquakes, was reopened last month after more than four months of repair work. The magnitude 6.6 Big Bear earthquake, centered about six miles from the observatory, almost rocked the three-telescope system off its supports and ruined much of the precision machinery that steers the five ton instrument. The telescopes sit on a steel pedestal, which is anchored to a concrete pier. The shaking bent the pedestal and sheared off its retaining bolts, and created a large crack and countless small fissures in the concrete. Large chunks of concrete also fell off the pier in places, exposing the anchor bolts within.

The shaking destroyed many pieces of machinery, too, including a gear that helps the largest telescope follow the sun, and the pivots and drive systems of the two smaller instruments struck and damaged a computer controlled light filter on the large telescope. Fortunately, the Landers earthquake, which struck a few hours earlier, caused a power failure, so none of the computers at Big Bear were running or damaged when the second tremor hit close to home.

Outside the building, scientists were alarmed to see crevices several feet deep, four feet wide, and

up to 200 feet long in the causeway that links the observatory, built 1/5 mile out in Big Bear Lake, with the shore. Parts of the causeway had also subsided up to six feet, and several boulders, some weighing upwards of two tons, had shifted by as much as ten feet. The researchers later learned the ground movement also destroyed some of the underground utility lines to the dome.

Within days after the earthquake, staff members removed all the electronics, cameras, and measuring instruments from the telescope system, and a rigging company hoisted the three telescope system out of the observatory building. While the instrument sat on shore in a garage, engineers from the solar observatory, Caltech's Owens Valley Radio Observatory, and Caltech civil engineering department worked together to design and fabricate new telescope drive systems, a stiffer steel pedestal, and a new, stronger concrete pier.

The crane returned on September 28, exactly three months after the earthquake, to replace the telescopes in the observatory. Staff members then spent several weeks reassembling the optical and electronic instruments on the telescopes, and in early November, scientists recorded the first image of the sun since the quake.

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# ASCIT Election '93

## Election Statements

### ASCIT President Moeen Abedin

Today I am asking you to vote on Monday for Moeen Abedin for ASCIT President. If you already want to vote for me, don't worry about reading the rest of this statement, although I encourage you to do so. Otherwise, definitely please keep going.

I want to be ASCIT President because I know I will do a good job as head of the ASCIT BOD. The ASCIT President serves as the undergraduate representative to some important groups, such as the Faculty Board and the Alumni Association. As President I will seek out your opinions and voice them to these administrative groups fairly. I am already serving you, the undergraduates, on three student faculty advisory committees, as part of the voice of undergrads to the faculty and administration. I am also serving as Junior Class Secretary/Treasurer. As promised first term, Mudeo was held, and it was a rousing suc-

cess. Now, Stanley Grant III, the Class President, and I are working on getting your ideas for 1994 commencement speaker, which we will voice to the Convocations Committee. (look for the surveys now up in the houses). In short, I hope my experience as a representative and Junior Class Officer qualifies me in your mind to deserve your vote for ASCIT President.

### Sonny Arcilla

Where does all of the money we give to ASCIT go? What does the ASCIT BOD do besides give out money and sponsor annual events? Why haven't we had more events (parties) with other campuses? Why is the IHC trying to organize a seven-house party? How can some clubs afford to sponsor so many more activities than others?

The questions above underscore some of my goals as ASCIT President.

They are all answered directly or indirectly by the fact that past ASCIT Boards have not put in the time to do what was not expected of them. I feel it's time to expect more from our ASCIT BOD and, in par-

ticular, the ASCIT President.

As ASCIT President, I plan to do more than just run Board meetings and represent the student body at random functions. Among other things, the following are what I plan:

1) At least two parties per year with other campuses like Occidental or Azusa Pacific;

2) At least two seven-house parties planned a term ahead of time to allow house social committees to plan around it;

3) Publication of a Club Handbook which would tell all present and potential student leaders how to organize events, get funding, and the like. Promoting clubs is the easiest way to promote student involvement for the ASCIT BOD. It should be encouraged;

4) Student polling via lounge sign-ups of student opinions on important subjects; and

5) To try to expand the duties of ASCIT BOD offices that presently carry few responsibilities.

**Qualifications:** California Tech Business Manager (3 years), SEDS President (1), Caltech Y Treasurer (1).

I am running because I have the time and initiative to do a great job and am the best qualified. I hope you agree.

### Hans Hornstein

The ASCIT President can do a great deal for the undergraduates at Caltech, if he or she is motivated and dedicated. I think I have those two qualities and the commitment necessary to see that the job is not only done, but done well. As President, if elected, I will attempt to improve relations with the administration. I will also not let ASCIT slide back into a caretaker student government. The President should be a good representative of the student body, because he may be the only point of contact that others outside the student body have. I feel that I would be a very good person to represent the various groups that make up the undergraduate community. Most of all, I care what happens to Tech, and want to make sure that we get the best future possible. These are the reasons I feel I would be the best choice for ASCIT President, and I would appreciate your vote.

### Derek Surka

ASCIT has the potential to deal with the many complaints which confront Caltech undergraduates and possibly solve some of their problems. As ASCIT President, I will tap this potential and transform ASCIT into an *effective* student government whose presence is known on campus. I want ASCIT to be known not only for financially supporting student organizations, but also for improving student life by directly addressing student complaints, such as crowded pre-registration.

I want more students to become involved in ASCIT and voice their opinions. In order to encourage participation, I will make ASCIT as open and accessible as possible. For example, I will write a bi-weekly column for the *California Tech* discussing various issues before ASCIT and asking for student input. I want all students to feel they can approach ASCIT with their concerns and be confident that ASCIT will act upon them.

Additionally, I want to have a Student-Faculty Conference

where major concerns can be addressed and possible solutions formulated. More importantly, I intend to *follow-up* on the conference and continue working to implement these solutions. It is possible to improve life at Caltech; all it takes is a little determination and effective leadership.

I feel I can provide both that determination and leadership. I have extensive experience in student government, having held many positions in various clubs and organizations in the Caltech community, including Vice-President of Page House and ASCIT Social Director.

I know what I would like ASCIT to become - an effective voice for the students and a more active force in student life. I will do all that I can to move ASCIT in that direction.

For a more accessible, prominent, and effective student government, vote Derek Surka for ASCIT President

## Bylaw Amendments

### Bylaw amendment 1

Remove "Activities Chairman" from Article IV-Officers, section 1.

Remove Article IV, section 10

Add Article XII, section 5.

The ASCIT Movies Chair shall be the chair of the ASCIT Movies Committee. The Chair shall be appointed by the Board of Directors with the counsel of the Treasurer, and shall be responsible for the Committee. The Movies Chair shall appoint additional members to the Movies Committee, upon approval by the Board of Directors. The Movies Committee will be in charge of operating and maintaining the ASCIT Movies equipment, choosing each term's movies, and managing the business expenses and advertising costs. At the beginning of each fiscal year, the Committee shall submit a budget for approval by the Board of Directors for the upcoming year, and they shall be responsible for reporting to the Board of Directors on their status throughout the year.

### Bylaw amendment 2

Add Article V, Section 4.

At the end of the officers' term of office, namely the Board of Directors and the *California Tech* Editors, the aforementioned officers of the Associated Students of the California Institute of Technology shall embark on a sojourn to an island state of the United States of America, situated in the Pacific Ocean, to formally terminate their term of office. The excursion must occur during the break between the second and third terms of that academic year, and shall be paid through surplus in the ASCIT budget.

This amendment is effective immediately.

## THE CALIFORNIA TECH

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# ASCIT

## Vice-President

### Michael Brundage

As ASCIT Vice President /BoC Chair, I will faithfully serve the community I represent and protect the honor system we hold dear. As Vice President, I will work diligently with the BoD and with you to help change Caltech for the better, and as BoC Chair, I will see that justice is carried out swiftly but fairly. I like our Honor System and the freedom it gives us to govern ourselves. Being Page House BoC Representative this past year, I've seen up close the beauty of our Honor Code in action; in these times especially, it is important that we maintain it carefully. When the bookstore requires identification, or a professor radically alters his or her collaboration policy, someone must go find out why we're not being trusted as much anymore, and try to restore the trust that was once there. I'll be that someone, with your support.

### Dan Millward

Hi, my name is Dan Millward. I'm running for the office of ASCIT vice president/BoC Chairman. I've served as a BoC representative-at-large for the past year, and have stood in for Mike Nassir as acting chairman when occasion required. I feel that these experiences have given me a good understanding of the honor code's meaning and how the Board of Control should operate. If elected, I will devote the time and consideration that this office calls for.

# TECH

## Editors

### Mike Benedetti, Michael Radford, Chris DuPuis

As the editors of *The Inside World* this year, we have become familiar with the workings of the *Tech*. We feel we are well prepared to edit the paper. Vote Angus.

### Momo Jeng Momo Jeng Momo Jeng

My name is Momo Jeng. My favorite track from *Abbey Road* is "Something." It has a beautiful bass line, and the singing is great.

# ASCIT Elections Continue

Ewald Hueffmeier

Nominations have closed for some of the major ASCIT offices and now it is the responsibility of you, the voter, to decide who you want to represent you. The initial election for ASCIT President, ASCIT Vice President (BOC Chair), and Editor(s) of the *California Tech* will be held this Monday. Please read the candidates' statements in this issue. Also on the ballot Monday are two proposed bylaw amendments which appeared in last week's *Tech*, and are posted in each house as well as at the ASCIT meeting room next to the MOSH's office. Any undergraduate may vote for BOC Chair (ASCIT Vice President), but only ASCIT members may vote for the other offices and the bylaw proposals. If you expect to be absent on Monday, you can file an absentee ballot with the Election Chairman (Ewald Hueffmeier, Page 134) anytime before midnight Sunday.

With the ending of one election, comes the beginning of another. Nominations open Wednesday for the remaining ASCIT offices. As before, if you want to run for one of these offices, you must submit a signed statement to the ASCIT Secretary (Korhan Gurkan: Box #565 or mail code 41-58) of your intention. Nominations close on Tuesday, February 2. The initial election for these offices will be held Monday, February 8 with a run-off election on Friday, February 12.

The offices for which nominations are opening are ASCIT Secretary, ASCIT Treasurer, Interhouse Committee (IHC) Chairman, Director for Academic Affairs, Director for Social Activities, Upperclass Director at Large, Freshman Director at Large, Athletic Manager, Board of Control (BOC) Secretary, and, if bylaw proposal #1 does not pass Monday (results of the Monday election will be posted in all houses by Tuesday morning), Activities Chairman.

The duties of each of these offices is spelled out in Article IV of the bylaws, which can be found in your *little t*. Basically, however, the ASCIT Secretary keeps minutes of all meetings of the Board of Directors and posts these in the houses. The ASCIT Treasurer is in charge of the financial aspects of the corporation. The IHC chairman, who

cannot be a freshman, presides over meetings of the Interhouse Committee. The Director for Academic Affairs is responsible for the *C.L.U.E.* and serves as chairman of the Educational Policies Committee. The Director for Social Activities is responsible for organizing ASCIT social activities. The Upperclass Director at Large is to manage and maintain the ASCIT van and copier. The Freshman Director at Large, who must be a freshman (here's your chance to break into politics, frosh!), is responsible for publishing the *Undergraduate Research Opportunities Handbook (UROH)*. The Athletic Manager is responsible for procuring all athletic awards for ASCIT. The BOC Secretary serves as secretary of the BOC, and unless bylaw Amendment #1 passes, Activities Chairman manages the AS-

continued on page 6

## Important Election Dates

**Jan. 25:** Initial election for Pres., VP, and Editor(s).

**Jan 27:** Nominations for remaining ASCIT offices open.

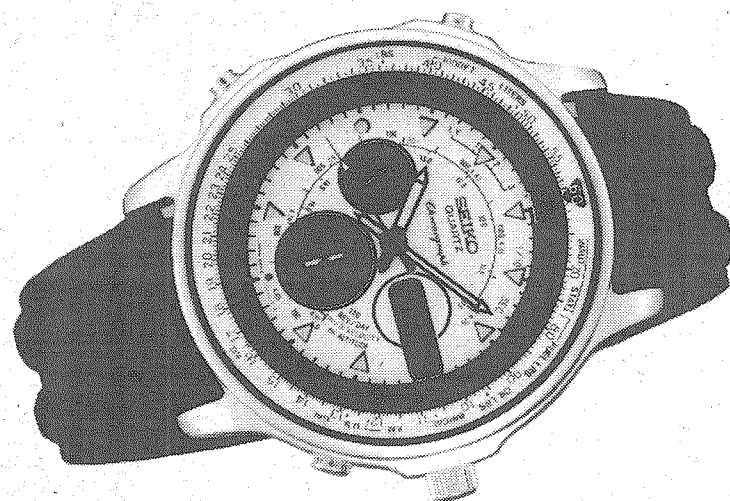
**Jan 29:** Runoff election for Pres., VP, and Editor(s).

**Feb 2:** Nominations close for remaining ASCIT offices.

**Feb 8:** Initial election for remaining offices.

**Feb 12:** Runoff election for remaining offices.

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## YNEWSYNEWSYNEWS

Clo Butcher

Hello again. I hope you all enjoyed the festivities earlier this week and are ready for some more.

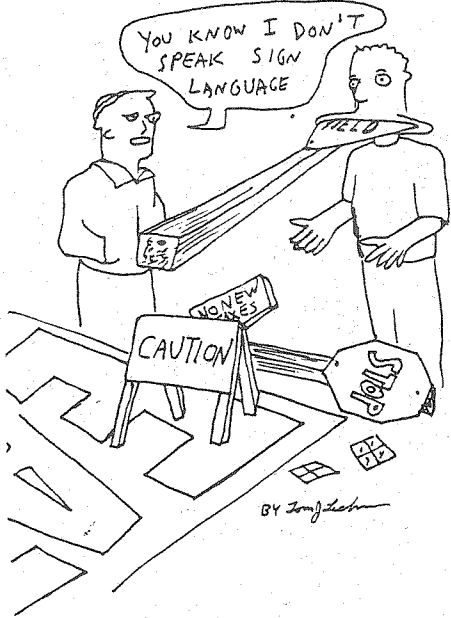
Saturday, January 23, from 7:30 to midnight in the Winnett Lounge, the Caltech C in conjunction with the Caltech Y and the International Office will be hosting a Chinese New Year Celebration. Snacks and beverages will be served. Most importantly, however, there will be a *karaoke* machine. We've picked out some fun songs - American and Chinese - so come play out your life long dream and sing the lead to your favorite songs.

We have UA, Pacific, and AMC discount movie tickets. Soon we will have tickets to Disney's newest movie *Homeward Bound* look for those coming soon.

Anyone who would like to see something different happen on campus, or is interested in any of the activities that we already run, please, please, please come to the Y Excomm meetings from noon to 1 pm on Mondays in the Y Lounge. We would love to see you - grad or undergrad. It doesn't take too much time and can be a lot of fun. If you don't want to be an excomm member, we still want to hear your ideas.

That's all for now. Have a pleasant weekend! Bye.

echners



## Kodo, Heartbeat Drummers of Japan, Perform at Caltech

Cara Stemen

Kodo will perform traditional Japanese drum music on Wednesday and Friday, January 27 and 29, at 8 p.m. in Beckman Auditorium.

Kodo means both heartbeat and Children of the Drum and expresses not only the sound of a mother's heartbeat, but also the desire to play the drums purely, with the heart of a child. Kodo uses drums of assorted sizes, the largest being the "o-daiko," a decorated instrument carved from the trunk of single tree. Weighing 900 pounds, it is mounted on a platform and played by two men. The ensemble also employs dance, mime, and a variety of other instruments, including the bamboo xylophone, gong, shamisen, bamboo flute, and wooden clacker.

Since its beginning in 1971, Kodo has been based on Sado Island in the Sea of Japan, an isolated setting of natural beauty. The members live communally and each day rigorously study and practice traditional performing arts, while developing the physical strength, energy, and stamina demanded in performance.

Tickets to this event are priced at \$30.00, \$27.50, and \$25.00. Caltech students (with ID) can purchase half-price tickets in advance and Rush Tickets for \$7.50 beginning Wednesday, January 27 (subject to availability). Tickets can be purchased at

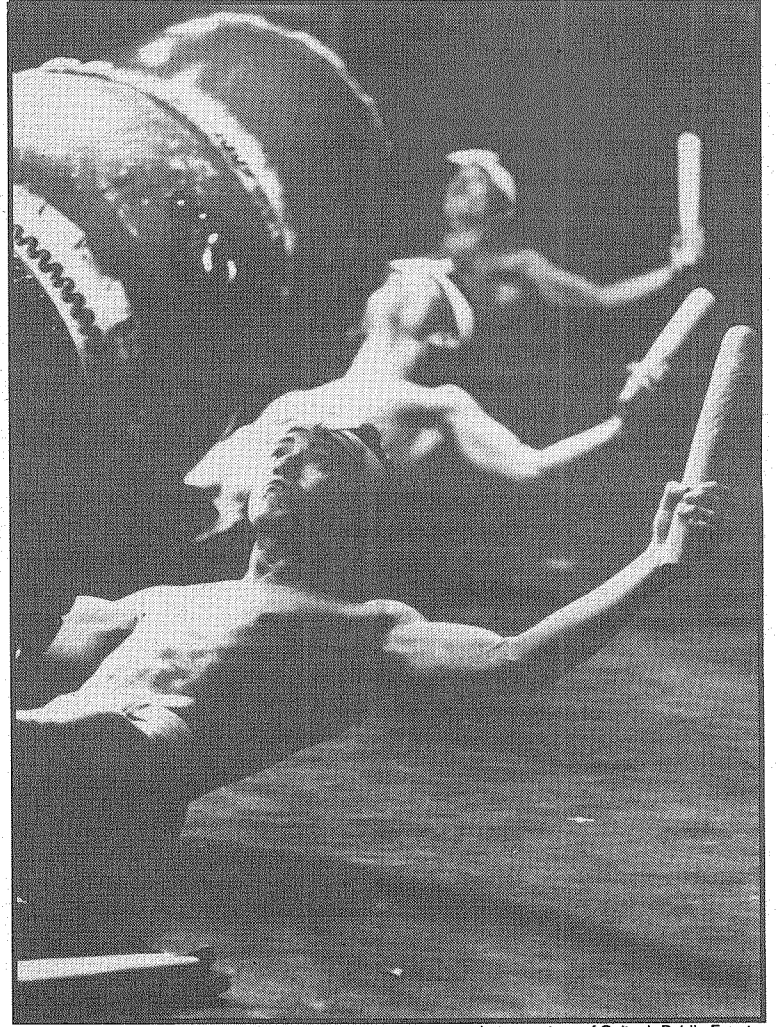


photo courtesy of Caltech Public Events

Kodo, the Heartbeat Drummers of Japan will perform on Wednesday and Friday, Jan. 27 and 29 in Beckman Auditorium.

the Caltech Ticket Office, located just north of the Beckman Auditorium parking lot. Call campus extension 4652 for information. Individuals with a disability should call Deborah White on extension 4688

(Voice & TDD) Monday through Friday between 8 am and 4 pm for information and assistance.

## Minutes of the ASCIT BOD, Jan. 19, 1993

Korhan Gürkan

Present are the BOD, Cathy Hafer, Ewald, Ed Etzkorn, Ingrid Choong.

ASCIT Elections: The first round of elections will be held on Monday. VOTE! The BOD decided that a presidential debate is not necessary. Nominations for the rest of the ASCIT Elected Offices will open

on Wednesday, January 27. The signups will be outside the ASCIT Meeting Room in the first floor of Winnett Center, and will close on Tuesday, February 2. Also, if you do not submit me a written statement stating the office you're running for by that time, your name will not appear on the ballot. I can be reached at 564-1260, Korhan Gürkan, ASCIT Secretary, Box 565, or ASCIT 41-58.

Big T: Ingrid submits last year's financial report. The Big T was \$600 over their budget when the 10% withholding is included. However, Ingrid said that last year's starting numbers were not very clear. The Big T should be in good shape for this year. By the way, one of the

editors resigned.

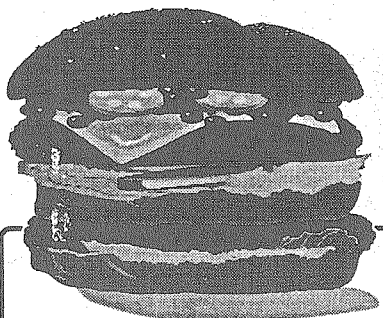
Women's Center: Cathy reports on the first get-together. She is thinking of having an additional meeting, which will be open to all undergrads, early February.

3-2 Program: The 3-2 program was not discussed at the Faculty Board meeting. So, we have more time to distribute the surveys. Please send them to the BOD after you are done. Amit gives some info from the Faculty Board meeting. Based on the Class of 86 data, 82% graduated in six years, which is defined as the graduation rate, while 61% managed to graduate in four years. The freshman retention rate for last year's class was 93%.

Women's Glee Club is requesting \$1500 to subsidize the part of the cost of an upcoming concert. The BOD decides to give them \$200. (7-0-0)

German Club picks up \$100.

The money budgeted for the ASCIT Van for this fiscal year is all used up. But, the income from the vans has not been processed yet, so the vans are in good shape.



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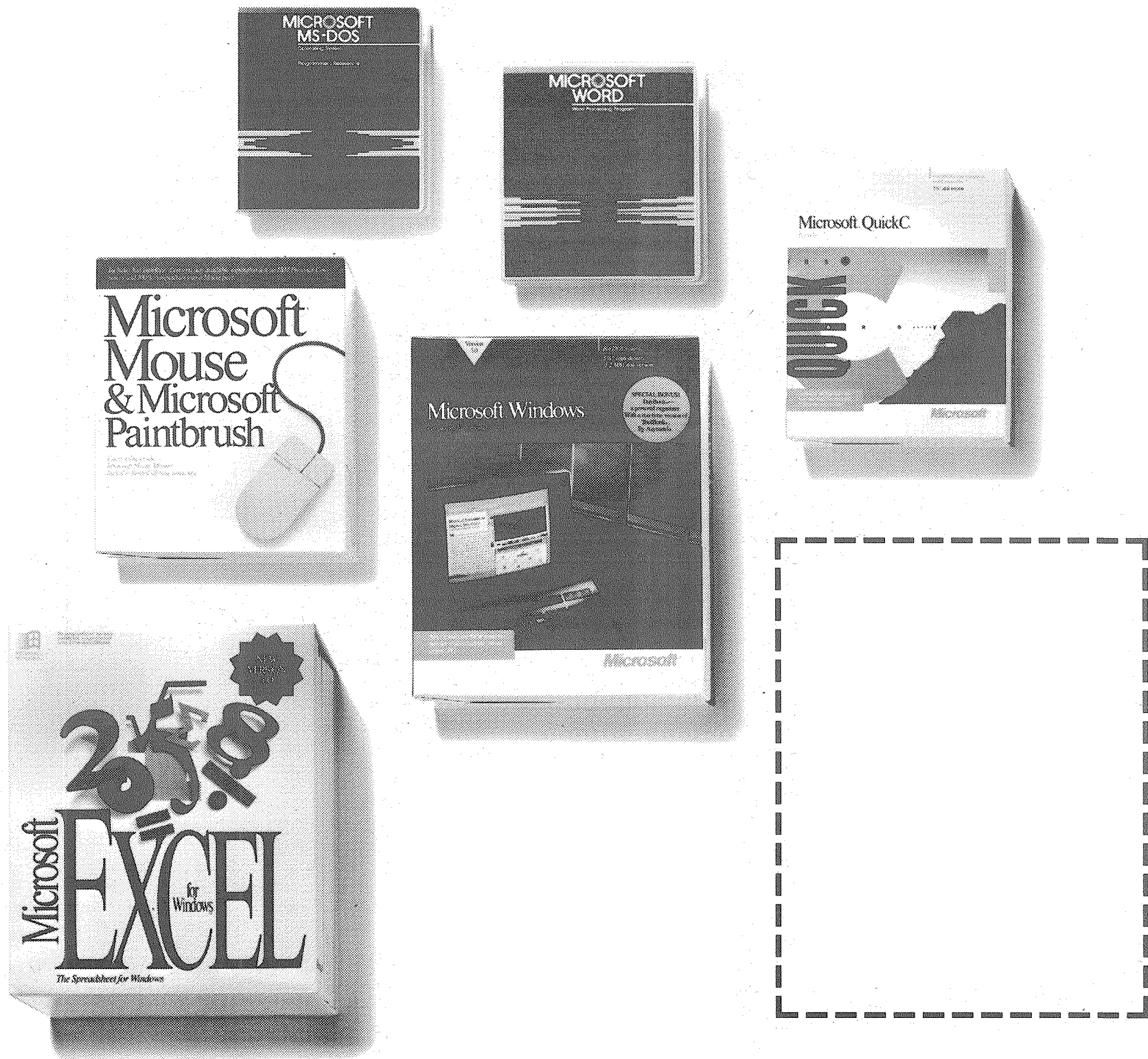
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## ENTERTAINMENT

## No "Evidence" of Quality

David W. Hogg

As fans of Madonna go, I am one of the more devoted. However "Body of Evidence" was a disappointment.

The movie is about Rebecca Carlson (Madonna), the lover of a rich man who died one night that she made love to him; and it is about her lawyer, Frank Dulaney (Willem Dafoe). Ms. Carlson is accused of murdering her lover, since his heart condition made strenuous sex (the kind Ms. Carlson likes) quite dangerous, and because she stood to inherit eight million dollars at his death. The movie is largely "courtroom drama," in which the facts of the case slowly emerge while Ms. Carlson and Mr. Dulaney (who is married) fall in love. The suspense is high when the verdict is read, and there are still plenty more surprises to come.

The plot and cast are excellent (yes, Madonna *can* act: go watch "Desperately Seeking Susan" for drama and "Who's That Girl" for comedy), but unfortunately, the

script is very poorly written (by Brad Mirman). Often the audience cringes at trite lines and predictable comebacks. At other times, just as embarrassing, the script becomes a transcript of Madonna's well-known social views. On the other hand, Madonna's personality is something that the movie has going for it. Her charm on screen is such that despite serious doubts about her innocence, the entire audience wants to see Ms. Carlson acquitted when the jury finishes its deliberations.

Madonna's charm also makes the audience want to see Mr. Dulaney, wife or no, "run the bases" with Ms. Carlson. Of course he does, but the sex scenes are not much of a turn-on. This is not because of the strange "acts" that they perform (Although some audience members were shocked: "Why is she doing that?" asked one, as Ms. Carlson poured hot wax on Mr. Dulaney's chest. "Because she is kinky," was the reply.), but because the acts seem cold and staged, like they are reading cue cards. I don't consider this

a serious criticism, since arousal is the business of pornography, and since no one would be turned on by a film of two people actually having sex (as opposed to "movie sex") anyway. But lusty Madonna-wanters beware: you will probably get significantly more kick from your own fantasies.

Your appreciation for the movie will depend on your opinion of Madonna, since it is her persona that provides the movie with some *raison d'être*. I went on opening weekend, surrounded by admirers of Madonna, and I, myself, am an admirer; the movie was not a complete loss for me. However, if you dislike Madonna, you are throwing away your \$4.75.

"Body of Evidence," directed by Uli Edel, starring Madonna, Willem Dafoe, and Joe Mantegna, is at theatres everywhere. Bring your student card to the AMC Old Pasadena (a long but manageable walk from Caltech), and you get in for \$4.75.

continued from page 3

## Elections

CIT movies.

Note that Athletic Manager, BOC Secretary, and Activities Chairman are not members of the ASCIT Board of Directors. Further note that Athletic Manager and Activities Chairman are positions that can be held by a group of ASCIT members. If you want to know more about any of these positions, I encourage you to talk to the current office-holders, who are listed in the *little t*. If you have any procedural questions, contact the Election Chairman, Ewald Hueffmeier (Page 134).

## Jim's Journal

by Jim



## Jim's Journal

by Jim



## YOUR INCOME TAX QUESTIONS CAN NOW BE ANSWERED!

The offices of Financial Aid, Graduate Studies, and International Student Programs, in cooperation with the Faculty Records Office, have arranged for a panel of specialists to address various questions pertaining to the preparation of individual federal and California state income tax returns. International students and faculty with specific concerns about federal and/or state tax preparation are encouraged to attend. The panel's membership will consist of an immigration attorney and three tax attorneys.

Monday, February 22, 1993

(Instructional Recess)

Baxter Lecture Hall

1:30 - 3:00 p.m.

## Bridge Without Sam

Jeff Goldsmith

On the Way

Playing in the North American Open Pairs with a competent partner against decent opposition, I deal myself vulnerable against not this promising collection:

♠ AKQ864 ♥ 1083 ♦ — ♣ K1042

We are playing five-card majors and Two-over-One game force. This rates to be a good hand for our system, so I am feeling encouraged when I open 1♠. LHO passes and partner bids 2♣, game forcing, which I like a lot. I am about to make a splinter jump when I hear an overcall of 2NT, showing length in the red suits. Not to be deterred, I choose to jump to 4♦, showing my club support and diamond shortness. LHO can get in this and does by raising my diamonds to five. Partner thinks about this a bit, but comes up with the bid I want to hear: 5♥. Good partner!

I am about to bid the Grand Slam Force because 7♣ will be cold opposite as little as

♠ xx ♥ Axx ♦ xxx ♣ AQJxx

and partner must have more than that for his game force. On my way to seven, however, RHO bids 6♦, making me guess about partner's club holding. I think it is really no guess; partner made a grand slam try when he bid 5♥, since we were by then committed to 6♣, so he must have the top clubs. I bid 7♣, giving the opponents the last guess, hoping strenuously that they do not sacrifice.

7♣ is passed around to RHO who gives this quite a bit of thought, as well he might, and finally decides to trust us and saves in 7♦. How unfortunate. Before I double this and hope to get more than our game at least, I give some thought to 7♣. 13 tricks are obvious at clubs, but I only see six spades, one heart, and five clubs at spades. If partner holds the ♥K or a sixth club and ♠Jx or three little spades, we can make 7♣, too, which has to be better than defending diamonds. How can I tell if he has this stuff? I am pretty confident about the 13th winner, but I cannot tell if spades are good enough to play at the seven-level; certainly partner could have a singleton, in which case 7♣ is a very bad bet. How can I tell? I cannot, but fortunately, partner is still in the game. I choose to pass, which is clearly forcing, and must suggest some higher contract. 7NT seems very unlikely given that I am probably void in diamonds, so the contract I must be considering is 7♣. 7♦ goes around to partner who considers for a little while and finally doubles. This gets passed out and we collect 500, which is worse than our game, so we are happy to find that we get an average score when several pairs are allowed to play fewer diamonds.

The final forcing pass was an unusual one in that normally, forcing passes at the seven level are intended to suggest bidding a grand after they have saved against our small slam. This one was suggesting a conversion to a higher-ranking suit, which had never occurred to me before.

Partner held

♠ 10x ♥ AJx ♦ Qxx ♣ AQJxx

He certainly had his bidding shoes on, but 7♣ is an excellent contract, and today had the benefit of being cold. His decision to double rather than bid 7♣ was a good one because he had no extra winner and no real help in spades. Thank you, partner.

The Caltech Bridge Club meets every Monday night at 7:15 in Winnett Lounge. Everybody is welcome; call Jeff Goldsmith at x2818 for details.

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# Sternberg Elected Fellow of A.A.A.S.

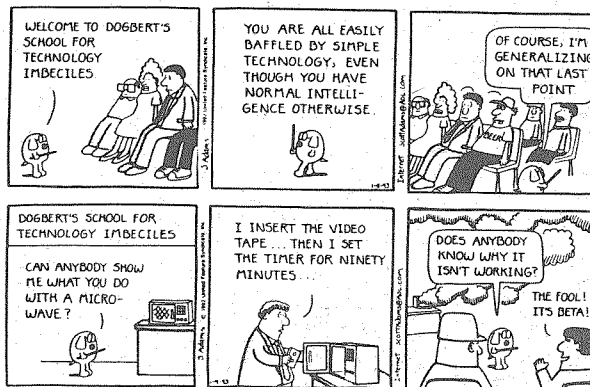
Jay Aller

A faculty member from the California Institute of Technology has been elected a fellow of the American Association for the Advancement of Science (AAAS), in recognition of his distinguished efforts toward the promotion of science and its applications. The AAAS named new fellow Paul Sternberg in the October 30 issue of the magazine *Science*.

Sternberg, 36, has a joint appointment as an associate investigator for the Howard Hughes Medical Institute and as associate professor of biology at Caltech, where he investigates the development and behavior of *Caenorhabditis elegans*, a species of nematode, or round-worm. Specifically, he examines chemical signaling between cells as organs develop within the young nematode. Although his studies focus on nematodes, whose development is both rapid and easily visible, much of Sternberg's work aims to shed light on the normal function of tumor-causing genes and on human development.

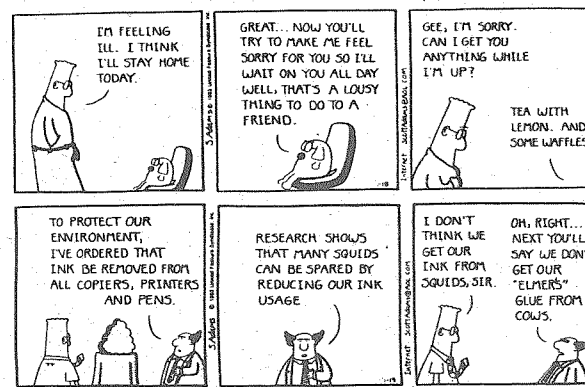
Sternberg earned his Ph.D. from the Massachusetts Institute of Technology in 1984, held a post-doctoral appointment for three years at the University of California, San Francisco, and joined Caltech's faculty in 1987. He lives in Pasadena.

Founded in 1848, AAAS is the world's largest general science organization and numbers more than 134,000 members worldwide. The Association publishes the weekly journal *Science* and the electronic journal *Current Clinical Trials*.



by Scott Adams

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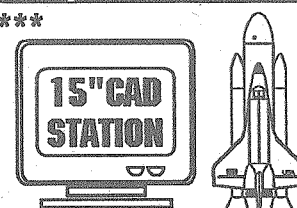
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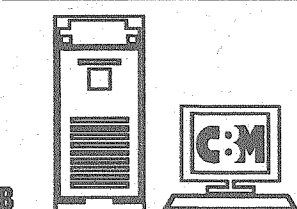
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### VESA LOCAL BUS 486DX-33/DX2-66

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- \*AT I/O: 2 SERIAL, PARALLEL, GAME PORT
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- \*AT I/O: 2 SERIAL, 1 PARALLEL, 1 GAME
- \*16BIT SVGA CARD W/1MB
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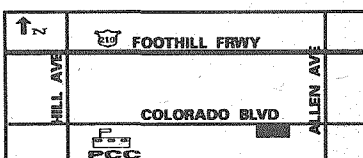
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#### 486SX-25

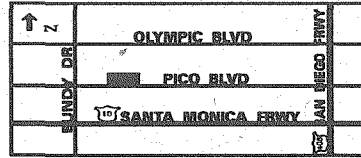
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# WHAT GOES ON

## NOTICES

**Undergraduate Women-** Your input is desperately needed in shaping the Women's Center. Its basic purpose is to address the issues and meet the needs of all the women on campus. Since the creation of the Women's Center has already been approved, the next step is to choose its coordinator and develop the programs. Although a variety of programs is expected, your input would be greatly beneficial. Express your opinion and wants concerning the Women's Center, or just listen and take this chance to meet other undergraduate women. Come to the discussion on any one of the days, free food (including vegetarian) will be served. (This doesn't mean just chips and dips.) The dates are Monday, Jan. 25 at 6:30 and Sunday, Jan. 31 at 2:00. Sign up inside the DRL/MOSH's office or call X6194 to reserve a spot. Feel free to call the following people for additional information: Cathy Hafer, 578.9924; Karen Hong, 449.5590; Maha Zewail, 792.3392

**We Want Men!!!** - Men wanted for walk-on parts in the TACIT production of Hello Dolly. Also... back stage help, lights, sound, stage crew, etc. for Hello Dolly. All members of the Caltech and JPL community are welcome! Call Elizabeth at x2395 for more details.

**Senior Pictures** are due to the Big T by Feb. 1. Please Mail your photo with your name, option, and any quotations you want to include exactly as you would like it printed in the Yearbook, to mc 27-58.

**Learn Ancient Greek** - A class to teach elementary ancient Greek, is being organized by Prof. Pigman for 1993-'94. If you are interested in taking the course, contact Prof. Pigman either by email: gdp@dido or by campus mail 101-40.

**Caltech Y ExComm Meeting-** The Y invites anyone who wishes to cosponsor an event to attend on the first or third Monday of each month.

## EVENTS AND SERVICES

**Friday Morning Donuts!** - That's right ASCIT and the Caltech Y are bringing back the Caltech tradition of Friday Morning Donuts. Donuts will be served today and every Friday at 8:00 am in front of Lloyd House. Come on out, eat breakfast, read the paper, and meet interesting people. Then, you can go back to bed, but don't miss the donuts.

**Weight Watchers** - Want to lose weight? Come to Winnet clubroom #1 at noon on Mondays from Jan. 25 to March 15. To sign up call x8360.

**Kabbalat Shabbat** - The Caltech and Oxy Hillels are sponsoring a Kabbalat Shabbat Program on the night of Friday, Jan. 29 in the Y Lounge beginning at 4:30 pm.

**Friday Prayer** - Prayers organized by Caltech Muslim Students are held in the Caltech Y lounge at 12:30 pm every Friday.

**Caltech Hillel/ Jewish Community Weekly Meeting** - An informal gathering, every Thursday at noon in the Y lounge. For information call Caty Konigsberg at (213)259-2959

**Mass** - Thursday at 8:15 in the Y lounge and Sunday at 10 am in Winnett lounge. Sacrament of Reconciliation (confession) is given 20 minutes before masses. Refreshments are served after mass.

**Bible Study and Discussion** - Every Wednesday at noon in the Y lounge. Bring your own lunch. For more information call Mike Gerfen at 356-4886.

**January Blood Drive** on Tuesday, Jan 26, from 9:45 to 2:30 For appointments call Veronica Kirton, x6374, although walkins are welcomed.

**Gay, Lesbian, Bisexual Support Group** - Meets the first and third Tuesdays at 7:30 pm in the Health Center Lounge. This confidential meeting is open to all Caltech community members looking for a supportive context in which to address questions and concerns about sexual orientation - including coming out, being out, self-discovery, coping with families.... We begin with a focus topic but move to whatever is feeling most relevant to the group that night. Refreshments are served. For information, please call x8331.

**The Caltech Student Investment Fund** meets every Tuesday at 5 pm in Winnett Clubroom #2. Come by and learn how to obtain limitless wealth and power. No previous investment experience or knowledge required.

**Preschool Playgroup** - Meets on Tuesday, Jan 26 in the Caltech Villa Apartments from 10 am to noon providing structured activities for mothers and fathers and their children. For more information call Valerie Murray, 287.8960.

**Adult Children of Alcoholics** - A 12-step group meets on campus every Tuesday, from 12 noon to 1 pm, in Y club room 2. The group is open to any student, staff or member of the faculty who grew up with family alcoholism and other problems. For more information call Dinah Lee Schaller at x2961.

**Open Line** - Open Line meets every Tuesday in the Y lounge upstairs during lunch, between 11:30 and 1:00. Topics discussed include developing a youth center for ages 5-12 for tutoring services, activities and cultural development for the children of Caltech students, staff and faculty, developing a multicultural book for the understanding of all nationalities, traditions and customs. Open to all of the Caltech community.

**The CIT-KNIT Group** meets at noon on Tuesdays in the Benioff Conference Room (Rm. 256 S. Mudd). For all levels of knitters. Come and join us.

**Baby Furniture Pool** - The Caltech Service League loans out baby furniture to students and postdocs on Wednesday at 324 S. Chester from 10 to 11 am. For more information call 952.1631.

## ENTERTAINMENT

**Kodo** - Heartbeat Drummers of Japan - Kodo-entertainers perform on drums of all sizes, accompanied by gongs, cymbals, strings and flutes. One drum, the "o-daiko," weighs over 900 lbs. and is played by two men on a platform. Come see them in Beckman Auditorium on Wednesday and Friday, Jan. 27 and 29 at 8:00 pm. Call x4652 for information.

**Chris Proctor and Harvey Reid** will give an acoustic guitar performance of Celtic, baroque and blues melodies in Winnett Lounge today. The eight o'clock show is sponsored by the Caltech Folk Music Society. For more information call x4652.

**Chamber Music** - Caltech students will perform music by Bach, Telemann, Mozart and Klachaturian, tonight in Dabney Lounge at 8 pm. Admission is free. For more information call x4652.

**The Pasadena Folkdance Co-op** offers beginning and intermediate instruction every Friday at 7:45 pm in Throop Unitarian Church on the corner of Los Robles and Del Mar. A program of varied international dances follows the instruction at 9:00 and continues until 11:00. Wear soft-soled shoes. A contribution of \$1.50 is requested.

**International Folk Dancing** - Tuesday nights in the Dabney Lounge. Beginning instruction starts at 7:30 pm; intermediate at 8:00 pm and open dancing takes place from 9:00 until midnight. Donations are accepted. For more information call Mike McKenna (310) 692.0366.

**Israeli Folk Dancing** - Sundays in Winnett lounge, Beginning instruction starts at 7:30 pm, intermediate at 8:00 and open dancing goes on from 8:30 to 10:30. For information call Nancy Macmillan at 795.3655. Admission is \$2.00.

**Scottish Country Dancing** - On Wednesdays in Dabney Lounge from 8 until 10 pm. Beginners are welcome and no partners are needed. For more information call David Hills at 354.8741.

**Music with James Boyk!** - Pianist James Boyk gives a performance each Wednesday from 4:30 to 6 pm in Dabney Lounge. The performance is open to the public and free of charge. Feel free to come late or leave early. For more information call x6353.

**Student Chamber Music Concert** - Caltech students perform music by Bach, Telemann, Mozart and Khachaturian on Friday, Jan 22 at 8 pm in Dabney Lounge. Admission is free. For more information call x4652.

**"Switzerland: A Peak Experience"** - Joe Adair will narrate this installment of the Armchair Adventure Series in Beckman Auditorium at 8 pm on Saturday, Jan. 23. Highlights of the film include visits to the Matterhorn, Eiger, Pilatus, Santis, Lucerne, Bern, Geneva and Zurich. Adair also explores the history, culture and values of the Swiss people. For more info call x4652.

## LECTURES/SEMINARS

**"The Ghost of the Executed Engineer: Technology and the Fall of the Soviet Union"** - is the title of a seminar to be delivered by Dr. Loren Graham, Prof. of the History of Science/Program in Science, Technology and Society at MIT, in Judy Library, on Thursday, Jan. 28 at 4:00 pm. Refreshments will be served.

## SCHOLARSHIPS, INTERNSHIPS & COMPETITIONS

**Summer Student Fellowship Program 1993** - Summer Student Fellowships are awarded to upperclass (juniors and seniors) in any of the fields of science or engineering with at least a tentative interest in oceanography and/or marine policy. Fellowships are awarded to pursue an independent research project chosen by the Fellow under the guidance of a member of the Research staff. The Fellowship stipend is \$3,660 for the 12-week program during the months of June-August. Travel allowance may be provided. The deadline for applications is March 1, 1993. Notification of decisions by April 12, 1993. Further information and application forms: The Fellowship Committee, Education Office, Clark Laboratory, Woods Hole Oceanographic Institution, Woods Hole, MA 02543. (508) 427-2000, ext. 2709.

**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 upperclass ME and/or students with machining experience. Deadline for submitting a brief letter of interest is Friday, January 29, 1993. If more information is required, contact the Dean of Students Office, 102 Parsons-Gates.

**Monticello Foundation Internships 1993** - The Deans' Office is accepting proposals for the Monticello Foundation Internship. One to three Caltech undergraduate women (current freshmen, sophomores and juniors) will be given an opportunity to participate in research projects outside the Caltech community for ten weeks during the summer. Each student will receive a \$3,500 stipend. Applicants are required to identify the projects in which they wish to participate. All arrangements with the principal researcher will be the responsibility of the student. Interested? Identify a sponsor for your experience at a research facility for a ten-week period. In a short essay, describe your project, and submit it to the Deans' Office, 102 Parsons-Gates, along with two faculty recommendations. Proposals are due March 1, 1993.

**"Progressive Social Change in the 1990's"** - *Monthly Review*, an independent socialist magazine, announces an essay contest for people 25 and under. Entries covering such topics as, How can we change progressive change in US society today? Are emerging movements creating new ideas and posing potential solutions? In what ways can new social institutions be constructed?, should be 2000 words or less, written in English and typed double-spaced. First prize is \$500, second \$300 and there is a \$100 third prize. All contestants will receive a free one-year subscription to *Monthly Review*. Send submissions to *Monthly Review*, 122 W 27th Street, New York, NY 10001. For more information call (212) 691-2555. The deadline for submissions is March 1.

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

**The College Women's Club of Pasadena Scholarship** competition is open to undergraduate students who are planning to enroll as full-time students for the 1993-94 academic year. Applicants must be U.S. citizens with a 3.00 GPA. The awards range from \$2,000 to \$3,000. Completed applications, including an academic transcript, current course list, three recommendations and a personal one-page essay are due in the Financial Aid Office by Feb. 5.

**Green Hills Software** annually awards several merit scholarships in the amounts of \$2500 and \$5000 to Caltech undergraduates who have demonstrated ability and special aptitude in computer science. These awards are for the Junior and Senior school years. In addition, Green Hills will award one or two Undergraduate Fellowships consisting of a Senior year scholarship plus a \$6000 summer internship for the preceding summer. All awards are merit awards, given without regard to financial need. Any student currently holding a Junior year award must reapply in order to be considered for the Senior award. The deadline for submitting the Green Hills Scholarship application to the Financial Aid Office is Friday, Feb. 5. Applications are available at the Financial Aid Office.

**The Chinese American Faculty Association** is awarding scholarships (\$500 each) to undergraduate students. Undergraduate students who are interested in Chinese culture and are enrolled full-time with a GPA of 3.5 or above are invited to apply. Completed applications must be postmarked no later than Feb. 16, 1993.

**The Society of Women Engineers** is seeking qualified applicants for thirty-one scholarships varying in amounts from \$1,000 to \$4,00. Applications, including supporting materials, must be postmarked no later than February 1, 1993.

**The American Meteorological Society** is offering 11 Undergraduate Scholarships and 11 Graduate Fellowships. For more information please check the bulletin board at the Financial Aid Officer the Bookstore. The postmark deadline with all attachments is February 1.

**The Consulting Engineers and Land Surveyors of California (CELSOC)** will award several scholarships for the 1993-94 academic year. Scholarships will range from \$1,000 to \$2,000. Scholarships are available to upper division students in the fields of engineering and/or land surveying with a minimum GPA of 3.5 in engineering and land surveying courses and a minimum overall GPA of 3.2. Deadline for applications is Feb. 26, 1993.

The annual **Mensa Scholarship Essay Contest** is here again. The essay should present clearly and concisely the applicant's academic, vocational and career goals. The only requirement is that the student be enrolled in at an accredited college/university for the 1993-1994 academic year. All entries must be postmarked on or before January 31, 1992.

**The Korean American Scholarship Foundation** is offering \$1,000 scholarships to full time students of Korean American heritage enrolled in at least the second year in a four year college, graduate school, or professional school. Deadline for the application, including supporting documents, is January 31, 1993.

**The Society for the Advancement of Material & Process Engineering (SAMPE)** is announcing its 1993 Undergraduate Awards Program for Engineering. Application packages must be submitted postmarked no later than February 1, 1993.

**The American Society of Naval Engineers** is a sponsoring a \$2,000 scholarship for the 1993-94 academic year. The candidate must be a U.S. citizen, demonstrate a genuine interest in a career in naval engineering, and be applying for support for the last year of a full-time program or for one year of graduate study. Financial need may also be considered. Deadline for receipt of scholarship materials by the ASNE offices is February 15, 1993.

**The American Physical Society (APS)** is offering \$2,500 scholarships to African-American, Hispanic-American, or Native-American undergraduate freshman or sophomore students majoring in Physics. The deadline to submit completed applications to APS is February 26, 1993.

**The SME Manufacturing Engineering Education Foundation** is announcing the availability of 4 separate undergraduate scholarships for direct application by the students. These scholarships range from \$500 to \$2,500. For information on scholarship criteria for each scholarship visit the Financial Aid Office. The application deadline is March 1.

**The American Scandinavian Foundation** of Los Angeles will distribute five \$1,000 scholarships in 1993 to upper division and graduate students with a demonstrated interest in Scandinavia. Applicants must have strong academic qualifications and must show financial need. Two letters of recommendation, a transcript and the completed application are due by March 15, 1993.

**The Jewish Community Scholarship Fund** is providing scholarships designed to assist Jewish students who are legal residents of Southern California, pursuing post high school training or education on a full-time basis, and able to document significant financial need. Forms may be obtained from the Jewish Vocational Service, Room 303, 6505 Wilshire Blvd., Los Angeles, CA 90048, or call (213) 655-8910. Deadline for submission of completed applications is April 1.

**American Electroplaters and Surface Finishers Society (AESF)** is offering scholarships for the 1993-94 academic year to students of at least junior standing. Awards are not necessarily based on financial need. Field of study for this scholarship is in chemistry and/or the engineering sciences. The application and all requested information and documentation must be postmarked by April 15, 1993.

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