

The Elections Squabble: Part 2

To the Editors:
As a former elections chairman, I think that the proposed new ASCIT election system is a step backward in the selection of officers. To illustrate this, consider an election with 6 voters and 3 candidates, A, B, and C, in which voter preferences are:

Voter	Preference Ranking
1	A B C
2	A B C
3	B C A
4	B C A
5	A B C
6	C A B

In other words voter 1 prefers candidate A to candidate B to candidate C, etc. Further, let us assume that each voter considers his/her top two choices as acceptable. Under the "approval" rules, B would win with 5 votes to A's 4. Under the present system A would win. Also note that B would lose to A under a direct A versus B contest. Thus we would be instituting a system in which a candidate would be elected despite the fact that a majority of the electorate would prefer another candidate.

Moreover, the concept of an "acceptable" candidate leaves a lot to be desired. Candidates are not binary on/off entities but people with various abilities and faults and what constitutes acceptable in one situation is not acceptable in others. For example, George Wallace may not be an acceptable candidate for President to many people, but probably

continued
on page 4

The Saga Continues Crooks Praised by Judge

By Lee Sunderlin
The four Caltech students charged with trespassing in an attempt to play a prank at the Rose Bowl last December 31 were freed in a triumph of justice yesterday. Defendants Charlie O'Neil, Joel Ennis, Juanito Villanueva, and Steve Martin entered a plea of "guilty, with an explanation." Judge Hassler ordered them to summary probation for the rest of the day. He then entered a "not guilty" plea for them and, after due deliberation, found them indeed not guilty.

The judge said that such acts "lend color to the Rose Bowl." He also wished that they would "do a better job next year." Defendant Steve Martin said that he considered it part of his sentence.

To the Editors:
The article in last week's *Tech* condemning the proposed changes to the ASCIT by-laws regarding voting procedures has made it clear that their intent must be clarified. Furthermore, there is an obvious need to clarify the Excomm's reasons for proposing them in the first place.

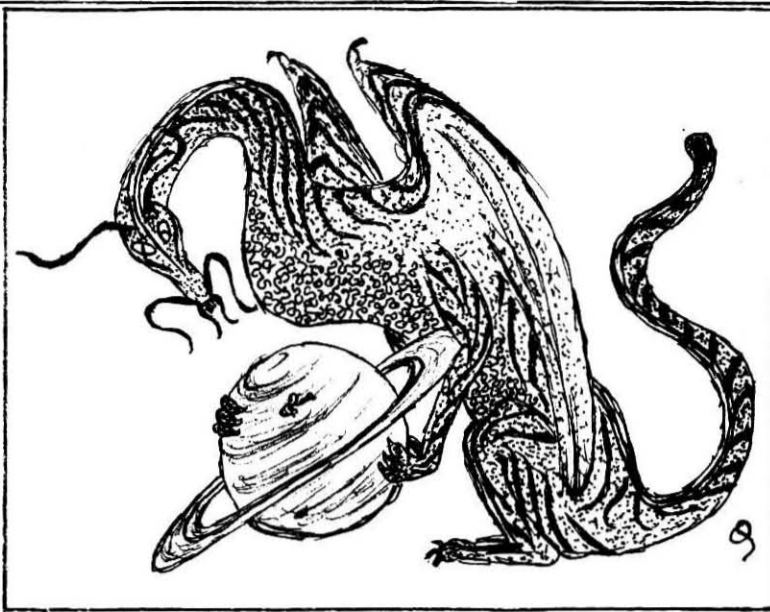
First, neither the Excomm nor the BOD are trying to pull a fast one or "sneak one past the voters" as was suggested. This seems to make the rather ridiculous implication that the Excomm stands to gain something by having these changes pass, or that there is some personal motive involved. I'm afraid that there is not much that I can say about the idea except that anyone who really believes it has their head pretty well entrenched where the sun never shines.

During the past term the Excomm spent a great deal of time discussing methods of improving the voting system used for ASCIT elections: specifically, to encourage a greater turnout and to make the system more efficient. The net result is the proposal to introduce a system of approval voting and to extend the length of the voting period, the details of which were printed in last week's *Tech* and should be posted in the houses.

The current system of voting is familiar to everyone. It attempts to elect the individual whom the majority of the voters find the most preferable of all the candidates. The standard argument against this system is that it can fail in situations where there are more than two candidates. In this instance the argument is probably academic and not applicable to any ASCIT election. The system does, however, give rise to problems in that it requires multiple run-off elections which result in a great deal of work and more importantly get extended over a period of time during which interest and participation tend to decrease.

Approval voting differs from the current system in that it elects the individual whom the greatest number of people feel is a qualified and acceptable candidate, and in this sense it is not subject to failure as the current system can be. The argument that has been made against approval voting is that it will always cause the third best candidate to win. Given the correct situation it is possible for a candidate to win who could not win under the current system, but I think that the outcome is far too case-dependent to be arbitrarily predetermined. The direct advantages of approval voting are

continued
on page 4



Faculty Awarded Teachin' Excellence

(CNB)—Five Caltech faculty members have been named recipients of awards for teaching excellence by ASCIT. They are William B. Bridges, professor of electrical engineering and applied physics; Peter B. Dervan, associate professor of chemistry; Joel N. Franklin, professor of applied mathematics; Rodman W. Paul, the Edward S. Harkness Professor of History; and Valentina Zaydman, lecturer in Russian.

The selections were made by the Educational Policies Committee of ASCIT on the basis of student ratings of courses taught during the 1980 fall term. The results of the ratings were published in a booklet called the *Teaching Quality Feedback Report* (TQFR). The booklet contains statistics and comments on the instructors' clarity, enthusiasm, command of the subject, rapport with the class, and interest in the students as individuals. The awards were first given in 1976.

Bridges, a Caltech faculty member since 1977, was given his award for his "good command of the material" and his "enthusiasm and clear, effective teaching" in the course, "Communication System Fundamentals." In the fall 1978 quarter, an optics course taught by Bridges was rated highest in a survey of teaching quality in engineering courses conducted by the Caltech Tau Beta Pi Chapter. Tau Beta Pi is the national engineering honor society.

Dervan, a second-time winner of the ASCIT award, was praised as "an excellent lecturer, sympathetic to students' problems, and enthusiastic," in his course, "Chemistry of Covalent Compounds." Dervan, a member of the Caltech faculty since 1973, is conducting research on the design and synthesis of small molecules that bind DNA.

Franklin's course in "Mathematical Programming and Game Theory" earned him his second ASCIT award and praise for his lecturing style and for his "ideal mixture of rigor and clarity." A Caltech faculty member since 1957,

Franklin formerly taught at New York University and the University of Washington.

Paul was lauded for his teaching ability in his history course, "American Life and Thought," as he won his second ASCIT award. The students praised Paul as "an excellent teacher, knowledgeable and dynamic," and for encouraging class discussions that stimulated interest. Paul has been a member of the Caltech faculty since 1947. He has received many honors for his research and publications on the history of California and the American West.

A fourth-time winner, Zaydman first received the teaching award in 1976, the first year it was given. Zaydman has been teaching Russian at Caltech since 1974. She was commended by students in her elementary Russian class for making "a hard class interesting and enjoyable for everyone."

Burned But Not Out

By Arley Anderson

On Monday, the Student Investment Fund had its first meeting of the new year. After an enjoyable and enlightening discussion with Donn Schoenmann, an institutional broker from Merrill Lynch, and Bill Carter, a portfolio manager from the Boston Company, about how institutions manage their portfolios, the Board settled down to a brief discussion of its position. December was not a good month for the Board's portfolio. The recently falling market resulted in a loss of nearly \$3500, but the Fund still finished with its index ahead of the S&P 500, 135.8, compared to 133.5. (This index reflects the growth of the total worth

continued
on page 4

Saturn Less Than Amazing

By Lee Sunderlin

A presentation was given in Ramo Auditorium last Tuesday by Bruce Murray, head of JPL. The subject was "Saturn and the Mind of Man." It consisted of a videotape of an earlier discussion, a slide show, and some questions and answers.

This talk was the descendant of two others on Mars and Jupiter. Unfortunately, Saturn has had much less impact on the mind of man, and the program was consequently less solid and on the subject.

In the videotape, Phillip Morrison elicited laughter, much of it undeserved, with his extreme enthusiasm. He spent more time than anyone on the supposed subject of the discussion. He outlined how Saturn, with the longest period of any planet visible before telescopes, was associated with time. Jupiter and Saturn passed every 20 years in one of the three signs of the Zodiac, with profound consequences to astronomers, such as Kepler, who saw in this the "Music of the Spheres."

Carl Sagan followed this up in his usual style, save for an entirely inflectionless pronunciation of "billions of years." In keeping with the broad overall psychological theme, he mentioned the great consternation the discovery of Saturn's rings caused to "the four or five planetary astronomers of the time."

Then Ray Bradbury kept to the ethereal topic by being even more flighty. He condemned the *L.A. Times* for pessimism and launched into a poem about the superiority of space travel to reading the newspaper in the morning.

Bruce Murray finished the videotape with a refreshingly solid discussion of the future of the space program. The following slides were interesting and informative. He mentioned possible missions to map Venus' surface with radar, explore the moons of Jupiter, put a movable lander or men on Mars, probe the atmosphere of Titan, meet Halley's Comet, and visit an asteroid. His metaphysical musings were a bit queer, though: after analyzing the difference between outreach and Western philosophy and introspective Eastern philosophy, as personified by the American space program and crowded India, he expressed fear at the thought, "What if God is an Indian?"

The topic of the talk was unfortunately meager, and the more the subject was ignored, the more interesting it was. Those who waited through the dark early moments saw a good presentation. We can all wait in fear, though, for "Pluto and the Mind of Man."

Body shop

Many viruses are making the rounds here in Southern California and have recently reached epidemic proportions in the L.A. area. This certainly has not excluded the Caltech community. Many students, staff and faculty have been hit by this recent outbreak and for this reason I would like to answer some common questions about the flu.

Q. *What is influenza?*

A. The flu—poopular term for influenza—is a viral infection which is quite common during the winter months. The illness may make a person feel utterly miserable. Symptoms include headache, cough, sore throat, nasal discharge, fever, muscle pain and a general feeling of sickness.

Q. *How is it transmitted?*

A. Flu is readily transmitted through any sort of close con-

tact with an infected person. Exposure to a person who is coughing or sneezing is especially likely to result in infection. If one person in a household has flu, the rest of the family often contacts the disease, and it spreads rapidly through classrooms and offices. Persons with flu are urged—for their own well-being as well as for the safety of others—not to go to work or school until they recover.

Q. *How should flu be treated?*

A. Treatment is symptomatic and is directed at keeping the person comfortable. The person should rest, drink plenty of fluids, take aspirin or tylenol for aches, pains or fever, and gargle with warm salt water or use Cloraseptic spray or

CONTINUED
ON PAGE 5



FEAR AND LOATHING IN ELECTRONICS

So, you want to follow your academic career with challenging real-world problems but you are wary of Big Company Politics—and you've developed a healthy loathing of neckties and regimens. Is that what is bugging you Bunky? Well, cheer up and consider Megatest.

In just four years Megatest has become a major innovator in LSI Test Equipment. Our machines test more microprocessors and EPROMS than anybody else's. We introduced the world's first commercially available Magnetic Bubble Memory Test System. That's not all—we've attained this standing in the industry while remaining a small, friendly, employee-owned company. We're young and we work like maniacs but we also devote a lot of time to having fun.

Research and Development—
Santa Clara
Computer Scientists (BS, MS, PhD.)
Analog and Digital Engineers

We are now developing new testers for the astoundingly complex chips of the future. Tester design for anticipated semiconductor technology poses system design problems more varied and complex than today's largest computer systems. Apart from the obvious hardware challenges, these new testers require a very sophisticated software environment. This includes special purpose language processors, powerful interactive development tools and special operating system features.

If you'd like to work in an environment where effort and creativity, not politicking, are rewarded then one of the following jobs might be for you:

Sales and Marketing Support—
Austin, Boston, Santa Clara
Analog and Digital Engineers
Computer Scientists

CAMPUS INTERVIEWS : TUESDAY JANUARY 20

Contact Placement Office.

Don't bother dressing up for the interview.

MEGATEST CORPORATION

2900 Patrick Henry Drive
Santa Clara, Ca. 95050
(408) 988-1700

Contact: Richard Swan


FREE PIZZA BEER
(Petrillo's) (Michelob)
An even more informal way to learn about MEGATEST.
RICKETT'S LOUNGE 8 PM
MONDAY JANUARY 19

FILM AILING

On the highway no one can hear you bawling.

MEGATEST

“Like to get paid for talking with Caltech Alumni?”



THE ALUMNI FUND

Contact the Alumni Fund office, extension 6286, for more information.



HAIRSTYLING SPECIAL!

to Caltech students with student ID card

\$200 OFF ON EVERY HAIRSTYLE (SHAMPOO, BLOW CUT AND DRY)

FOR MEN & WOMEN (FOR APPT. CALL)
792-5301
201 So. Lake Ave., Pasadena

Buy Caltech Cards and save 20% **CALTECH'S** Buy Caltech Cards and save 20%

BURGER CONTINENTAL
will offer you a deal you cannot refuse.



good food at reasonable prices
refills on soft drinks at all times
seconds on salad bar

SPECIALTIES: SHISH-KABOB, SHAORMA, SOUVLAKI-STEAK
HOMEMADE PASTRIES: BAKLAVA, BURMA, AND NAPOLEONS

For Entire Month of January:
A Free Root Beer Float to Freshmen and Sophomores

Faculty, Grad Students, Attend!
Mondays and Tuesdays are Beer Days. Buy 1 pitcher, get the second one free!

On Lake Avenue
1/2 Block North of California

Elections Brouhaha Heats Up

Angel Responds... Gellman Retorts

from one

would be if the ballot contained Idi Amin and Adolf Hitler.

In addition, the proposed system would not eliminate strategic voting, as suggested in Ed Lambert's article in *The Tech*. As a counterexample suppose I thought that both A and B would be OK as opposed to C, but that I greatly preferred A to B (i.e., $A \gg B > C$), and that I thought B was the frontrunner ahead of A. In this case I would very rationally vote only for A, since to vote for B also would increase B's chance of defeating A. (Although it is true that voting for A only would help C vis a vis B, note that I am assuming that C is expected to take last place.)

I would like to add that runoff elections are no big deal. From a former Election Chairman's viewpoint they are far easier to run than the general elections.

Runoffs could be better publicized by printing advance notice of them in *The Tech*, which would require changing the date of runoffs.

Finally, 24 hour voting is not necessary. If a voter thinks his/her vote is not secret enough, he/she can 1) pick up a ballot, go to a private place, mark ballot, return, put ballot in box and sign register or, 2) go to Winnett where there is a scantily-watched ballot box. Moreover, if a voter doesn't bother to vote between 10 am and 4 pm or get an absentee ballot, he/she probably doesn't care enough about the election to bother.

In summary I feel that the proposed by-laws change is a bad move and I urge my fellow Techers to vote **NO**.

—Jim Angel
1978 Elections Chairman

Gellman Retorts

from one

that it produces a result without the need for a run-off election. Coupled with the extension of the voting period to 24 hours, it is hoped that there will be a large response at elections but that this turnout will only be necessary once.

These proposed changes to the by-laws will be voted on on Monday, the 19th of January. The Excomm has discussed their merits and demerits and is of the opinion that they represent an improvement over the *status quo* and that as such they should be tried. I would appreciate it if anyone with questions about the proposals would make the effort to discuss them with members of the Excomm before voting on Monday.

—Andy Gellman

[Ed. Note: A few things do need clarifying. Last week's 'article' was written as a guest editorial at the request of the acting Editors in Chief, thus explaining the use of the Editorial 'We' throughout the piece. The intent of the comment about 'sneaking one past the voters' was not meant to imply any direct illegalities or dishonesty, but to object to an apparent victory of political expediency over open democracy. We accept that the Excomm believed that it was doing the right thing, and with no ulterior motives. We do note, Mr. Gellman's comment about heads and sunshine notwithstanding, that at least one member of said Excomm is running in the first election that would be conducted under the proposed new rules. We believe (and fervently hope) that this implies bad timing rather than personal reasons for changing the rules. In any case, we still ask for separate votes on the By-Laws Articles, and we still urge a **NO** vote on the Election Rules changes.]

SIF

FROM ONE

of the Fund and it was set at 100 when the Fund began in March 1979. Conveniently, at that time, the S&P was also 100. For comparison, at the end of the last fiscal year (Feb 1980), our index was near 110.

Our biggest losers were AMD and Exxon. Al Koehler, our resident analyst of semiconductor stocks, informs us that the recession is hitting the semiconductor industry hard because there has been a slackening of demand, while semiconductor companies are being forced to increase production capacity to offset a Japanese Threat in the coming post-recession period. The result is that earnings are down and the short-term outlook is poor. My impression is that this, coupled with a general feeling that now would be a good time to take profits, led to the sharp decline in AMD. Exxon seems to be another victim of profit-taking.

The Board delayed any action on changing its market position until the next meeting which will be held at 5:00 Monday, Jan. 26 in the Trustees Room. Naturally, everyone is invited to attend. In addition to our financial position, disbursements and the election of the new Board will be discussed.

Nominations are now open for the board of the Student Investment Fund. Applications will be in Theresa Meisling's office beginning Monday, the 19th. As a last note, all organizations seeking funds from this year's disbursements should submit written proposals to the board care of the Student Investment Fund, 210-40.

Yuill Guests at OWC

(CPE)—On January 16, 1981, at 8 pm in Winnett Lounge, the Organization for Women at Caltech will sponsor an open-audience discussion of women's changing role in today's society. Taking center-stage will be several OWC members plus guest actress Helen Yuill, who will star in "The Belle of Amherst" at 8 pm in Beckman Auditorium the following evening, January 17.

That women have voiced—from whispers to shouts—discontent with what many consider their time-dishonored secondary status in life is not a debatable fact. However, as is the case with most either created or accidental problems, their effects and the effects of their effects (i.e., their solutions) have not yet emerged from muddied waters.

Although almost anything will go in the debate/discussion, its focus will be on the "ands" of women's changing roles. For example, women and the family will be broken down to specific changes wrought upon men, husbands, children, as well as to such non-specific changes as societal benefits vs. societal damage.

The public is invited. There is no admission charge.

Why do outstanding systems programmers work in Bellevue, WA?

Microsoft.

Microsoft develops the leading edge in micro-computer systems software. Our BASIC is world renowned. Our new XENIX* OS, the micro-computer adaptation of the UNIX* OS, has computer companies and others chomping at the bit. We design state of the art system software.

And, we need programmers to work on Data Base Systems, FORTRAN, BASIC, COBOL, Pascal, C, Compilers, Graphics, Networks, and many other projects.

Our OEM customer base is a Who's Who of the hardware business (Apple,

Radio Shack, Texas Instruments, Intel, Tektronix). As new hardware is developed (8086, Z8000, 68000 microprocessor systems), Microsoft's programmers get their hands on the machines before they go into production. So your hardware suggestions and software innovations during R&D become part of the final product.

Microsoft provides the best systems programming work environment:

- all the high-level hardware (DEC 2020 and 11/70 development systems) and software development tools you'll need, in a

- small company with lots of interaction and sharing of ideas and methods, where
- you can develop your full potential. The Pacific Northwest is a great environment too:

- mountains, ocean, desert, rain forest, rivers and lakes all within easy reach.
- major cultural, sports, social, and commercial activities in Seattle, just fifteen minutes away.

We are looking for outstanding systems programmers—those with intelligence, drive, and a commitment to excellence. We want program-

mers who will advance The Standard in micro-computer software.

More information about Microsoft is available at the Placement Center.

We will be on campus Tuesday, January 20, or application may be made by resume, attention: Mr. Steve Ballmer, Assistant to the President.

*UNIX is a trademark of Bell Laboratories
XENIX is a trademark of Microsoft.

10800 NE Eighth, Suite 819
Bellevue, WA 98004
206-455-8080

We set the standard.

MICROSOFT

Commentary

Ath-Holes

The pressures that Caltech academics place upon students often leave them barely enough time or energy to engage in any sort of athletic activity. In response to this problem there is an unquestionably diverse set of PE classes that students may take. However, the vast majority of students find the attendance requirements too restrictive and often merely satisfy the required 9 units of PE. As a less restrictive form of athletic activity, many students participate, either individually or in groups, in running, swimming, basketball, ultimate frisbee, soccer, and, of course, interhouse sports.

These activities are usually without credit or supervision, despite an excellent self-designed PE course. The attitude of the PE department towards such student organized activities is usually skeptical, and little concern exists among the PE faculty for providing facilities for these students. In addition, comments and actions of members of the Athletic Department towards student-organized athletics have been blatantly insulting and discouraging.

Two important facilities for both individual and group athletics are the swimming pool and the gym. The swimming pool is a facility that few students can ever use, with those in classes and on the swim team as exceptions. On weekdays the only regular hours for open swimming are 11:00 am to 2:00 pm (in other words, lunchtime). Availability of the gym is equally depressing. It is available to all students in the early morning, when most students are in class, and on Friday nights,

when any student in his right mind would want to be doing things other than playing basketball. All other hours in the afternoon and evening, except dinnertime, naturally, are occupied by classes or varsity athletics. There were once several nights during the week when half of the gym was open to all students, assuming that the fencing coach was in a good mood. Since that time Mr. Emery has allotted these hours to such organizations as the men's volleyball club.

An example of the Athletic Department's behavior toward student group athletics is shown by a series of events that occurred at the end of first term and the beginning of the present term. In early October, members of Dabney House and Ricketts House began to meet two or three times a week in the afternoon to play soccer on the field in front of the gym. Participation increased to upwards of 30 students. On weekends the soccer field was often used by off-campus groups, some of which were

promised use of Caltech's already-scarce facilities. This was, however, one of the smallest obstacles encountered by the group. Before registration this term, the Director of Athletics, Mr. Warren "Webb" Emery (who alludes to Dabney/Ricketts soccer as "modified soccer") had the soccer goals removed from the field. As the Caltech soccer team no longer needed them, he saw little need for the goals to remain on the field, despite repeated complaints by members of Dabney House. Mr. Emery believed that one of the goals could possibly interfere with the left fielder of the baseball team. Evidently, a soccer program with 30 participants is expendable, to prevent a possible inconvenience to one baseball player. Several students suggested, to no avail, the possibility of sliding the goals to a more convenient location when students were not playing soccer. To add insult to injury, Mr. Emery removed the benches along the sidelines of the field, used by

resting players or spectators, and had the water fountain by the soccer field disconnected. Later, when Mr. Emery encountered the soccer group, he said, "You know that when baseball starts you boys are through!" The Dabney/Ricketts group is still playing soccer, in spite of the apparent contempt of the athletics department.

A healthy athletics department would encourage student organized athletics, even if they are, God forbid, just for fun. Apparently, Caltech's Department of Athletics is not very healthy. As a possible remedy, the gym and the swimming pool should be open to all students for spontaneous individual and group athletics, several hours (afternoon and evening) each week. Soccer goals should be readily available for students to move into place before a game. Finally, the department faculty should cooperate with students and encourage such activities, rather than deride them.

-Glen Swindle

Body Shop

from three

lozenges to reduce throat pain. Beyond that the illness must run its course. If fever is high or persists, a doctor or nurse practitioner should be consulted since other diseases may have symptoms similar to influenza.

Q. Do antibiotics help fight against flu?

A. No, since influenza is caused by a virus. Antibiotics are only effective in combating bacterial infections.

Q. Can influenza be prevented by immunization?

A. Yes, to a limited extent. The disease is due to a number of different strains of the influenza virus. Vaccines are now available for protection at local clinics and the Red Cross. Many different combinations are available varying from year to year in anticipation of the particular type of flu which is foreseen for that year. A number of people still seem to have flu-like symptoms despite having been immunized. Nevertheless, this protection is effective enough so that it is usually advised for persons whose health would be particularly endangered by influenza. These high-risk groups include elderly persons and persons with serious chronic illnesses such as heart disease, lung disease or diabetes.

Q. When should influenza vaccine be taken?

A. To provide maximum protection during winter months, influenza immunization should be received before mid-November. Immunity lasts about six months.

If you've got the flu and it seems to be hanging on, or you have questions about your health, why not come and visit us at the Health Center?

Thanks for your positive feedback and responses regarding the Body Shop. It helps us determine your needs and interests. Keep it up!

-Lynnette Wilmoth, R.N.
Health Center 1-8

Imagine yourself at Hughes

You won't want to miss the **Hughes Career Opportunity Presentation** if you're an EE, ME, Physics, Computer Science or Math major. A Hughes engineer and Cal Tech alum will be on campus:

**Tuesday, January 20, 4-6 pm,
Information Session in Noyes,
Room 153**

to tell you how you can become involved with innovations that could change the world.

**At Hughes,
your future is limited only by your imagination.**



HUGHES AIRCRAFT COMPANY

U.S. Citizenship Required for Employment
Equal Opportunity Employer

Hughes Aircraft Company, P.O. Box 90515, Los Angeles, CA 90009.

sports

Prickett Fences

By D. R. Tanyan

Pulling themselves together after a term marred by injuries, poor attendance, and Blue Slips, the Mighty Fencing Beavers conquered the Cal Poly Mustangs with a trio of match victories that were twice decided by the last bout. Undeclared in her first competition was frosh Barb Turpin, as were veterans Scott Prahl ("...Knee surgery? What knee surgery?") and Bruce Prickett. Outstanding performances were turned in by Maclen Marvit and Jim

Cummings, and the whole team fought hard to gain the narrow victory. Q. Pham of the Mustangs showed quickness and poise in his three victories, and the tenacity of both teams brought many 5-4 bouts.

The Mustangs gained their only victory early on, in the fast moving Epée match. With veteran Brian Kenny out for medical reasons, and Stuart Goodnick still missing in orbit ("Ground Control to Major Tom..."), the Beavers had only members of last term's

beginning class to hold the line. While all fought hard, only Jim Cummings was able to come out ahead, winning two of his bouts with speed and ferocity. Tony Miller also was aggressive, but not able to get the last touch in the two bouts in which he fought to scores of 5-4. Paul St. Marie and John Shapiro were also overwhelmed. The match was dominated by Q. Pham of the Mustangs, who withstood strong challenges from Cummings and Miller to lead the Equine Epéeists to a 7-2 victory.

Meanwhile, the Tech Men's Foil Team was doing better. Scott Prahl, showing his old combination of finesse and patience, lead off by skunking his first opponent 5-0. The Mustangs retaliated by defeating Maclen Marvit and Rick Pogge 5-1, 5-2. Tech and Poly then traded victories down the line, bringing a score

continued on page 7

Beavers B - Ballers Drop Two

By P. G. Hepzibah

The Caltech Beavers basketball squad opened league play by dropping its first two SCIAC games. The Beavers allowed Occidental to take a 21-2 lead in last Saturday's game and the Techers were never able to recover. Frank Janeczek and Pat McMurtry scored 13 points each as the Beavers lost 79-44. Gary Tornquist and Janeczek each grabbed 8 rebounds. Caltech played tough defense in the second half to hold Oxy to their lowest point output against CIT in several years.

The result was almost the same Wednesday night as Whittier handed Caltech an 85-51 defeat. The Beavers jumped out to a 7-4 lead before surrendering 14 straight

points. Several Tech players put in great performances as the game was a lot closer than the score might indicate. McMurtry led the way with 15 points; other scorers were Janeczek (9), Tornquist (8), Bob Golden (8), Phil Patten (9) and Steve Schneider (2). Frank J. had 8 rebounds and Gary T. had 7 as the hustling Techers outrebounded Whittier 37-29, but it wasn't enough to overcome Whittier's 60% field goal percentage.

The Caltech J.V. lost to Oxy 94-29 as they found it impossible to put that orange sphere into the net. Scott Gordon scored 11 points despite a dismal 5 of 19 performance from the field. Stewart Peebles scored six points. Other scorers were Doug MacKenzie (4), Howard Kong (3), Perry Walker (2), Tom Heer (2), and Reed Burkhard (1).

Against Whittier the J.Vees played excellent defense, holding Whittier to 73 points, but failure to score for 14 straight minutes resulted in a 73-30 defeat. Scott Gordon had 8 points and Stewart Peebles and Armand Capote had 6 points each. The next games are at Claremont tomorrow and at Tech against L.A. Baptist on Monday.

Radio Rangers

The Caltech Amateur Radio Club will have a field trip to JPL this Saturday, Jan. 17. Meet by the club 'shack' on the second floor of Winnett at 8:30 am. Bring your Caltech ID (no admittance to JPL without it). For more information contact Sam Sjogren in Ricketts House. The club is now meeting in Clubroom 2 in Winnett every Tuesday at 10 pm.

Japanese Armchairs?

The next in the Armchair Adventures travel film series will be *Japan*, narrated by Thayer Soule. This film will be presented in Beckman Auditorium on Friday, January 30, at 8 pm. Admission \$5.00-4.00.

Wheel to Flats

The Caltech Cycling Club is having a trip on Sunday, January 18 to Chantry Flats. We will be leaving from Winnett Student Center at 8:00 am, and returning at approximately 3:00 pm (though people can turn back at any time). Bring a lunch. See you there.



THE HAIR CUTTERS

HIS AND HERS OPEN EVENINGS

449-6967 449-1022

1009 E. COLORADO PASADENA NEXT TO THE ACADEMY THEATRE PARKING IN REAR

RESUME OF A PROSPECTIVE EMPLOYER

APPLICANT: Standard Oil of California

ADDRESS: 225 Bush Street
San Francisco, California 94104
Attn: Coordinator of Professional Employment

OBJECTIVE: Hire the best minds we can find, give them room to breathe, and see where they take us.

A FEW HIGHLIGHTS FROM OUR 100 YEARS OF EXPERIENCE:

1880. Fred Taylor, using something called a cable drill, reaches the hard-won depth of 560 feet. Rock gives way to oil.

1959. The first of the modern hydrocracking processes, developed by Socal researchers, is commercialized, providing an economic response to fuel oil demands for the next 20 years.

1967. Socal researchers come up with a naphtha reforming process called Rheniforming, which increases refinery capacity to produce unleaded gasolines.

1978. With construction and installation directed by Socal engineers, the largest offshore rig in history is settled in the turbulent North Atlantic. The central platform is 1 1/2 times the height of the Great Pyramid, and the largest man-made object ever moved.

1981. We don't know what the breakthroughs will be this year, but we've committed \$2.8 billion to making sure there are some.

ACTIVITIES: Earth sciences, engineering, computer sciences, alternate energy research, and more.

REFERENCES: 38,000 employees worldwide.

Standard Oil Company of California



Chevron Family of Companies

An equal opportunity/affirmative action employer.

Fencers Kick

FROM SIX

of 4-4 to the last bout. With the pressure on, Marvit fought ferociously, winning the last bout by a cliff-hanging 5-4 and giving Tech the first of a string of close victories.

The sabre match was the next to finish, having followed a very different pattern. Once again, Tech came on strong with Bruce Prickett winning the first bout 5-1. Ben Luisi and Russel Almond followed through, winning their bouts with long attacks and good timing, 5-4. Not until Prickett had won the fourth bout, 5-3, did the Mustangs start to hold their own. Luisi and Almond were both defeated, as Favero and Razo of Poly protected themselves better and out-reached the Techers. But Prickett won his third bout handily, sewing up the match. Luisi loosened up, but lost his last bout 5-4, while Lundstrom of Poly defeated substitute Howard Cohen to leave Tech a victory in Sabre, 5-4.

With Tech ahead 2-1 in match victories, but Poly ahead 15-12 in actual bouts won, the outcome of the meet came down to the last bouts of the Women's foil match. Again, Tech drew first blood, with Barb Turpin winning 5-1. Again, Poly came right back, defeating Penninger and Fletcher, 5-4, 5-3. Turpin committed fencericide again, and Penninger lost her second bout, 5-1. Then Turpin had her closest shave, winning 5-4, while Fletcher turned it on to win 5-1. Meanwhile, Coach George Clovis was quietly discussing the advantages of aggressiveness with Penninger: "...I'll relocate your spine through your..." Tech went into the last two bouts ahead 4-3, but Fletcher was quickly overwhelmed, leaving the team match and the meet at Penninger's tiny little feet. Freshly inspired, Lisa went after her victim, winning the bout 5-2 and giving Tech the meet by 3 team victories to 1.

What is really encouraging about this victory is that many of our fencers are new to their weapons and to competition, while Cal Poly has already been through a term of dual meets. Our next meet is this Saturday at Northridge, perennially one of the toughest teams in the state. In preparation, we are all practicing a new mantra recommended by former Guru Goodnick: "Kill! Kill! Kill! Kill!"

BOC to Visit Houses

by R. C. Colgrove

To a profound extent, the continued success of the Honor System hinges upon the widespread conviction that it should, that it can, and that it does work. This system of honor and mutual trust, which pervades every aspect of our lives, is in a sense a very special covenant that we share; and one that we value quite highly. Like all prized possessions, however, it must be dusted off and periodically re-examined to keep it in perfect condition. As a means of doing just that, your friendly BOC will come

out of hiding over the next couple of weeks to hold a meeting after dinner in each house to talk about the Honor System. We strongly urge all of you to attend and please bring any questions—or answers—you'd like to see discussed. Special attention will be given to the relationship of the Honor System to the use of master keys and to the practice of RF's. We of the Board feel we've been sitting on our butts too long. We'd like to make the Honor System an even more active and more positive part of Tech life by hashing it out in open forum. Here's the schedule:

- Ricketts—Mon., Jan. 19
- Ruddock—Tue., Jan. 20
- Lloyd—Wed., Jan. 21
- Fleming—Thu., Jan. 22
- Dabney—Mon., Jan. 26
- Blacker—Tue., Jan. 27
- Page—Wed., Jan. 28

While My Guitar Gently Weeps

Caltech has added a new Guitar Class with guitarist Darryl Denning in the Winter Quarter. The new Intermediate Class will emphasize learning to read notes on the entire guitar fingerboard and intermediate repertoire. The Class is designed for students who want to go beyond the Beginning class and will provide a smooth transition from the Beginning to the Advanced Class. The prerequisite for the Intermediate Class is completion of the Beginning Class or equivalent experience. With approval of the instructor students may take the Beginning and Intermediate Classes simultaneously.

All Classes feature Classical

and Flamenco repertoire and techniques but the skills gained can be used in other forms of guitar as well. Classes will meet in Fleming Music Room on Tuesdays according to the following schedule:

- Intermediate Guitar: 2-3 pm
- Beginning Guitar: 4:30-5:30 pm
- Advanced Guitar: 5:30-6:30 pm

Private instruction on all levels can also be arranged with Mr. Denning. For further information on all classes call 465-0881.

Check!

The Chess Club meets on Mondays at 7:30 pm in Winnett Clubroom 1. Club tournaments are starting soon! For further information call Bob Scheid, x4545.



After 15 interviews with various companies, I finally found MITRE. And after 15 interviews I definitely knew what I was looking for when I saw it.

I had to have breathing room. A place that would turn me loose and let me work on different kinds of projects. On the other hand, I had to know I'd be able to turn to other people for advice and backup. And I definitely wanted a steady growth situation.

With the MITRE people, I knew right away I'd found it all.

At any given time, they have some 75 or so funded, significant programs involving several hundred separate projects and tasks. And because they're Technical Advisors to the Air Force's Electronic Systems Division in Command, Control and Communications (C³), they design and develop some of the world's most advanced information systems.

Still, MITRE handles every assignment as if it were the only one. Because they have to come up with the right solution every time. That's their product.

The best of MITRE to me is that they'll let me move from project to project if I want, or get deeply involved in a longer-range one. There's always something waiting for me.

I'm glad it took 15 interviews to get to MITRE. Now when I say I chose them, I know exactly what I'm talking about.

Openings exist in:

- COMPUTER SYSTEMS**
- COMMAND AND CONTROL**
- SYSTEMS ARCHITECTURE**
- COMMUNICATIONS**
- RADAR SYSTEMS**

See your Placement Office to set up an on-campus interview, or send your resume directly to Jerome P. McKinnon, The MITRE Corporation, Bedford, MA 01730. U.S. Citizenship or resident alien registration required.

**MITRE will be at
California Institute
of Technology
on January 30, 1981**

THE
MITRE
CORPORATION

MITRE is an equal opportunity employer actively seeking applications under its affirmative action program.

Classified Ads FOR SALE

GENE RUBIN AUDIO. We carry only those products which provide highest quality and value. We feature: PS Audio, Thiel, NAD, 3D Acoustics, Chartwell LS3/5A, Spondor, Cizek, Hafler, VPI, Connoisseur, KM Labs, Dyna-vector, Grace, LAST, Live Wire, Platter Matter, Adcom, and more. M/C & VISA. (213) 571-1299.

Buying or selling something? You, too, can take out an ad in *The California Tech!* The cost is \$2 per inch plus 30¢ per extra line for Classifieds. Bring ad copy to the Tech office or call 356-6154. OK?

* stuff that didn't fit anywhere else *

The Next Spruce Goose?

Hughes Aircraft Company will be conducting its on-campus recruiting here on Monday, January 26. They are looking for:

All degrees in EE, CS, ME, and Ae for the Missile Systems Group in Canoga Park;

BS or MS in EE, ME, Ae, and CS for the Space & Com. group in El Segundo;

BS or MS in ME or CS, or all degrees in EE, Ph, or MS for the Industrial Electronics Group, at Torrance, Newport Beach, Irvine, Carlsbad and Sylmar;

BS or MS in EE, ME, Ph, or CS for the Electro-Optical & Data Systems Group in El Segundo;

All degrees in EE, Engrg., CS, Ma, or Ph for the Ground Systems Group in Fullerton;

BS or MS in EE, ME, CS, Ph, or Ma, or PhD in EE, CE, Ph or Ma for the Radar Systems Group in El Segundo.

All students must have either U.S. citizenship or Permanent Visa in order to make an appointment. For further information, please contact the Placement Office, Room 8, Dabney Hall.

Live! From the Caltech Y!

Yes, it's NHL hockey, featuring the Los Angeles Kings and the Toronto Maple Leafs (with a second feature of Caltech vs. Pierce). The Caltech Y is sponsoring a hockey excursion on January 22 to see both exciting games. Limited transportation available. Cost for this special double feature is \$4.00. Sign up in the Y office. Don't miss it.

Women in Science

The Aerospace Corporation is sponsoring a one-day workshop for women in science and engineering. The event will be held on March 21, 1981 in El Segundo. For further information please contact Bobbi Sims at (213) 647-1541.

OWC Notes

The Organization for Women at Caltech and the Caltech Y will present a special series on violence against women—what to do, where to go, and how to defend oneself. The program is open to all members of the Caltech community and their guests. There is no charge.

The scheduled events include:

Tuesday, January 20 at noon in Winnett Lounge—a speaker from the Pasadena Rape Hot Line;

Monday, January 26 at noon on the Quad—demonstration on self-defense and martial arts by "Women in Martial Arts";

Tuesday, January 27 at noon in Winnett Lounge—a speaker from Haven House—a refuge for battered women;

Tuesday, February 3 at noon in Winnett Lounge—demonstration and workshop on self-defense by Pasadena YWCA representatives;

Monday, February 9 at 7:00 pm—Self Defense Course (6-8 weeks) to begin. More details to come.

ASCIT MONEY!

Any club or organization that has been budgeted money for the 1980 fiscal year can come pick it up in 231 Lloyd (see Dan Pernich), or risk losing it after March 1.

Italy Surrenders!

Saturday night, the Italian fleet surrenders to Great Britain, and Germany doesn't like it. We have positions open for German spies aboard Italian battleships. Come to Dabney Hall at 7:30 pm. Another fine war brought to you by the Caltech Gamers.

OWC General Meeting

On Tuesday, January 20, there will be a general meeting of the Organization for Women at Caltech at noon in Clubroom I in Winnett Center.

Career Seminars

For the third year in a row, a series of career counseling seminars will be held by the Caltech Y and the Gnome Club. There will be a total of seven seminars, four this term. The first will be held this Tuesday, January 20 at 7:30 pm in the Y Lounge. Speaking on "Careers in Consulting" will be William J. Carroll, president of James M. Montgomery Consulting Engineers, Inc., and Vern A. Edwards, an independent consulting engineer. On February 3 the topic will be "Investments"; on February 17, "Entrepreneurship"; and on March 3, "Careers for Physicists".

The purpose of these seminars is to bring Gnomes (alumni who have "made it") together with current undergrads and grads to discuss career selection. During the informal discussion, students will hear each speaker tell his story—how he got where he is today, his perspectives, career changes, etc. Students will also be able to ask questions.

So, if you are interested in any or all of these topics, come to the seminars. You may learn something valuable.

Coleman Quartet

The Lasalle Quartet will be performing in Beckman Auditorium on Sunday, January 25 at 3:30 pm as one of the Coleman Chamber Music Concert series. They will be performing Haydn's Quartet in G Major, Op. 33, No. 5; Schoenberg's Quartet No. 4; and Ravel's Quartet in F Major. Admission: \$10-9-8-6; students \$2.50 off. Call 356-4652 for information.

Reducing?

The Health Center is forming a weight reduction program, due to start soon. If anyone is interested, please call John Adler, x6393, or leave a message.

ASCIT Nominations

Have you ever wanted Fame? Glory? Power? Well, now's your chance! ASCIT nominations are now open until January 21. Sign-ups are on Therese Meisling's door in Winnett Center. If you have any questions about the responsibilities of being an ASCIT troll, any one on the current BOD is more than willing to tell you about it all. Elections will be on February 2, so sign up soon.

Candidates wishing to place written statements in the California Tech should submit legible material to the Publications Office, 107 Winnett, no later than January 27. These statements will be printed in the issue of January 30.

Heeeeere's David!

Yes, you too can get free tickets to the tapings of the Tonight Show for those dates when Johnny Carson is on vacation. David Letterman will host programs taping on Jan. 28-30, and Joan Rivers will host on Feb. 2nd. To order free tickets, please send your request addressed to NBC Television Studio, Attn: TNT Tix, 3000 W. Alameda Ave., Burbank, CA 91523. All mail is acknowledged and requests are filled in the order received. Please include the date desired and a self-addressed stamped envelope. Tickets are also available at the NBC ticket counter on the day of the show, from 8:30 am to 5:30 pm on weekdays.

GDG Meeting

There will be a meeting of the Gay Discussion Group tonight at 7:30 pm in Room 218 Baxter.

ENGINEERS
BS/MS/PhD
"Most companies will promise you everything—
but do they deliver?"
Some companies may promise the world
Aerojet ElectroSystems will not.
But we try to deliver what we promise, and we promise you challenging working assignments, and high rewards for outstanding performance.
You won't be ignored or forgotten when you join us. Doubt us?
Ask Mr. Len Stimpson, Sr. Technical Staff Specialist—Mechanical Engineering. You can meet Mr. Stimpson at the Career Planning & Placement Center on campus. He and other Aerojet representatives will be interviewing Tuesday, January 20.
If you are looking for a company that lives up to its promise . . . look to Aerojet, Azusa.
Aerojet ElectroSystems
P.O. Box 296-C.T.— Azusa, Calif. 91702
An Affirmative Action Employer

Enjoy Lunch & Dinner And Pizza With Us
or Take It Out
PRIMO Italian Specialties
Gourmet
350 S. Lake Ave. Pasadena 795-4749
In the Colonnade Mall across from Bullock's
Monday-Saturday 10 a.m.-8:30 p.m.
Espresso Cappuccino

WITH THIS COUPON — GOOD AFTER 5 P.M.
LIMIT ONE COUPON PER CUSTOMER
You may buy ONE drink in a glass beer or wine, or a soft drink for 5¢ with purchase of any dinner or pizza

Caltech 107-51
PASADENA, CALIFORNIA 91125
NON-PROFIT ORG. U.S. POSTAGE PAID PASADENA, CA PERMIT NO. 583
The California Tech is published weekly except during examination and vacation periods by the Associated Students of the California Institute of Technology, Inc., Winnett Center, Caltech 107-51, Pasadena, California 91125.