

## Feature

## Student Spends Summer Working in Japan

by Ron Forni

It was the second year that Mr. Kitsuda, a Caltech alumni, has offered two students the opportunity to work in his factory in Japan for a summer, and I was lucky enough to be one of them.

The factory produces metal parts which are stamped out by transfer presses. For example, fire extinguisher bottles are produced at a rate of one every 12 seconds there. Part of the time, I machined the dies used in the transfer presses using a N/C milling machine and an EDM wire cutter. I found this to be rather challenging work. The other job was operating a robot welding machine. About every two hours the robot would break down and fixing it could be quite interesting. For the most part, though, this job was like assembly-line work. (Part of the time I also taught English.)

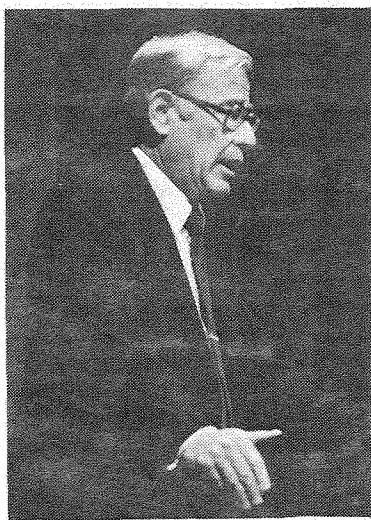
Next summer, Kitsuda Engineering Co. will probably give two other Caltech students a chance to work in Japan. If you are thinking about applying for this job, I would like to make it clear that you will be working in a factory perhaps 10 hours a day, five or six days a week without air conditioning in 100% humidity. If you make a mistake you could lose various parts of your body, but

most of the time it just results in a couple hundred dollar piece of scrap metal. You will probably be paid the same as a Japanese worker, but meals, housing, plane fare, and even umbrellas will most likely be provided for. It turned out to be an excellent way to see Japan and meet the people.

There is really a lot to tell about Japan. Let me just tell you about one day.

It was still early in the morning, and I had skipped breakfast in the youth hostel so that I could catch the first southbound limited express out of Sapporo. That night, I had slept in a room with no less than 20 other people, but lodging only cost \$10 and that included breakfast and dinner, so I didn't mind. (I was surprised that they put up with my snoring. In America, I think I might have had a pillow shoved down my throat.) By 9 o'clock I was heading down the east coast of Hokkaido, and I was almost to my destination. As the train slowed we passed through a couple of tunnels, and then from nowhere appeared fifty or so fishing boats huddled together in a man-made harbor. To the right was a town which somehow reminded me of the towns in Utah separated by 100 miles of

continued on page 4



- photo by Bob Paz

Harold Brown

## Election Results

Prop. 25 Clean Water Bond  
Approved 73%

Bonds issued to provide for water pollution control, water conservation and reclamation projects.

Prop. 26 School Building Bonds  
Approved 61%

Construction and improvement of public schools

Prop. 27 Hazardous Wastes Bonds  
Approved 72%

Clean-up of hazardous industrial wastes.

Prop. 28 Safe Drinking Water Bonds  
Approved 73%

Improvement of water systems to meet minimum drinking water standards.

Prop. 29 Veterans Bonds  
Approved 66%

Farm and home aid to California veterans.

Prop. 30 Senior Center Bonds  
Approved 67%

Senior Citizen Centers.

Prop. 31 Property Taxation  
Approved 51%

Empowers legislature to exempt newly constructed fire protection improvements from property tax reassessment.

Prop. 32 Supreme Court  
Approved 59%

Modifies existing transfer of causes and review of decisions provisions. Enables Supreme Court to review only parts of Appeal decisions

Prop. 33 Property Tax Postponement  
Approved 82%

Allows legislature to postpone property tax payments by disabled persons.

Prop. 34 Property Taxation Exclusion  
Rejected 52%

Move to exempt safety construction on historical structures from property tax reassessment.

continued on page 5

## Brown on S.D.I.

by Julian West

Former Caltech President Harold Brown spoke on the Strategic Defense Initiative (SDI) in Beckman Auditorium, Wednesday. The talk inaugurated the 15th year of the California Seminar on International Security and Foreign Policy.

Brown, who was Secretary of Defense from 1977 until 1981, has recently completed a study of the new defense proposals. Wednesday's talk was his first public statement of the results.

He concludes that a ballistic missile defense is "not technically feasible." For that reason it is important to consider the repercussions of SDI. It would divert military attention from the U.S. nuclear deterrent, and would interfere with the management of an adversary relation with the U.S.S.R.

According to Brown, the U.S. should not abandon the strategy of "mutual assured destruction" which has dominated nuclear thinking for 30 years. "Every president has been uncomfortable with that strategy," he said, but "none has seen an alternative."

In a short press conference before the lecture Brown outlined his proposals. Asking "What would I do?" he proceeded to give six answers to his rhetorical question.

First, he would not substitute the option of defense for deterrence. Second, he would "go on modernizing U.S. offensive forces." Third, he would "reaffirm" the treaty limiting anti-ballistic missile systems (ABMs) and would try to hold the Soviet Union to its observation.

Fourth, he would not proceed with the strategic defense initiative, but fifth, would research ABMs. Brown recommended spending about \$1.5 billion per year on ABM research, but concentrating on early warning systems and study of ground-based terminal

defence of ICBM silo sites. Six, he recommends negotiations concerning ABMs and anti-satellite systems.

Speaking on the day after the election, Brown was not openly critical of President Reagan. "I assume," he said, "that the President wants to talk with the Russians."

He pointed out, however, that Reagan's nuclear policies have been "very different" from those of Nixon, Ford and Carter. Reagan, unlike his predecessors, has believed that the U.S. needed a nuclear buildup before talks could begin, and he "sees the Soviet Union as the source of all the United States' problems."

When asked whether the President's policies have made the U.S. mainland more secure, Brown judged that the key factor was the likelihood of a full-scale nuclear exchange. He pointed out that despite the massive arms buildup of the last four years, few new weapons have yet been put in place.

"Therefore, if we're secure now, we were secure then," he concluded. "I would not say that we're farther [from nuclear war], but I never thought we were very close."

In his talk, Brown stated that military research could be either "stabilising" or "destabilising." In his opinion, SDI would be a destabilising project. Brown implied that if nuclear weapons did not exist, the U.S. could have returned to its isolationist pre-war policies. America would still be a superpower with great influence in the world, he judged.

The California Seminar on International Security and Foreign Policy was founded by Brown, as Caltech President, along with the Rand Corporation. Opinions and findings of the Seminar have had a direct impact on national policymakers.

David Elliot and Marvin Goldberger are Caltech members of the Seminar Executive Committee.

## Grads Get New Dean

Dr. Arden L. Albee has been appointed as Caltech's new dean of graduate studies.

Albee is a project scientist for the Mars Geoscience Climatology Orbiter mission at JPL. He has been on the Caltech faculty since 1959, becoming professor in 1966. He has served on several National Space and Aeronautics (NASA)

committees relating to his research areas of metamorphic rocks, lunar rocks, meteorites and remote sensing. Albee was awarded the NASA Medal for Exceptional Scientific Achievement in 1976.

The new dean succeeds James J. Morgan, vice president for student affairs, who served as the acting dean.

## Maynes To Speak On Foreign Policy

Charles Maynes, editor of *Foreign Policy Magazine*, will speak in Baxter Lecture Hall on Wednesday, Nov. 14 at 8:30 p.m.

Maynes is also a nationally syndicated newspaper columnist frequently published in the L.A. Times and has been a formidable critic of the Reagan

Administration's foreign policies.

The talk will speculate on and critique American foreign policy during Reagan's second term.

Maynes will be presented as a Weingart Distinguished Speaker and his talk is sponsored by the Caltech Y.



- photo by Ron Gidseg

There was tension in the air. Superficially it seemed like just another Saturday night in quiet Pasadena. But this one was different: Caltech had won a football game earlier that day. Will there be a bonfire this time? Will the outside world be reminded of Beaver might?

Of course they would! However at 10:50pm it didn't seem that way. A good bonfire needs a good diversion first; but the appointed site, Mentor at Del Mar, was empty.

continued on page 6

Live From **New York**

**Liberally Speaking**

by Ken Whang

POLITICALLY, COLUMBIA appears to be a remaining stronghold of liberalism and student activism as our national liberal-conservative pendulum continues in its rightward swing.

I say "appears" since my credibility is limited by six weeks of experience here and a definite liberal bias. Nevertheless, there are some things about a place that can become evident in a short time.

Though by no means unanimous, the liberal sentiment does exist in a definite majority among students, faculty, and administration; it applies to campus, national and world issues.

Recent concern in campus politics has centered on Columbia's South African investments and relations among minority groups. Local issues like these generate dialogue and editorials in the student newspaper, as well as organized discussions and demonstrations. The South African issue has been around long enough that a single-issue organization exists to battle the Trustees on it.

Whether liberal or conservative, most of the Columbia students I've met so far have struck me as being at least conscious of social issues and as having thought through their stronger opinions enough that they can legitimately back them up with confidence.

More than a handful of them additionally devote time to actively pursue their ideals. They campaign for the political

candidates, join student groups, and volunteer in various community service organizations. At least a dozen pages of the student-published Columbia Guide to New York are devoted to volunteering and how to get involved.

Of course, the big thing that's on everyone's minds now involves people and issues far beyond the Columbia campus and New York City; it's the current presidential election. The Mondale and Reagan campaign stands are almost permanent fixtures on College Walk. Come debate time, we all gather around the TV to watch, critique and talk politics.

While we've been watching, some of the faculty have been integrally involved. Several Columbia Law School professors took active roles in preparing Mondale for his first debate. University President Sovern, one of Mondale's former professors, played Reagan earlier this month in pre-debate sparring sessions.

The 1984 election prospects and its long-term implications are currently looking pretty depressing to many of us, as the polls indicate that the majority of Americans hold much more conservative views than do the majority of Columbia students. By my own rough estimate, sixty to seventy percent of the undergraduates here favor the Mondale-Ferraro ticket. Reagan seems to run a little stronger among the engineering students than the arts and science students, as I

suspect is also the case at Caltech.

An engineer friend of mine sees the race as being more even, suggesting that Reagan supporters are just quieter about their politics since it's so fashionable to be liberal here.

Whatever the case, if the election turns out as most of us expect, the American political pendulum will get some added momentum in its swing to the right. With accompanying Supreme Court appointments, this phase may last well into the next two or three decades of our lives before turning back again.

I think it was Hegel who always saw cycles like these in history. Depending on how you look at it then, we liberals are either a few years behind or many years ahead of our time.

**Additional Live from New York on page 5. Notes From Here and The Gadfly to appear in next week's issue.**

**letters**

**No Faith In ASCIT**

To the Editor:

As a concerned student, I was very interested to hear what Miss Solberg had to say in her letter detailing recent ASCIT activities.

One cause of inactivity, as she cited, was the fact that ASCIT was broke from paying bills. She indicates that *student body* irresponsibility (rather than BOD irresponsibility) caused a \$5000 loss on the WATS phone line. The loss occurred through unpaid bills and use of false account numbers. As managers of the WATS line, *the BOD should not* have a 2-month or more billing delay (which leads to unpaid bills over the summer), and the WATS line billing code should automatically screen non-existent ID numbers. After straightening up the mess simply by footing the bill, rather than cleaning up billing delays or fixing the ID loopholes, Miss Solberg contends that "we

[the BOD] made sure that you'll never again have to pay for other students' dishonesty." They did nothing more than pass the burden unfixed onto the Institute. Nothing was made sure of. If the BOD were more responsible with prompt billing, the problem would surely have been less severe.

As for the Athenaeum Formal, why did the BOD allow all those couples to attend if they did not pay? And was sufficient effort made to bill those students or to ask them to pay? You can't expect or hope that they will knock themselves over getting to you with their money after the event. If you run an event, part of it is pursuing bills and making sure everything is properly paid for.

The same goes for the party with the other schools. Miss Solberg wrote, "though *promised*, money from the other colleges was not forthcoming..." How could the BOD make such shoddy deals? If the colleges agreed and promised to pay according to a certain deal, then follow through with it. Better yet, you should have had all the monies accounted for *before* either of these social events took place. The BOD **continued on page 3**

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*The Caltech Y Fly-by*

**Friday... November 9**

Noon concert, Mark Levy, Political folk music, noon on the Quad.

Philharmonic Trip tonight. Don't forget.

Sign up today for yet another Philharmonic trip which will be on Friday November 16.

Sign up for sailing which will be on November 17.

Sign up for "The Hands of Its Enemy" which will be on November 30, tickets are \$4!

Stranded over Thanksgiving? The Y can help; sign up for Thanksgiving dinner with a local family.

**Monday... November 12**

"Science and the Paranormal," James ("The Amazing") Randi, Baxter Lecture Hall, 7:30 pm.

**Wednesday... November 14**

Noon Update, "What's Happening in Plasma Physics." Paul Bellan, noon, Winnett Clubroom 1, bring a lunch and a friend.

"Speculations on American Foreign Policy Under the New Administration." Charles W. Mayes, Publisher of Foreign Policy Magazine. Baxter Lecture Hall, 8:30 pm.

**Friday... November 16**

Noon Concert, to be announced.

Philharmonic trip, the program consists of works by Luciano Berio. (See above)

**Saturday... November 17**

Sailing trip (See above)

For more information, contact the Caltech Y at 356-6163, or just drop by.

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## letters

## ASCIT

from page 2

should be more careful with money which does not belong to them.

Miss Solberg also indicates the BOD is making strides towards student life improvements. As examples, she cites the upcoming purchases of ice machines and leasing of copiers for the houses. Ice machines are expensive, as are copier leases. Will that really improve student life? And do students want their money spent like that? Didn't we just institute a Copicard system for 24-hour service? And even if the BOD absolutely feels that both are a must for student

life, won't *one* ice machine do? Must we have plural ice machines and plural copiers? Again the BOD should be more careful and responsible when it comes to spending the students' money.

Finally, Miss Solberg writes that "Without the BOD, almost no club would exist on campus: no glee club, Hillel, *Big T*, *the Tech*,..." *The Tech*, for example is mostly independent financially, I believe. They do not need ASCIT, BOD, or outside funding.

*Funding* that the clubs receive from ASCIT are possible because students pay ASCIT dues. *Without that money*, few clubs are possible. The BOD itself does *not* have anything to do with intrinsic club existence. The BOD is elected by the students to redistribute and manage the

money the students pay, and Miss Solberg's letter is more than sufficient evidence to me that the BOD has mismanaged my dollars and lost a considerable amount of them. The books may be neater, but the money is gone.

Maybe Miss Wu's Gadfly ["Promises, Promises, Vol.86 issue 6] did not go far enough. It said the lack of attention may lead to lack of activity. Has it instead led to a lack of competence?

-K. A. Tuckman

## More Tech Team Sport

To the Editor:

Interhouse soccer began this past Monday, and because there is not enough room, the

school [intercollegiate] team is not having any more practices for the rest of the season! Many of Caltech's finest athletes often cut out of team practices in order to play Interhouse sports. I can think of two reasons why this trend is a bad one:

1) School teams allow kids to make new friends (i.e. people from different houses working together towards a single goal);

2) Who cares if Blacker or Lloyd or Fleming can win 1st place in Interhouse Softball? I mean, look who the competition was: another group of wimpy Techers!

The only way to reverse this bowel-churning anathema is for the athletes to challenge

themselves and play on the Caltech teams. It is much more satisfying to *play hard* and lose a close match against Claremont or Occidental than to beat the living hell out of the Darbs. Believe me, it's true.

-Steve Hawes

## Vet's Day Silence

To the Editor:

Please join people around the world in remembering the signing of the Armistice of World War I, November 11, 1918. Keep a two-minute silence on Sunday morning at 11 o'clock.

This day is set aside to remember those who died in all the world's conflicts.

-Julian West

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# Alumni Gives Summer Jobs in Japan to Techers

from page 1  
desert.

I knew there was supposed to be a mountain hot spring inland from here, but I didn't know which road to take or how far. I decided to take my chances and head down what looked like main street. Suddenly I heard a voice asking in broken English if I needed a ride. Without thinking, I said no. I guess I thought I was still in L.A., walking down Hollywood Blvd. or something. Besides if it was a fifty mile ride it would have taken 2 days to walk back to the station. So I kept on walking as the guy in the jeep drove off.

After about 10 minutes the town had given way to steep mountains rising up out of the muddy river flowing by the

side of the road. After an hour a gentle rain began to fall. I didn't mind the cool rain drops, because it was already very hot. A couple of hours later I paced an old man walking down the road. He said "Euse" (Hey, how is it going). I said "Euse" back (It is going just fine). The old man asked "Doko" (Where are you headed for?). I pointed up into the mountains, and he said something in Japanese which I couldn't understand. I kind of knew what he was saying. (Translated it sounded something like: "Hey, what's wrong with you? That's a long walk. No wonder Americans can't build good cars. They always do things the hard way.")

Another hour went by. I

would have turned around soon if I wanted to catch the last southbound train today. By now I was a good four hours from the station, but then around the next corner appeared signs of civilization. Highrise hotels, souvenir shops, and even a bus station appeared along the side of the road. Further on up the road were public baths and the source of the hot spring water. I didn't realize how far I had walked until I took a cable car up to the top of the mountain. I could see the ocean way off in the distance and the tiny river winding its way down the mountain. The mountain almost reminded me of hell. It smelled of sulfur and brimstone. There were even 2 statues of hellish-like creatures guarding the place. Suddenly, out of nowhere, appeared a swarm of tiny creatures. They were quick to surround me and I knew I had only one chance to escape. I would have to say

hello and shake hands with about fifty little Japanese children. By now, I was used to being treated like a movie star because I was a foreigner.

I decided to rest here in town for a couple of hours and then take a bus back to the station. I met a couple from Australia that I had talked to 3 days earlier. For some reason they reminded me of Techers. He was wearing a Chinese-style bamboo hat which shaded his thin face. She had her blond hair cut short and was carrying an oversized backpack. I said goodbye to them as I got on my bus. It was still a long way back to Tokyo. I wouldn't be home until 3 pm the next day. I was hoping to get some sleep on the ferry from Hokkaido to the mainland. The cabin was broken up into living-room sized areas where 20 or so people stretched out on the floor. Somehow I don't think this would have worked in New York. In about five minutes I was asleep despite the gentle

rumbling of the diesel engines. The next thing I knew, bells were sounding. I went on deck just in time to see the sun rising over the port bow as the ferry pulled into dock...

I really appreciated the chance to experience that totally different world from ours. I also thought it would be a nice idea to return the favor and invite two workers from the factory to work at Caltech for 3 months. If they didn't come during the first term, it would seem reasonable that there would be room for them in Caltech housing. If you are in a position where you could offer someone a job for about 3 months, I know some people who would really like to see America. What I had in mind was a job in one of Caltech's machine shops or labs. Not being able to speak the language is really not a big problem. So if you have any suggestions about this give me a call at 449-9163.

Doomo arigatoo.

## BLOOM COUNTY

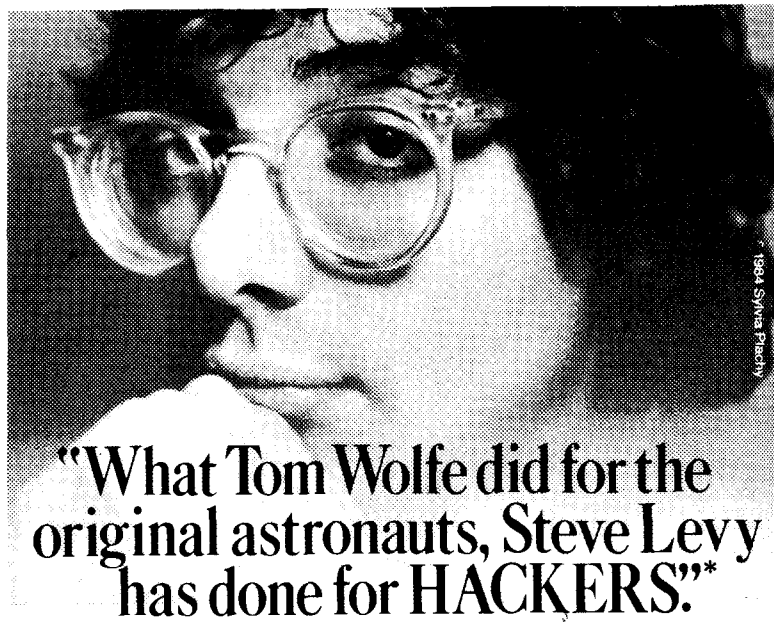
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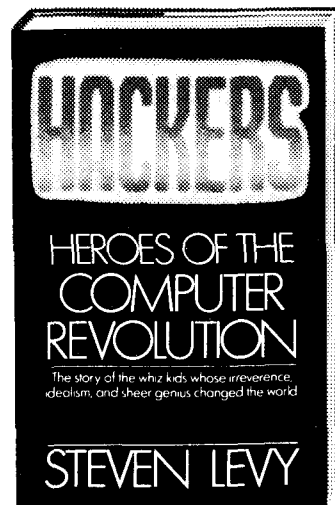


"What Tom Wolfe did for the original astronauts, Steve Levy has done for HACKERS!"

Meet Peter Deutsch, who was still in short pants when he stumbled on the TX-0 at MIT; Bill Gosper, the Horowitz of computer keyboards and guru of the Hacker Ethic; Richard Greenblatt, who went into night phase so often that he zorched his academic career; Steve (Slug) Russell, who hacked the first video game and never made a dime from it; Lee Felsenstein, who brought the "junkyard approach" to computers; Efrem Lipkin, who loved machines but hated their uses; John Harris, star programmer who yearned for female companionship. Learn how the Ethic shared by these adventurers and visionaries brought about the computer revolution that has changed our world.

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DOUBLEDAY

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**Body Shop****Digest This Now**

by Miki Goodwin, R.N.

**Sore Throat:** The throat is a well designed piece of human machinery and has been described as an incredible freeway of activity. It transports food and water down, oxygen in, and words out. It also has structures to fight infection—the tonsils and adenoids. However, more people seek medical attention for sore throats than for any other health problem. Sore throats can be caused by allergies, infections, air pollution, heavy smoking or low humidity.

As a rule of thumb—medical attention should be sought if:

- a) painful symptoms get worse over a 2-day period;
- b) there is pus or whiteness visible in the back of the throat;
- c) an accompanying fever lasts over 48 hours;
- d) swallowing is difficult;
- e) swollen neck glands appear.

**Acute Gastroenteritis:** this

is an inflammation of the lining of the stomach and intestines. It is commonly caused by a viral infection; other causes might include bacterial parasitic infections, food poisoning, allergies, emotional upsets, overindulgence in alcohol, drastic laxatives and other medicines.

There are several methods of self help: rest, avoid food and take ice-chips or clear liquids only. As symptoms decrease diet can increase diet can increase to more liquids, broths and jellies and eventually to a bland diet, letting one's appetite be the guide.

Another rule of thumb—notify the Health Center if any of the following occurs:

- a) diarrhea that does not go away within three or four days;
- b) mucus, blood or worms in the bowel movements;
- c) fever over 100°F;
- d) development of pain in the abdomen or rectum.

# Live From New York

## The Big Difference

by Ken Whang

LIKE THE CITY WHICH IT IS A PART OF, Columbia is a big place. Because of this bigness, more services, organizations and events are available here than at smaller schools, but they are harder to find amid the shuffle and are often more trouble to access.

The University is comprised of over a dozen different schools, each with its own administration, faculty and course offerings. This decentralized organization means that a senior in high school can file up to three separate undergraduate applications - to Columbia College, the School of Engineering, and Barnard College, the women's undergraduate college which complimented Columbia College when it was all male. Each of these applications would be considered independently. A senior in college wishing to take an obscure graduate course can consult up to 20 dif-

ferent graduate catalogues to find what he is looking for.

Registration and billing are complicated and time consuming procedures here compared to the veritable in and out flash at Caltech. Instead of there being a single omniscient employee at the Registrar, there are yards and yards of counters serving the different schools and catering to specific types of problems. The Bursar's office is worse: the long line leads to an understaffed counter where they invariably tell you that you do indeed owe them another hundred dollars.

To serve the many undergraduates at Columbia College, the Dean's office has a system whereby each day three to five of the full-time deans will have hours. You have to arrive half an hour early to sign up, but after you've waited, they are quite receptive and helpful.

The larger number of

students here doesn't necessarily lead to significantly larger class sizes, since the students have such diverse academic interest and, for many topics, honors or intensive sequences are offered. Faculty do seem to be more distant from the undergraduates than was the case at Caltech. Professors are usually available only during their specified office hours, typically two to four hours per week.

Another big difference between Columbia and Caltech is that there is no honor system here. The size of the University and the laissez-faire attitude of the administration makes such a system unworkable here. Consequently, all tests are proctored and access to many services and facilities on campus requires special privileges.

Of course the flip of this bigness is that there is more available here than at smaller schools. There exists the critical number of people necessary for many student organizations to form and exist stably from year to year, including two daily student newspapers and a full-time radio station. There are more courses available which not only cover a wide range of topics but also often treat the same topics from different perspectives. The University also offers tremendous resources; Columbia's libraries comprise the sixth largest academic library system in the country.

So with the bigness of the University come advantages and disadvantages. It is for the individual to decide at what size the ideal balance is struck.

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We will be interviewing on campus Monday, November 12, 1984. Please contact your career placement office for schedule information.

# MICROSOFT

High Performance Software

## Election Results

from page 1

### Prop. 36 Taxation Limits (Jarvis)

Rejected 55%

Extension of Prop. 13 from 1978. Move to restrict areas where real property taxes could be applied to.

### Prop. 37 State Lottery

Approved 58%

Establishes state-operated lottery to benefit public education.

### Prop. 38 English-Only Ballots

Approved 71%

Recommends a law be amended to print voting materials in English only.

### Prop. 39 Reapportionment

Rejected 55%

Reapportionment of Senate, Assembly, and Congressional districts for 1986.

### Prop. 40 Campaign Contributions

Rejected 64%

Limits placed on candidate contributions.

### Prop. 41 Welfare Programs

Rejected 63%

Limit on welfare expenditures to national average plus 10 percent.

## Amazing Randi Comes To Caltech on Monday

by Al Seckel

Can "gifted" people really move and bend objects solely with the powers of their minds? Are there people who can actually read other people's thoughts and view hidden objects from great distances? Many people are under the impression that psychic phenomena have been conclusively established through many experiments by reputable scientists. The experiments that are reported to the public do seem rigorously scientific, and people have been led to understand that psychic research has been done at prestigious institutions. Why, then, are there some skeptics stubbornly resisting the tide?

This November 12th (Monday) at 7:30 in Baxter Auditorium, the Caltech Y is proud to present as its distinguished speaker James Randi, known professionally as THE AMAZING RANDI, to address these issues. Randi is internationally known as a magician, conjuror, and escape artist. But for the past thirty-five years of his professional life, he has also been active as an investigator of the paranormal, occult and supernatural claims that have impressed the public for generations. He is a founding member of the Committee for the Scientific Investigation of Claims of the Paranormal, and has a standing offer of ten thousand dollars for proof of any paranormal phenomenon under carefully controlled conditions. Randi's training gives him

special expertise in detecting simple conjuring tricks in alleged paranormal feats. Unafraid to call researchers to account for their failures and impostures, Randi tells us that we have been badly served by scientists who have failed to follow the procedures required by their training and traditions.

Randi is the author of numerous articles and books dealing with the paranormal, including *The Magic of Uri Geller*, which is the definitive exposé of the Geller myth and the involvement of scientists with it. His new book *Flim-Flam: The Truth About Unicorns, Parapsychology and Other Delusions*, covers the field, from biorhythms to UFOs.

Science writer Isaac Asimov stated, "Perhaps nobody in the world understands both the virtues and the failings of the paranormal as well as Randi does. His qualifications as a rational human being are unparalleled."

During Monday night's lecture Randi will attempt to read the minds of several Caltech students, bend metallic objects, and perform surgery on a volunteer without the aid of a scalpel or knife. You may have seen Randi on any number of television shows, from *Ripley's Believe It or Not!* to *Nova* and *The Tonight Show*. Now's your chance to see and talk to The Amazing Randi in person. It promises to be a night that will delight. The lecture is free and open to the public.

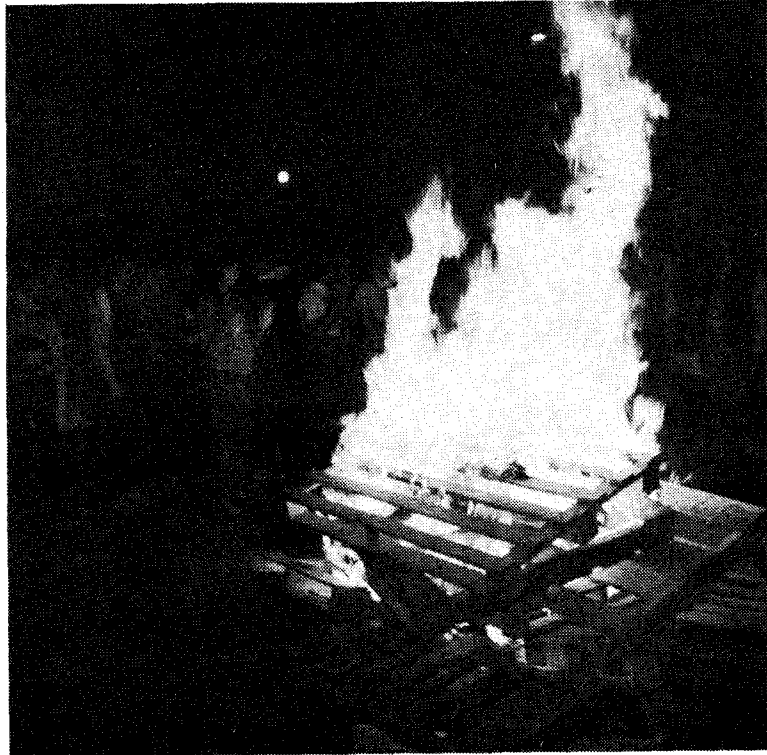


photo by Ron Gidseg

from page 1

Then people started appearing. By twos and threes Techers arrived and started circling the intersection as per tradition. Then it was the time, 11:11pm. The Caltech horde rushed off to the ultimate destination, Lake at San Pasqual. As the first of the group arrived, the traffic barricades and the sacred wooden pallets were put in place and then the fuel was lit. The roar of the flames blended in with the roar of the crowd as a warm glow spread over everyone present.

Soon the Pasadena Police Department joined in the celebration. They also graciously took over traffic control. A few minutes later the Fire Department arrived. Then under the gaze of the flying searchlight they turned the smoke to steam.

Thus the bonfire ended as the cleanup began. A dark spot was left on the pavement but here was a bright spot in the memories of all those who witnessed the event.

## Jazz Review

### Best Jazz Album: Modern Times

by John Fourkas

#### Steps Ahead

MODERN TIMES

#### Elektra Musician Records

As 1984 draws all too quickly to a close, I find myself ready to cast a tentative vote for The Best Jazz Album of the Year. The preliminary award goes to Steps Ahead for their latest album, *Modern Times*.

For those of you who (for some strange reason) are unacquainted with Steps Ahead, I will give a short history of the band and their music. Steps Ahead (née Steps) was born in 1979 at Seventh Avenue South, a New York City jazz night club. The band quickly gathered a large following in New York and Japan (where their popularity was great enough to warrant cutting three albums for Nippon Columbia). In 1983, the band made their international debut with the album *Steps Ahead*, featuring Michael Brecker (tenor sax), Peter Erskine (drums), Mike Moinieri (vibes and marimba), Eddie Gomez (bass), and one new member, Eliane Elias (piano). The album, which features a modern approach to traditional jazz using traditional instruments, met with critical acclaim and popular approval. The new musical style was quite refreshing. The semi-improvisational songs, highlighted by daring bass work and innovative sax solos, were a welcome relief from the hundred-mile-an-hour trumpet solos, raucous saxophone, and uninspired guitar work which we have come to expect from modern jazz.

While *Steps Ahead* was a welcome fresh breeze, *Modern Times* is a consummate masterpiece which blows the listener away. Warren Bernhardt has replaced Eliane Elias on keyboards and, as the album title might suggest, has brought an electronic sound with him. While such an addition has traditionally weakened the musical structure of many jazz bands, opening the door to unproductive, ruinous innovations (take Miles Davis, for example), the music of Steps Ahead has been magically strengthened. The introduction of electronic instruments seems to have caused the band to realize the full potential of the recording studio, and any rough edge caused by improvisation has disappeared (without the loss of the music's wonderful impromptu feeling).

The music of *Modern Times* is as versatile as it is enjoyable. The album opens with "Safari," a bubbly yet smooth-flowing number. The following song, "Oops," is perhaps the high point of the album. An ebullient, uplifting, and downright catchy song with a definite Latin tinge, it may prove to be a standard in the Steps Ahead genre of jazz. Also of particular interest is "Radio-Active." This piece is a striking contrast of the old and new styles in the form of a

competition between saxophone and synthesizer. The clash is at first tense and exhilarating; but the drums serve to resolve the conflict and blend the two approaches into

a single new style which combines the best aspects of each. All in all, this album is a must for any jazz collection.

Next time: The Best Debut Jazz Album of the Year.

## Chessatech

by Doug Dekker

The Caltech Chess Club began its first tournament of the new school year last week, when ten competitors gathered to do battle. The first round was marked by several upsets of the rated players by their unrated "beginner" opponents.

One round will be played each Saturday, at 1 p.m. in Winnett Clubroom 1; spectators are welcome. It's still possible for latecomers to enter the event; if you'd like to participate, show up tomorrow and we'll give you a half-point for round 1.

In our first column we presented a game won by this writer from Scott Lewicki of Page House. Today Scott gets his revenge by putting the hammer to Tim Smith of Ricketts in a sharp tactical struggle.

LEWICKI (1556) — SMITH (1588)  
02/08/84, King's Indian Defense

1	d4	Nf6
2	c4	g6
3	Nc3	Bg7
4	e4	d6
5	f4	

Classical chess theory,

which reached its clearest expression in the writings of the dogmatic Dr. Siegbert Tarasch, taught that *occupation of the center, especially by pawns, was a principal goal of correct opening play*. Around 1910, chafing under the restrictions imposed by this narrow viewpoint, a group of young masters headed by Breyer, Reti, and Nimzovich began to argue that *control of the center was really the issue*. They developed heretical opening systems in which the opponent was *invited* to set up a broad pawn center, in the hope that it could later be undermined by pressure from the flanks. Tartakower jokingly called these new ideas "hypermodern"; the rebels liked the term and the name stuck.

The variation in the present game, the Four Pawns Attack in the King's Indian Defense, is a good example of a Hypermodern opening. Experience has shown that Black can obtain adequate counterplay against the White center; if,

continued on page 7

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however, his efforts are ill-conceived or ill-timed, the pawns can leap forward, opening his position like a can of beans.

5... O-O  
6 Nf3 Bg4?!

Dubious. Usual is 6...c5!, for example: a) 7 dc Qa5! 8 Bd3 (8 cd? Ne4x 9 de? Re8 with a winning position for Black) Nfd7! (threatening 9...Bc3x+) 9 Bd2 Nc5x and Black is better, or

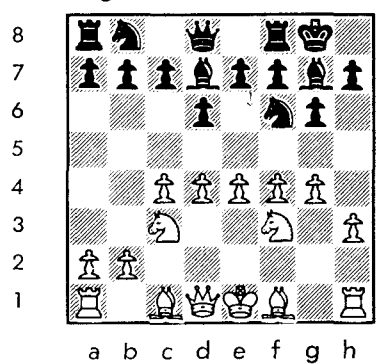
b) 7 d5 e6! 8 Be2 ed when White can choose between the solid 9 ed, the wild 9 cd, or the crazy 10 e5!?, with, in each case, tremendous complications in which Black's prospects are not worse.

7 h3 Bd7?!

Preferable is 7...Bf3x 8 Qf3x Nfd7! 9 Be3 c5! (worse is 9...Nc6 10 O-O-O when White has excellent attacking chances according to Boleslavsky) 10 O-O-O (perhaps

10 d5 Qa5 11 Bd2 is better) Qa5 (10...Nc6? 11 dc Nc5x [or 11...dc] 12 Bc5x) with counterplay, e.g., 11 e5 Nc6 12 dc (12 d5 Nd4 13 Bd4x cd 14 Rd4x de) Nc5x 13 ed? Bc3x.

8 g4



a b c d e f g h

A provocative position. Are White's pawns strong, or are they weak? Is the coming assault irresistible, or can Black utilize his lead in development for counterattack?

8... h6?

Black violates a cardinal rule of defense: he voluntarily weakens his position (specifically g6) for no tangible gain.

Necessary is the tenacious 8...Ne8!, hoping for 9 g5 f5! e.g. 10 h4 (10 gf ef) fe 11 Ne4x Bg4! 12 Be2 Nc6 13 Be3 (or 13 d5 Bf3x 14 Bf3x Nd4 15 Bg4 Nf5) e5! with fascinating play. Better for White is 9 f5, when Black must try 9...e6 10 Bd3 (10 fe!) ef and now:

a) 11 gf c5 12 Be3 (12 d5!? Nf6 13 Bf4 Qe7 14 e5? Nh5) Qa5 (12...Qe7? 13 Nd5 or 12...Qc8 13 Nd5 Nc6 14 dc or 12...b6 13 e5! [with the idea 14 f6] de 14 dc!) 13 dc (13 Qd2 Nc6 or 13 e5 cd! 14 Bd4x de) dc 14 e5!? Bf5x 15 Bf5x gf 16 Rg1 Nc6 and Black can defend;

b) 11 ef Qc8! (11... Qe7+? 12 Kf2!) 12 Qc2

(12 Bg5 Nf6 [12...gf? 13 Be7] threatening 13...Re8+) Nc6 (pressure on the center from the flanks!) 13 Be3 Nb4 15 Qb1 Nd3x+ 16 Qd3x gf 17 g5! f4!! (Black returns the extra pawn to activate his pieces) 18 Bf4x Bf5, with a tenable position.

These lines are complex and demand precise play by Black, very difficult to achieve over the board.

9 Rg1

Also possible is the straightforward 9 g5! hg (9...Nh5? 10 gh Bh6x 11 f5! Bc1x [11...Ng3 12 Rg1 or 11...Bg7 12 fg fg 13 Rg1] 12 Qc1x with a superb game for White) 10 fg! when there can follow 10...Nh5 11 Rg1 (11 Be2? Ng3 12 Rh2 Ne2x 13 Qe2x Qc8 14 h4 Bg4) Qc8 12 Be2! Bh3x 13 Nh4 with a winning attack, for example 13...Nc6 14 Bh5x gh 15 Qh5x Bd4x 16 g6! Kg7 (forced)

17 Qh6+ Kf6 18 g7+ Ke5 19 Bf4+ +.

9... e6

There is nothing better: 9...Nh7 10 g5 h5 (10...hg 11 fg as above) 11 Nh4 and f5 will follow.

10 f5?

But this is incorrect. After 10 g5 hg 11 fg Black is in deep trouble:

a) 11...Nh5? 12 Be2 Bh8 13 Nh2 Ng7 14 Ng4 etc.;

b) 11...Nh7 12 h4 e5 13 d5 f5 14 gf Qf6x 15 Be2 Kf7?! (trying to escape) 16 Ng5+ Ng5x?? (16...Kg8 was necessary) 17 Bg5x ending the struggle;

c) 11...Ne8 12 h4 Kh7 13 h5 Rh8 (13...gh? 14 Nh4) 14 hg+ fg 15 Nh4, when White is clearly superior (15...Bh6? 16 Ng6x Kg6x 17 gh+).

10... g5?

Black returns the favor! Imperative (and strong) was 10...ef, opening lines for counterattack after 11 gf (11 ef Re8+ with counterplay) Qe8! 12 Qe2 (12 fg Ne4x 13 gf+ Rf7x and White's king is in as much danger as Black's) Bc6 13 e5!? (13 Nd2 or 13 d5 Bd7 14 fg fg with a satisfactory position for Black) Bf3x 14 Qf3x de 15 Qb7x ed+ and now:

a) 16 Ne2 Nc6 threatening 17...d3;

b) 16 Kf2 dc! 17 Qa8x Ne4+ and 18...cb;

c) 16 Kd1 dc! 17 Qa8x Qd7+ with c1) 18 Ke1 Re8+ 19 Be2 (19 Kf2 Ne4+) Nh5! 20 Qb7 (20 b3 c2 or 20 Rb1 c2! 21 Ra1 Qd1+!) cb 21 Bb2x Nf4 winning, and c2) 18 Kc2 Nc6 19 Qb7 Rb8 20 Qa6 Nb4+ grabbing the queen. These lines suggest the dangers to which White can be exposed if the pawn center is destroyed.

10...g5, as played, strives to keep the kingside closed. But now, with the ghost of Dr. Tarrasch looking on, the pawns roll forward, sweeping Black off the board.

11 e5!

Much stronger than the immediate 11 h4.

11... Nh7  
12 f6 Bh8  
13 h4 gh  
14 g5 Re8

Played to give the King some running room (the threat was 15 gh+ winning a piece).

15 g6!

Energetic play. If now 15...Ng5, 16 g7 wins the beleaguered bishop. So Black's reply is forced.

15... fg  
16 Rg6x+ Kf7

16...Kf8 17 Bh6x+ Kf7 18 Bd3 is no better.

17 Ng5+!

Even stronger than 17 Bd3. It's all over for Black.

17... Ng5x

17...Kg6x 18 Bd3 is checkmate, and if 17...hg, 18 Qh5 follows anyway.

18 Qh5 Bf6x

Desperation.

19 Rf6x+ Resigns

19...Ke7 20 Bg5x wins, e.g. 20...Rf8 21 Rh6x+ Rf6 22 Bf6x+ Kf8 23 Rh8+ +, and 19...Kg7 (or 19...Kg8) is met by 20 Qg6+ Kh8 21 Qh6x+ Nh7 (on 21...Kg8 there is 22 Rg6+ Kf7 23 Qg7+ +) 22 Rf7 and mate in one.

A smooth finish by Lewicki.



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Cheerleaders practice crowd control

- photo by Ron Gidseg

## Coach Dodd Introduces AMa Mikasa for Polo

by Math Shot

Water polo is a unique sport. Take last Saturday for example. We thought we were going to play a tournament, the SCIAC Westerns, against Oxy and Whittier. We were wrong. In reality, Dodd used the tournament as an excuse to teach us all something called "Polo Math" or perhaps "Abstract Insanity." He called it AMa mikasa.

We were summoned into the chalk room, no, lecture hall at 11:30 am for our first and, hopefully, last class of the year. Dodd opened with a proposition. "Assume we've got a large concrete bowl 25 yards long, 6 lanes wide, and 7 1/2-15 feet deep. Let's call it a pool. Put two goals, 1 funny-looking yellow ball, and 14 players in it. We'll call that a water polo game. Now, take this game and add two referees, two coaches, and two benches of reserves. Now what have you got. Right, a mess." (Around this time, I was thinking that this was pretty simple. Just a lot of addition.) Then he broke into complex number theory. "Let's add some fans to the 'big picture'. Well, we'll make them imaginary, since they don't exist. Now we're ready to go." (Ready to go where, to the john?)

He moved on to define an 'opportunity' as a free shot at the goal. "In a game, we get X number of 'opportunities'. Suppose, \_\_\_\_\_, you blow one. Then we've only got (X-1) opportunities. And that's shit." He proceeded to write the fundamental equation  $(X-1) = \text{SHIT}$  on the board for us. Using that he derived the Fourth Quarter Theorem whereby any goals scored in the last 3 minutes by our opponents are simply thrown away. As an example he took our last game,

transforming a 16-11 score into a 14-11 without so much as blinking an eye.

Going back to the fundamental equation, he then defined vectors and vector analysis. All water polo vectors must cross and thus create a pick, then backstroke back to their initial positions, in order that they might go again. He defined the zero-vector to be a complacent or non-driver. Then he ran into a contradiction. The result of a natural operation on a vector is a kickout, but our man-up offense results only in a lost opportunity. Thus, applying the fundamental equation, vectors are shit, which is a contradiction to the stated definition above... well, you get the idea.

Before he let us go, Dodd defined a new binary system for us, one in which everything is thought of in terms of X's and O's, vectoring in a pool. With everything tied up in that, which we'll call the Fundamental Theorem of Water polo, he sent us out to take our midterm exam. We all failed miserably, losing 11-6, and thus, by team meeting, we all decided to drop on November 11.

To celebrate our decision, a massive party took place that night in which Mr. Water polo degenerated into an alcoholic stupor, a samurai drinker from UCSD forced all to drink on Presidential order, and Graveman showed an incredible ability to roll quarters off his nose. The next day, those of us able to get up at 5:30 am told Dodd of our decision to drop. Along the way, we said a fond farewell to our seniors, in their last week of water polo—ever(?)

NEXT WEEK: see Dodd smash Physics. "Hey, \_\_\_\_\_, be like an atom and split."

## The Rhyme of the Ancient Fencer

by Parry Riposte

Two days before the fight  
The team was feeling alright  
Blades were polished shiny and bright  
All equipment was working right  
The fencing master lectured and exclaimed,  
"I want you to go out and win!"  
One enthusiast stood and acclaimed,  
"Then you'll buy us a bottle of gin!"  
The team fenced two hours that night  
With control and a feeling of might.

Saturday, the day of campaign  
The master gave us some champagne.  
One foilsman boasted and cried,  
"What foe shall we defeat today?"  
The master toasted and replied,  
"You shan't give an inch of way  
To Fullerton Assassins or San Diego Aztecs."  
On that morning, nine forty five  
The team got on interstate five  
To San Diego and doing fifty-five.

The team got there at one o'clock  
And saw different teams in their flocks  
The gym looked old and small  
With thin mattresses hanged on the wall  
We started practicing with out pals  
Doing lunges and parries to know how  
The blades met and produced a screech  
Then one guy moved and made a reach  
Everyone there was all warmed up  
Hoping to win and be the top.

The women's foil team started the bouts  
The gym was filled with cheers and shouts  
Phyllis Li acted like an amazon  
By winning four duels without a doubt  
Shannon Gwong is a new recruit  
She did well by leading pursuit  
Dana Pillsbury moves like a cat  
She is observant and uses tact  
And won two bouts by being fast  
Bridgway and Peters got their first win  
Soon after they were wearing a big grin  
The final score was eight to eight  
But, the joy of tying soon abated  
More touches went to SDSU  
So it was the victor of the two.  
Feeling weary and things forgotten  
The team next met Cal State Fullerton  
They tried hard but with no avail  
The final score, five to eleven  
A match Fullerton prevailed.

Back home, the fencing master led the way  
To get ready for another day  
Against U.C. Santa Barbara and UCLA.

The men's foil team did not have luck  
Against SDSU who moved like ducks  
Caltech was defeated zero to nine  
With no mental pain on their minds  
The second match with Fullerton  
The team showed a better sign  
Scott Grossman, the big dancing bear  
Did his move with ultimate care  
He won two bouts without a nightmare  
Craig Keller caught Grossman's spirit  
He saw the blade and didn't fear it  
Winning one by attacking with dare  
Adam Lewenburg did alright  
He lunged and parried and showed no fright  
Planning his movement with good insight  
The match ended at four forty-six  
And the foilists lost three to six.

The men's epee team lost both matches  
And their blades got many scratches  
Bill Gray saw his foe as Darth Vader  
And Luke Skywalker as himself with candor  
Bill is young and was wearing white  
Feeling the force with him was a delight  
Joe Bechenbach is thin and tall  
He has advantage after all  
His long limbs and speed is quite appalled  
With his reach he fears no one small  
James O'Dea won the only bout  
Against SDSU who like to shout  
James took his foe by surprise  
By a scheme easy to devise  
Thomas Luke got his first win  
While fencing against Fullerton  
He parried and riposted quickly  
And got a few touches instantly.

The men's saber team had its gore  
By defeating SDSU five to four  
Before the match, both teams in rigor  
Matt Himmelstein yelled, "Kill, disfigure!"  
Matt took the initiative  
Won a bout and felt appreciative  
Scott Lewicki took the chance  
To cut and strike at his stance  
He defeated one gracefully  
And lost a close one unintentionally  
Chien-Wei Han had won all three  
Later on he went on a spree  
Jeff Greason and Pat Blaine gave their best  
They almost won one to pass the test  
Sooner or later, they'll put their foes to rest  
Against Fullerton was not so fine  
For they lost miserably zero to nine.



Beavers advance the ball



Wild, wet fun

- photos by Ron Gidseg

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## sports

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With  
Santosh

Last Week's Record:

W-L: 6-8

Against Spread: 5-9

Cumulative:

W-L: 25-16

Against Spread: 20-21

## AFC

**L.A. Raiders (7-4) at Seattle (8-2) [Monday night]**

The Raiders lost two in a row for the first time since 1981. This is a must win for both teams and should be an excellent game to watch. The Raiders lost to Seattle 28-14 in L.A. The rematch will be hard-fought both on and off the field with Seahawk fans renowned for their abnormality and anti-social conduct.

Prediction: Raiders by 3

**Denver (9-1) at San Diego (5-5)**

With a loss here, San Diego could be essentially eliminated from the playoffs. The Broncos will be going for their 10th straight win.

Prediction: Denver by 4

**Indianapolis (3-7) at N.Y. Jets (6-4)**

The Jets blew a half-time lead to the Dolphins but retained their self-respect. They must win for a wild card berth.

Prediction: Jets by 4

**Buffalo (0-10) at New England (6-4)**

Prediction: Pats by 7

**Pittsburgh (6-4) at Cincinnati (3-7)**

Prediction: Pittsburgh by 4

**Houston (0-10) at Kansas City (5-5)**

Prediction: K.C. by 7

## NFC

**Atlanta (3-7) at New Orleans (4-6)**

Prediction: New Orleans by 2

**Chicago (7-3) at L.A. Rams (6-4)**

A must win game for the Rams to compete with the NFC East for a wild-card berth.

Prediction: Chicago by 4

**Dallas (6-4) at St. Louis (6-4)**

A key NFC East game. Cowboy haters must enjoy the Cowboys' "Silver Season."

Prediction: St. Louis by 4

**Detroit (3-6-1) at Washington (6-4)**

Prediction: Washington by 2

**Minnesota (3-7) vs Green Bay (3-7) at Milwaukee**

Prediction: Green Bay by 4

**N.Y. Giants (6-4) at Tampa Bay (3-7)**

The Giants last defeated Dallas twice in a single season 21 years ago. They have won 2 straight over Dallas and Washington. The Giants have the best chance to win the NFC East.

Prediction: Giants by 4

## Interconference

**Philadelphia (4-5-1) at Miami (10-0)**

The Dolphins are well known for their cheap shots and unorthodox field maintenance techniques, explaining their 10-0 record. They will unfortunately make it 11-0.

Prediction: Miami by 6

**San Francisco (9-1) at Cleveland (2-8)**

Prediction: Niners by 9

## Spikers Score

by Busy Sue

Last Saturday we played the Cal State San Bernardino Coyotes. They bark like coyotes, but they're bigger. Things didn't start out too well—a lot of people (including the coach) didn't show up. And last time we played them, they wiped the floor with us. But those of us that did bother to show did well. We even managed to rally at the end of the second game. We didn't win, but we didn't embarrass ourselves either.

On Monday we played the Whittier Poets. They won one game because we played badly and we won one game because they played badly. In the third and final game of the match, everyone played out of their minds. We had a real battle. Finally, they won 18-16.

Our last game is on Saturday, and it will probably be away. So, why not go to the Alumni basketball game instead? 2:00 pm at the gym—maybe I'll see you there.



— photo by Ron Glasg

(l-r) Nicole Vogt, Lynn Hildemann, Chris Tiller, Cris Morris

## MICROSOFT WILL BE ON CAMPUS NOVEMBER 12, 1984 TO INTERVIEW SYSTEMS DESIGN PROGRAMMERS

MICROSOFT CORPORATION is seeking EXCEPTIONAL SYSTEMS DESIGN PROGRAMMERS to work on multitasking operating systems, networking, advanced compilers, interactive systems, graphics, productivity applications and more. You'll be working with hardware such as the Macintosh and other 16- and 32-bit Micros (286, 8086, 68000), so new some of it hasn't been publically introduced. This is a place where you can explore beyond the boundaries of your experience as a software engineer. The atmosphere couldn't be better. Microsoft provides the best systems programming work environment.

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- even refrigerators full of free sodas and fruit juice!...and the hardware...
- all the high-level hardware (DEC-20, PDP 11, VAX, SUN 68000 machines) 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.

Microsoft is owned and operated by the same people of bold vision who produced the first microcomputer system software (BASIC), the first plug-in processor (SoftCard), the first lap-held computer (Tandy M100), and other firsts...and the bosses — Bill Gates and Paul Allen are technical wizards themselves. They understand the work, and they understand people like themselves who have the drive to be the best. Your work at Microsoft matters. It will be used by millions of people. There's a lot of satisfaction in that. Microsoft will give you a chance to show the world and yourself just how good you are.

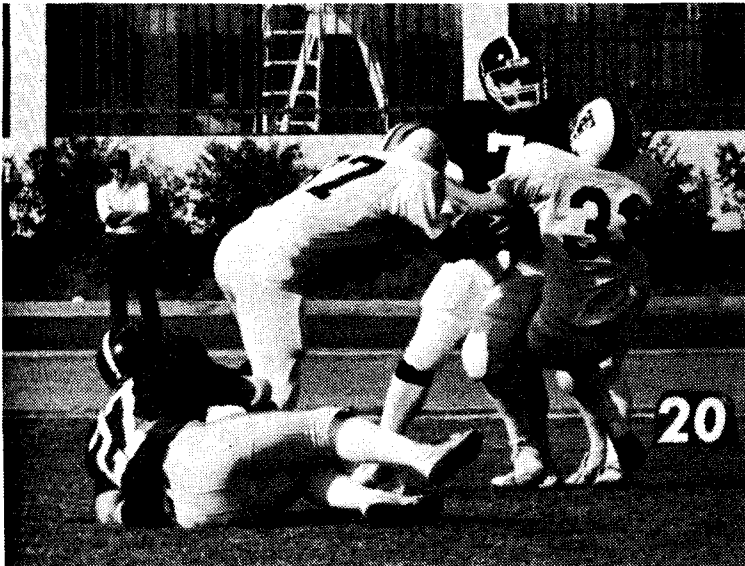
To make a good thing better, Microsoft is located in the center of a scenic playground, just 15 minutes from the major sports and cultural activities of the city of Seattle. Lifestyle is casual, but active with a wide variety of outdoor activities, mountains for skiing and hiking, lakes, ocean, etc.

We want programmers who will create Microsoft High Performance Software. You will have top skills, top grades and achievements and have demonstrated talent in software development and systems programming through relevant experience such as summer employment, work at a campus computer center, graduate research and/or other professional work experience. You will possess a sound base of technical knowledge and show an eagerness to learn and grow. If you meet these qualifications, you deserve to work with the best! Microsoft offers an excellent compensation and benefits package. Jo Ann Rahal, Technical Recruiter, Dept. WZ, MICROSOFT CORPORATION, 10700 Northup Way, Box 97200, Bellevue, Washington 98009. We are an equal opportunity employer.

We will be interviewing on campus Monday, November 12, 1984. Please contact your career placement office for schedule information.

**MICROSOFT**  
High Performance Software

sports



— photo by Ron Gidseg

Steve Louis and Daren Casey sack San Fernando QB

Weekly Sports Calendar

Intercollegiate

DAY	DATE	TIME	SPORT	OPPONENT	LOCATION
Sat.	11-10		TBA Cross Country	SCIAC Championships	Clare-Mudd
Sat.	11-10	10:00 am	Water Polo	SCIAC Championships	Clare-Mudd
Sat.	11-10	10:00 am	Soccer	Soccer Club	Caltech
Sat.	11-10	1:00 pm	Fencing	UCSB & UCLA	UCSB
Sat.	11-10	1:30 pm	Football	North East Bengals	Caltech
Sat.	11-10	2:00 pm	Women's Volleyball	Christ College	Christ Col.
Sat.	11-10	2:00 pm	Basketball (Varsity)	Alumni	Caltech
Sat.	11-10	4:00 pm	Basketball (JV)	Alumni	Caltech
Sun.	11-11	12 noon	Water Polo	SCIAC Championships	Clare-Mudd

Interhouse (Soccer)

Day	Date	Time	Teams	Referees	Location
Fri.	11-9	4:00 pm	Fleming vs. Blacker	Page	East
Fri.	11-9	4:00 pm	Lloyd vs. Ruddock	Ricketts	West
Mon.	11-12	4:00 pm	Ricketts vs. Ruddock	Blacker	East
Mon.	11-12	4:00 pm	Dabney vs. Page	Fleming	West
Tue.	11-13	4:00 pm	Ruddock vs. Fleming	Lloyd	East
Tue.	11-13	4:00 pm	Blacker vs. Dabney	Page	West
Wed.	11-14	4:00 pm	Dabney vs. Fleming	Ruddock	East
Wed.	11-14	4:00 pm	Lloyd vs. Page	Ricketts	West
Thu.	11-15	4:00 pm	Ruddock vs. Page	Fleming	East
Thu.	11-15	4:00 pm	Blacker vs. Ricketts	Lloyd	West

G.S.C Volleyball

A League

Day	Date	Time	Teams	Referees	Court
Mon.	11-12	6:15 pm	Jet Setters vs. Blockheads	Turing Machine	West
Mon.	11-12	7:15 pm	Six Hitters vs. Turing Machine	Blockheads	West
Mon.	11-12	8:15 pm	Upsetters vs. Fleming	TAPIR	West
Mon.	11-12	9:15 pm	Tammy's Team vs. TAPIR	Upsetters	West
Tue.	11-13	10:00 pm	Brute Force vs. Page	Joy of Sets	West
Tue.	11-13	11:00 pm	Bump n Grind vs. Joy of Sets	Brute Force	East

B1 League

Day	Date	Time	Teams	Referees	Court
Tue.	11-13	10:00 pm	McGill Mean Machine vs. Smashers	To Be Determined	East
Wed.	11-14	6:15 pm	McGill Mean Machine vs. HIM's	Smashers	East
Wed.	11-14	7:15 pm	Smashers vs. Rotorheads	McGill Mean	East
Wed.	11-14	8:15 pm	Overpaid Amateurs vs. Earth People	Rotorheads	East
Wed.	11-14	9:15 pm	Nice Guys vs. Ricketts	Lloyd Juggernaut	East
Wed.	11-14	10:15 pm	Lloyd Juggernaut vs. Buddock	Nice Guys	East

B2 League

Day	Date	Time	Teams	Referees	Court
Tue.	11-13	10:00 pm	Cubbies vs. Not Yet Known	Ruddock	West
Wed.	11-14	6:15 pm	Cubbies vs. Natural Satellites	Not Yet Known	West
Wed.	11-14	7:15 pm	Not Yet Known vs. Eh? Team	Cubbies	West
Wed.	11-14	8:15 pm	Astronomy vs. Face	Eh? Team	West
Wed.	11-14	9:15 pm	Brains not Braun vs. Jerry's Kids II	X-Men	West
West	11-14	10:15 pm	X-Men vs. Sops	Brains not Braun	West

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Beaver's Light Fire; Beer Shows

by Santosh Krishnan

The Caltech Beavers evened their record at 3-3 with a powerful win over the San Fernando Valley Bulls last Saturday. The Beavers, led by Gene Toshima, steam-rolled through the Bull defense on many dives in the 19-6 victory. The offense, which unleashed an impressive aerial attack on the San Diego Cougars, demonstrated offensive line power with a dominating ground game. After a 55-yard breakaway run on 3rd down for a Bull TD, the Beaver defense dug in to control the line of scrimmage for the rest of the game. The extra point was blocked and the Bulls led 6-0. Later on in the 1st half, Lee Mallory intercepted a Bulls pass deep in Beaver territory. After a Martin Brouillette-

Steve Roskowski bomb that put CIT in Bulls territory, Martin was able to evade Bull defenders in scampering from the 20 to the Bull 3. After a QB sneak and an encroachment call against the Bulls, the Beavers found themselves E yards from the goal line. Gene Toshima then ran the ball in for the first of his 3 TD's.

The Bulls were threatening in the second half when they drove down to the Caltech 3. A brilliant goal-line stand, however, stopped the Bulls on fourth down and gave the Beavers first and 10 from their 3. This brought on a scintillating 97-yard drive which culminated in a Toshima run to put CIT well ahead. Toshima scored again when the Bulls were unable to move the ball

after an excellent Steve Collins punt left them at their 10-yard line.

The defense, which reminded this reporter of the "Midway Monsters" of the 'fifties, had that special *je ne sais quois* that all football fans crave. Mike Burl and Mark Schuyler, among others registered numerous tackles. The cheerleaders and the FREE BEER (provided by the cheerleaders and not by ASCIT as incorrectly stated last week) kept the crowd under control. After the game (11:11 pm to be exact), a bonfire was successfully carried out on San Pasqual and Lake. Tomorrow's game against the North East Bengals will be the last home game and last FREE BEER of the season. Be there to see the Beavers win again.



# announcements

Material for the announcement section of the California Tech must be submitted typed on or with the Announcement Form available at the Tech office by the Tuesday before the Friday of publication.

## Caltech Y Pizza

On Friday, November 16 at 5:30 pm in the Caltech Y Lounge, the Y will be sponsoring a get-to-know-the-Y session for those students (both grad and undergrad) who are interested in joining the Y Executive Committee. General socializing will go on until 6:00, when the presentation will begin, with the dinner (pizza, beer, soda, etc.) served after the presentation. All students who think that they would like to participate in campus activities, or would just like to find out what the Y is doing on campus are invited to attend.

## Antimatter Drive

Dr. Robert L. Forward will present a lecture on "Antimatter Propulsion" Tuesday, Nov. 13 at 7:00 pm at Kinsey Auditorium, the California Museum of Science and Industry, 700 State Drive, Los Angeles. Dr. Forward will discuss techniques for the efficient generation, long-term storage, and utilization of antimatter for space propulsion. The lecture is free and the public is invited to attend. For more information, call (213) 374-1381.

This lecture is sponsored by the Organization for the Advancement of Space Industrialization and Settlement (OASIS), the Greater Los Angeles Chapter of the L-5 Society. The organization is a non-profit, educational group which promotes space development.

## Putnam Prepping

An informal seminar in mathematical problem solving will be given at 3 pm this afternoon (Friday) in 151 Sloan. Various contest problems including the 1974 Putnam Contest problems will be discussed. For more information, contact Art Duval in Ricketts, Everett Howe in Dabney, or Jung Im in Blacker.

## Math Club Putnam Clinic Offered

The Caltech Math Club is sponsoring a clinic to prepare for the Putnam Exam at 7:30 pm on Tuesday November 20. Professors Gary Lorden and Barry Simon will talk on how to do well on the exam, which will be administered on Saturday December 1. Everyone signed up for the exam is invited. Refreshments will be served.

## Biology Tutorials

The Biology Division is offering tutorials again for the 2nd term, listed as Bi23, offered for 3-6 units. These informal courses have been well attended in the past and give students a chance to interact more closely with faculty and to explore subjects not otherwise covered in the curriculum. Current sections being offered concern Current Medical Issues, Brain Correlates of Cognition, and Field Ornithology. New ideas are always welcome. If you have a favorite biological subject and can find yourself a tutor (usually a professor or a postdoc), see J. Strauss, x4903, 118 Kerckhoff, and new sections can be easily arranged.

## Update Addresses

On January 31, Caltech's Payroll Department will mail employee's W-2 Forms to the address shown on the Payroll/Personnel system. Any employee who has moved to a new address during the year and has not reported the information to Personnel should do so before December 15, 1984.

Last year 12 percent of the W-2 Forms mailed out from Caltech were returned because the addresses were outdated. Don't risk a delay in getting your W-2 Form.

Home address information reported for the Campus Personnel Directory is not automatically transferred to other offices.

Your department should fill out the six-part Personnel Change Notice (Form P-53) and forward to the Personnel Department, Mail Code 101-6.

Foreign students should take note that they cannot claim exempt for more than one (1) exemption without filing a 1078 Form in the Payroll Office.

## Now, Your Very Own

Yes, once again, the Men's Glee Club is selling black Caltech sports coats. These coats are in excellent condition and their prices range from \$14 to \$20. See Concetto Geremia in Keck or any other Men's Glee Club members for more information.

## One Act Tryouts

There will be tryouts for 6 one-act plays, Sunday, Monday and Tuesday, Nov. 11, 12 and 13 in Winnett. The plays are "Action" by Speer, "A Phoenix Too Frequent" by Fry, "Gosforth's Fete" by Ayckbourn, "Let's Murder Vivaldi" by Mercer, "Long Voyage Home" by O'Neill, and "The Labyrinth" by Arrabal. Performances will be Jan. 11-13 and 18-20.

## Sabbath Services

Friday night services are being held in the Y lounge by the Caltech Hillel. The services are held every Friday from 5:30 to 6:00 pm (except on those weeks when there is a Hillel Potluck Dinner). For further information, call 793-3 59. Everyone is welcome to help us celebrate the Sabbath.

## Mikado Auditions

Auditions for the annual Caltech Musical will be held on Saturday and Sunday, Nov. 17 & 18 from 10 am to 6 pm in the basement of Baxter. Those interested in auditioning should bring some prepared music; anyone interested in technical work should drop by and leave their names. This year's show is Gilbert & Sullivan's *The Mikado*. All Caltech and JPL affiliates—students (undergraduate and graduate), faculty, staff, family and friends—are invited to participate in the production. Performances will be the last weekend in February, and the first in March.

## Russia Trip

Last call for those planning to visit Moscow and Leningrad over Spring break. The cost is \$1300 (including everything: air fare, hotels, meals, tour guides). Open to students, faculty and staff (must be under 35 years old). A group roster will be drawn up at the final meeting next Tuesday, November 13, at 12:30 in 2 Dabney. For more information call x3615.

## The Coffeehouse

In trying to respond to a demand for food that isn't hamburger-based, we have been expanding our menu. We now offer: turkey & roast beef sandwiches, egg & potato salad, potato chips, and a large variety of candy, as well as beef & red pepper burritos. These are in addition to the standard menu of burgers, fries, shakes, bagels, hot dogs, almost Tommy's chili, BLT's, and grilled cheese sandwiches.

We are also open for lunch on Saturday and Sunday, 12:00-1:30. At this time we also serve tuna salad, but NO milkshakes.

If you have any suggestions come out and tell us.

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### FOR SALE—

**FOR SALE:** Quality dining room set. drexel "profile" table, extends to 8 feet. 4 side, 2 arm chairs, custom leather seats. \$250. Ext. 6324 or (818) 375-3733 after 6.

**FOR SALE:** Grid Compass portable computer with floppy disc drive and Management Tools software package. Never used—in box. \$4000 or best offer. Call Ben at 213-477-0061 9-5.

**FOR SALE:** 1970 Mustang automatic, V8 engine, rebuilt transmission, power steering, power brakes, very clean. \$2000 firm. Call Pilar at 509-3065 day, 842-6259 eve.

### HELP WANTED—

**TELEPHONE SALES** Pasadena Symphony Orchestra. Tired of selling copy supplies at 6:00 am? We have leads, good hours, and nice offices. Only articulate people need apply. We have a product worth selling. Come join the magic. Call Pasadena Symphony Office 818-793-7172. \$4/hour or commission.

**WORK YOUR OWN HOURS.** Earn extra money. Call Cathy Estrada at (818) 449-3244.

**HELP WANTED:** 780 Machine language programming—software and hardware. Contact Joe Vu 794-2411 after 5 PM.

**EXCELLENT INCOME** for part time home assembly work. For info. call 504-641-8003 Ext. 8738.

**HELP WANTED:** Clerical—\$3.50 to start, prefer full time, will work with customers on the phone (not sales). Call Margi 791-0401, 9-5.

**YOUNG PROFESSIONAL** couple living in La Canada needs mature, responsible student to help manage household affairs. Principal duties to include cooking, shopping, light gardening, and light cleaning approximately 10 hrs/week. Opportunity to work flexible hours for friendly people. \$4/hr to start with raises there after. Call 952-2189 evenings.

### HOUSING—

**HOUSE TO SHARE:** Beautiful 2-bedroom duplex close to Caltech. \$250/month plus utilities. Call Catherine at Ext. 6816.

**APARTMENT OFFERED** Quiet apt. offered to share in exchange for helping an active paralyzed teacher. 1 block west of Caltech w/ own bedroom and bath. Ideal for person who spends most evenings working at home. Reliable, friendly person sought, prefer grad student, non-smoker. Inquire at 449-8928.

**REAL ESTATE opportunity.** Studio condo 2 blocks from campus, only \$2000 cash to move in. Contact Victor Herrell 449-5030. See ad on page 4 for details.

### GENERAL—

**WANTED** Posters, any size. Contemporary subjects (rock, etc.) Contact Ara at 356-9283 or send note to 1-57.

**\$50 PAID** to individual effecting permanent riddance of stray dogs defecating on 260 sq ft of Pasadena lawn. Usual deterrents fail. Call 796-4418.

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### TYPING—

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