

WHOOPEE! This poster atop Millikan Library was just a part of the welcome for Willy Fowler, Caltech's latest Nobel Laureate. Photo essay begins on page 4.

Tech Wins Three – What's Wrong?

Football

by Ath Man at Large

Last Saturday afternoon, the Caltech Beaver football team improved its season record to three wins and one loss with a workmanlike 19-7 victory over the Northeast Bengals. Coming off an exciting 20-14 victory over La Verne's JV team the previous week, the Beavers displayed continued improvement, especially on defense, as they shut down the Bengals, a team the Beavers barely squeaked by in the opening game of the season.

The Beavers scored the game's first touchdown in the first quarter after getting the ball on the Bengal 30-yard line

continued on page 6

Soccer

by Tom Remmers

The Caltech soccer team finally came together in the past two games by beating Whittier on Saturday 4-3, and Oxy on Wednesday, 3-2.

The game against Whittier started evenly for the first quarter until one of the Whittier players was ejected, leaving them with only 10 players on the field. Taking advantage of this, Tom Remmers was able to score a lifetime high four goals. Assisting were John Sahr, Bob Mostert, and Brad Axan. The Caltech defense made the game exciting by giving away a few goals, but they held Whittier in the end.

Against Oxy, John Krehbiel

continued on page 6

Cross-Country

by Thor Feet

Caltech's Cross Country men's team picked up another victory October 22 by placing second in a three-way meet at La Verne. The Beavers were stomped 15-50 by Pomona-Pitzer, but they evened the score by downing Claremont 26-33.

Pomona-Pitzer dominated the meet, taking nine of the first eleven places. This included first by Francis in a time of 26:13. Caltech's top finisher was senior Steve Stahl, who completed the flat 5.0 mile course in 28:09, which was good enough for 12th in a field of 30 runners. Other Caltech runners included Bob Kelly (13), Mike Jensen (15), Robby Dow (16), Brian McLain (19), Darin Acosta (22), John Beck (23), Sean Moriarty (24), and Andy Workman (30). The result was good enough to beat Claremont for the first time in three meetings this year.

Another first was logged by the women's team when they fielded a complete team of five runners for the first time this season. Unfortunately the occasion was spoiled 19-38 by Claremont and 19-36 by

continued on page 6

Bluegrass!!

The Caltech Folk Music Society brings to the campus tonight (Friday) one of the country's finest bluegrass bands, Berline, Crary and Hickman. The concert will take place at 8 pm in Dabney Hall, and although tickets are \$5 in advance and \$6 at the door, thanks to a subsidy from the Graduate Student Council, there are 20 tickets available to grad and undergrad students for only \$3. Additional information is available from the Caltech Ticket Office (x4652).

Byron Berline, Dan Crary and John Hickman, who make the trio, are well known as individual performers, but together they are renowned for the best contemporary bluegrass on the West Coast. Frequent performers at almost every bluegrass festival that there has ever been, they perform all too infrequently here in their home, Los Angeles.

Byron Berline has toured extensively on three continents, has won three major U.S. fiddle championships, has written and performed several motion picture and television scores,

and has appeared on dozens of recordings of other major recording artists as well as recording several fiddle records himself. Dan Crary has just recently returned from a solo tour in Australia. He is clearly one of the finest flatpicking guitarists in the world, and also writes some original music which is performed by the trio. John Hickman is a fine banjo player who does extensive work in recording sessions, movies and television, as well as teaching.

Other upcoming Folk Music Society events on campus include: a concert with Old Mother Logo, an all-women stringband known for their old-timey music, who will be here on Friday, Dec. 2, and another Hootenjanamany, a BYOI (bring your own instrument) get-together on Saturday, Dec. 17. For information about these and other Folk Music Society events, contact Brian Toby, x4181, Simon Davies, x4427 or write to the Caltech Folk Music Society, c/o GSC, 138-78.

Electronic Education Geoffrey Fox: New Dean of Educational Computing

by Sonny Lee

The computer revolution has had far-reaching impacts in many areas, not the least of which is education. Recognizing this, Caltech has decided to create a post to oversee the use of computers in education. Enter Professor Geoffrey C. Fox, the first Dean for Educational Computing.

According to Dr. Fox, there should be an emphasis on new approaches to teaching using computers as an aid. "Number crunching is probably not important in education," said Dr. Fox, "Rather, the most important application (of computers in education) will be to teach difficult ideas."

As an example, Dr. Fox pointed out the graphics display capabilities of computers. "Most people find visualizing, let alone drawing, say, a three-dimensional graph difficult," Dr. Fox explained, "but using computer graphics, this can be quite easily done."

Dr. Fox also emphasized the general availability of computers for such applications. He stated that the general calculating power of large mainframe computer systems is best suited towards research, whereas the small personal computers are ideally suited for educational purposes. They are small and inexpensive, and Dr. Fox predicts that every student will have one in high school by 1990.

As to the extent of involvement in educational computing, Dr. Fox believes that Caltech has taken substantial steps in the field. "We're trying, and I don't think that the other places like CMU (Carnegie-Mellon U.) and MIT (you-know-who), the acknowledged leaders in computer science, are ahead of us (in educational computing)."

As evidence, Dr. Fox described the creation this year of two new courses, Ph 20 and

E 1; both deal with computer applications in their respective fields. Also mentioned was the addition of some 85 new computers throughout the campus for student use and the soon to be installed new Data General MV/4000 computers. Three of these mainframes will be set aside exclusively for the students and administered by the students. These new computers will provide some one and a half times the computing power of the current single VAX 11/780, two-thirds of which the students use.

The process of introducing computers to education at Caltech will be easier because of its small size, explained Dr. Fox. "CMU's well-publicized program is supposed to have about 500 personal computers for student use by the end of next year. Well, first of all, they haven't gotten them yet, secondly, that works out to be one computer for every eight students there. For us to achieve that ratio here, we only need 100 PC's. As a matter of fact, we have over that number now."

"This past year, we've added 85 new machines," said Dr. Fox. "We plan to continue at this rate and perhaps accelerate it." Since "home-grown" software, that is, software written here, will be harder to modify and update with changing equipment, Dr. Fox expects to utilize commercial software in the future. He also mentioned the future activation of the "Net," a Caltech network allowing linking of PC's in student houses to the computer center. According to Dr. Fox, the system should be working with a few terminals very soon. New links will be added as needed.

As a final note, Dr. Fox directs this message to the student body: "If any student has an idea, suggestions, whatever, just call or see me."

Tomko-Pavia's Solstice and Sketches

"Solstice" and the sketches "The Twa Corbies" and "Subduction" are original plays, written by Caltech Physics graduate student Greg Tomko-Pavia. They will be presented by members of the Theater Arts Program at Caltech (TACIT) Friday, Nov. 4 through Sunday, Nov. 6, Friday, Nov. 11 and Saturday, Nov. 12 in Ramo Auditorium. Evening performances will begin each day at 8 pm, with a matinee at 2:30 pm on Nov. 6.

These plays explore the

dynamics of human relationships against the background of science and mythology. Settings range from a space station of the future to the battlefields of Medieval Scotland.

Cast members include Michael Petterson, Astrid Howard, Laurie Hawlett, George Roegler, Peter Jones, Huston Horn, Rodney Kinney, Ray Lischner, Kimberly Carr, Richard Feynman and Neil Russell. Caltech's Theater Arts Program consists of students, faculty and staff.

This is the third in a series of plays directed by Caltech students. Directing "Solstice" and the sketches will be Tomko-Pavia and Howard. Choreography will be provided by Jane de Burlo.

The evening performance on Nov. 6 is scheduled to be signed for the hearing impaired. Tickets are priced at \$5.00 general; students \$2 off. They are available at the Caltech Ticket Office, 332 S. Michigan Ave., Pasadena. For information, call 356-4652.

The Academic Problem Time to Smell the Flowers

There are many social reasons why the social atmosphere here at Caltech is poor, but what has to be the number one reason is the institute's academic structure and policies.

During the second week of one of my classes last year, the prof, when asked why his first assignment was such a killer, answered with, "well, if I didn't [make it so hard], you'd spend all your time on physics or chemistry instead, and I'd rather you do calculus." His answer was a pathetic summary of much of

impossible to work every second, every day without break, which is how one might try to get ahead. This pressure leads to students resenting the work and getting depressed. The very concepts that the prof is trying to bring out are lost in the endless homework grind. At 4 o'clock in the morning, the attitude is "what's the right answer" rather than "hmmm, what a beautiful concept I'm learning this morning."

This kind of pressure, in turn, takes its toll on those rare free hours. Because few can count on a regular 20 hours a week in which to pursue a hobby, outside reading, or club activity, those scattered 5 to 8 hours end up being spent as unconstructive frustration vents or escapes. They range in form from getting drunk, smashing shopping carts, playing video games, eating or just sleeping. There is no real time to concentrate on growing, learning and maturing in a social and personal type of way. Those who insist on a sport or other regular pastime are often forced to choose between their sport or their GPA. The schoolwork is designed to fill each waking hour, so if you demand something else, be ready to give up a class or your 3.5 GPA. Each year, there are students who just burn out or drop out.

The overwhelming academic pressures make students want to escape for a while rather than deal with their accumulating problems. And if all this isn't bad enough, the institute requires three terms of this in the space that other schools finish two terms in. That means more concentration, more rush, and less vacation. The 2 week winter break and 1 week spring break are too short for some to pay hundreds of dollars to just visit home. In 31 weeks of classes and exams, there are only 19 days of holiday total.

The purpose of a college education from back in those ivy-grown university days was to make freshmen into well-rounded renaissance men ready to go out into the world to find a calling in life. Growing and maturing was part of the process besides literature, languages, speech, writing, law, government, history, art, and the sciences. It was not to be a vocational type of training for engineers to graduate to a \$30,000 job with no other functional qualities. Without those other personal types of subjects, the mechanics and electricity means absolutely nothing, and a school like Caltech just ends up breeding idiot savants.

Many different changes can be made to cor-

the gadfly No. 2

An examination of student life at Caltech

what is wrong. Each professor feels as if his subject is the most important and so the student wouldn't mind if he had to spend the most time on it. Well wake up prof, your students do mind, particularly if it is a core class. Academically overloading a student is physically and mentally unhealthy, it leads to less learning with a poorer attitude, and lastly, it is contrary to the spirit of a college education.

A load of four 9-unit classes, which is normal at any other school, borders on an underload here at Caltech. In taking five classes you have to keep shifting gears to keep track of five trains of thought. Typically, each class has a weekly assignment which requires more time than it is allotted for. In that situation, if you spend one evening a week on each subject, and make allowances for evening classes and those subjects that require more than one evening, then you are left with less than one night a week to recuperate before the cycle starts again. The work piles in much faster than most students can assimilate it. As a result, a good deal of the taught knowledge is never learned and the student gets frustrated with a feeling of academic inadequacy and falling behind.

This frustration leads to many unhealthy practices. To meet the homework deadlines, some try to live on less than four hours of sleep a night for a few days in a row, plus there are those famous all-nighters. Professors often say that this practice results from not starting an assignment until the last moment, but that is not always the case if you use the five class scenario described above. Besides, it is humanly

letters

Rotation and Housing

Concrete Proposals The System Works

To the Editor:

To extend my proposals on possible changes to the house picking system, I feel it worthwhile to suggest a system, or rather several alternative systems, to the selection process itself that would serve to increase the freshman's say in the choice of his future house. I'll list a few ideas without comment. These examples are purely for the purpose of discussion, to lead to actual possible amendments to the current system:

1) *Adam Smith Capitalism.* Let's assume the selection process takes place after a period
continued on page 3

To the Editor:

I've noted with a sense of rising bemusement the several letters and articles that have appeared in the *Tech* lamenting the state of Rotation in particular and the student housing system in general. What are we to make of this? That there's a general sentiment on campus to the effect that the current system should be changed? I suspect not, and suggest that what we have here is a lack of historical perspective among a disaffected and suddenly vocal minority of undergraduates who have had no real opportunity to compare the student
continued on page 3

Miele for PCC

Dear Caltech students, faculty and staff:

Those of you who are local voters and live in the vicinity of Caltech have received your sample ballot for the Nov. 8 election of a governing Board Member in district 4 of Pasadena City College.

I urge you to vote in this election for Susanne Miele.

She has the qualifications, the energy and the interest to manage and fight for PCC in these difficult times, to restore communication between PCC Board and faculty, and to offer the best possible to the students.

You are invited to hear and talk to Sue Miele on Tuesday noon, Nov. 1 on the Caltech

campus upstairs at Winnett, Clubroom 1. The incumbent, Roger Gertmenian, has also been invited to be there to present his views.

PCC is a precious resource for us in the Caltech community
continued on page 5

The Caltech Y Fly-by

Friday...October 28

Noon Concert - Tim Fuller's Pop Rockers, 'The Society Beat.'

Art Workshop - Art as a living?? No, just for fun! Y workshop, every Friday, 3-6 pm. Everyone welcome.

Halloween Dance Party - PCC is having fun. You can too. Campus Center lounge, 8 to 1 pm, \$3.50 for most of us and \$6 for couples.

Saturday...October 29

Square Dance - Beginner or expert, join the fun! Dabney Lounge, 8 to 11 pm. It is FREE. Co-sponsored by CCF. See y'all there.

Sunday...October 30

Sailors to Anacapa embark at 7 am in the Y van. Dont forget to set your clock back an hour.

Dan Berrigan - 'Nuclear War and Armageddon' at USC. Free - the Y car leaves Winnett at 1:15 pm.

Tuesday...November 1

ESL - English as a Secondary Language class, 9 to 12 in Clubroom 1, \$2 per hour.

Wednesday...November 2

On the Quad - 'Toymaker and Son,' a Christian allegory in dramatic dance presented by the Caltech Christian Fellowship.

Noon Update - 'Computer Graphics at Caltech,' James Blinn, lecturer in computer science, CIT/JPL. Feel free to bring a lunch.

Friday...November 4

THE LELAND STANFORD MARCHING(!) BAND IN CONCERT ON THE ATHENAEM TERRACE STEPS AT 2 PM. The festivities shall prove exciting and interesting. The music will be fantastic, too.

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Dead

by Zobi-Wan

The effect of that class of forces which is so often labeled as "beyond our control" is rather better documented than it is understood. To date, the scientific community still awaits the publication of even a single serious treatment of the problem. Events whose set of initial conditions is disjoint from the current state of their pending subject do not enjoy wide popularity in the experimental disciplines, simply by virtue of the necessary fact of causality. To wit, you can't correct something you know nothing about.

Further, the absolute orthonormality of event and observer in such cases, though poorly understood, is accepted as fundamental. Few choose to view reality in any other light. This concept is reflected in the mathematical model of the universe, particularly in the Uniqueness Property discussed previously in this column. That is, you can't control things which are beyond your control.

It should scarcely come as a surprise, then, that the author feels perfect justification in disclaiming all responsibility for any errors appearing beneath this byline. The reason is that an error is by definition an alternate solution to a given problem, and its unsatisfactory nature with regard to that problem is of necessity unknown (or better still, *undefined*). For if its status as an error were recognized concretely, the potential for correction would surely be sufficient to cause a tending towards change. That which is unknown cannot be corrected; that which is uncorrected due to the absence of control is uncontrollable. The concept of culpability is therefore obsolete.

And that is why it is no one's fault that the following paragraph was excluded from last week's column:

The following proof originally appeared in this column on January 22, 1982. It is reprinted here due to (non-zero) popular demand.

Similarly, it is no one's fault that the obvious parallel between the Pudding Uncertainty Principle derived earlier in this column ("One cannot simultaneously maintain a pudding and prove its existence") and a particular subset of the wisdom of the ages ("You can't have your cake and eat it, too") was never explicitly drawn. Again, an error of omission is an entity whose existence is not recognized and which therefore is neither understood nor acknowledged. By this logic, errors do not exist. The customer is always right.

The Inside World

Blacker: No entry.

Dabney: Last Saturday was the Frosh Bonfire, which attracted a good size crowd to see the blazing destruction of a courtyard full of compuscratch. From jumping into the unlit pile in the afternoon, to jumpint over the flaming embers late that night, the only unhappy being has a hapless palm, who burst into flames.

TONIGHT is the BDR party featuring *A Band Called Sam* at 8:00 pm on the Dabney courtyard. All are invited. Coming events: an interhouse mud-wrestling competition featuring a match between Barb Turpin and Janet Saylor. Check future columns for details.

—Bill Callahan

Fleming: The past two weeks hve been pretty darn eventful at Fleming House. Last week, the Big Red Softball team rolled along into a first place tie (thanks, Ruddock), and this past Sunday the basketball bums clobbered the Darbs to hold thDiscobolus trophy for the second straight week.

Saturday night marked the Fleming House Halloween Party, held in the Fleming basement. Special thanks to the Social Team for importing Poly girls to make for a pretty decent ratio.

Two for one week has come to a close, but not until upperclassmen had sufficiently studied bonding characteristics of freshmen and water molecules.

This week's thought: look both ways before you cross the street. A cop might be waiting to give you a jaywalking ticket.

—EZ (but not cheap)

Page: No entry.

Lloyd: No entry.

Ricketts: No entry.

Ruddock: This weekend Rudds invaded the Pasadena Mann and together viewed the new James Bond flick, *Never say Never Again*. Everyone who attended gave the movie a good review, saying it was exciting if typical Bond fare.

Berkeley South House held its elections this week and Craig Zupke was elected head wart, I mean scum. Larry "compunerd" Meixner was too busy playing Rogue to care that "the warts [of Berkeley South] fell off [from the rest of Ruddock]," so there seems to be no great opposition to their secession.

Everyone seems to be thinking about Interhouse, and Grand Dragon Evan Cromwell is geting ahead early. If Ruddock's stunning Med-fly theme of two years ago was any indication, Evan should do a fantastic job with this year.

—Dierdre McClure

TEACH IN JAPAN

Persons with a degree in such fields as civil, mechanical, chemical, electronic, and other various engineering wishing to teach Japanese adults for one or two years in Tokyo and other parts of Japan should write to:

International Education Services
Shin Taiso Bldg.
10-7, Dogenzaka 2-chome, Shibuya-ku
Tokyo, Japan 150

Instructors employed by I.E.S. will teach Japanese businessmen and engineers English as a second language and the terminology in their own field of study or job-experience in Japan.

No Japanese language is required for classroom instruction. Teaching experience is not required. An orientation and training are given in Tokyo.

Information on salary, transportation and housing can be obtained by providing International Education Services with a detailed resume and a letter indicating an interest in the position.

Personal interviews will be held in San Francisco and Los Angeles in January, 1984. Selected applicants are expected in Tokyo April through August, 1984.

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The Nobel Laureate Meets the Press

I had "no indication that I was a candidate... It really came as a complete surprise to me"

"It's not going to make any difference to me... I'm still going to be Willy Fowler"

Postwar funding "supported, in a very generous way, pure research."

"I hope... the eventual payoffs from the pure research culturally, intellectually, and economically will keep the U.S. competitive."

Willy Fowler is a grand old chap

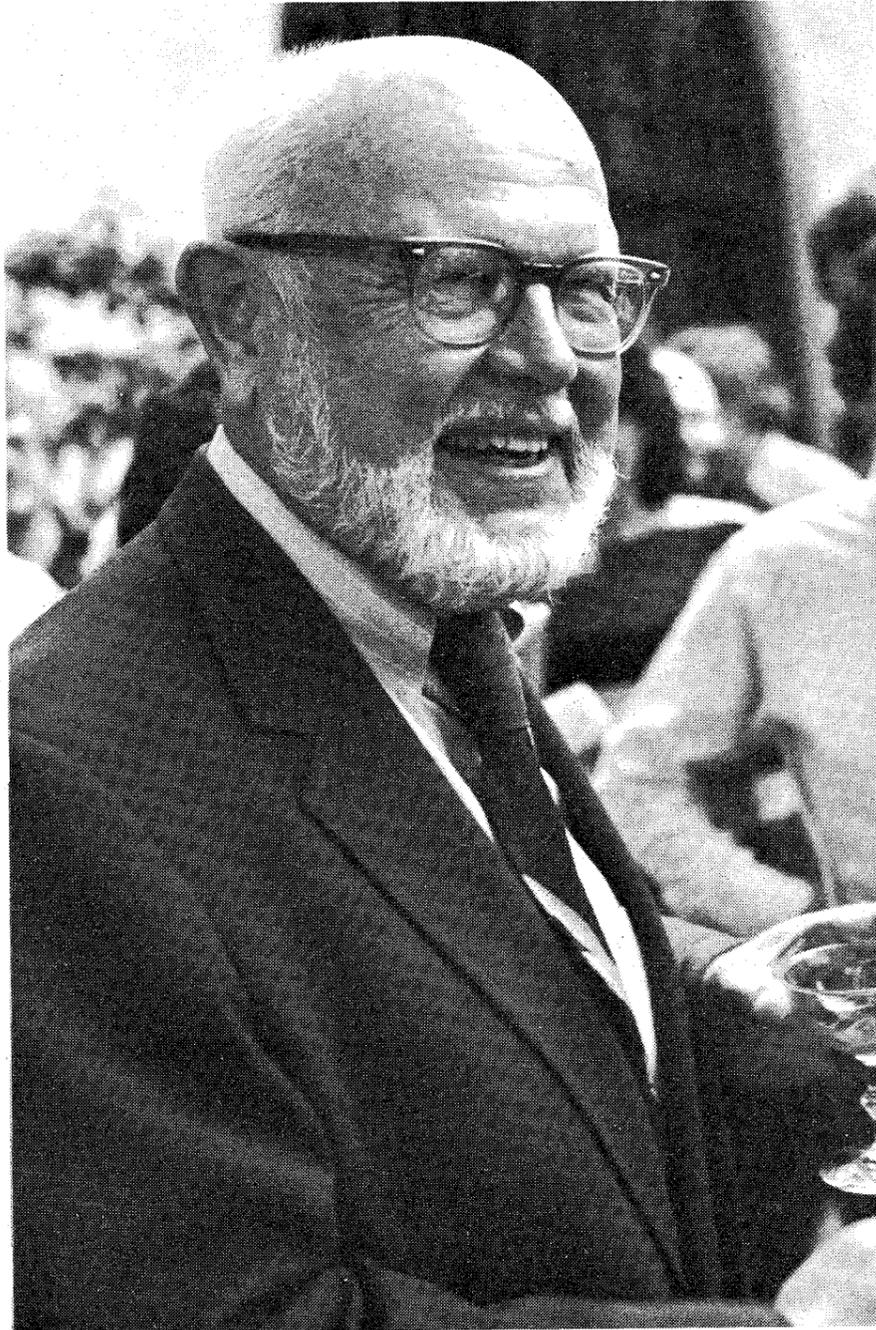
With white hair, whiskers and his Pirate's cap,

He cracks to the students in the tandem lab

"Boys, there's just one thing that I wish I had."

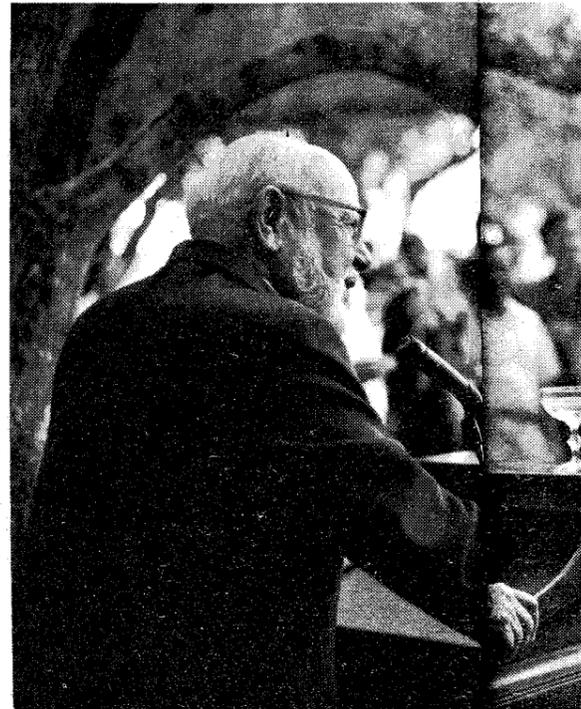
"Your Medal of Science!", the Kellogg team cries,

continued...



WIYY

Photos Betzen



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PLACE: Career Development Center Rm. 8, Parsons-Gates



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letters

Please Vote for PCC

An open letter to Caltech's students:

For years, members of the Pasadena community have tried to involve Caltech students in local elections, particularly those regarding education—Pasadena School Board races and Pasadena Community College Trustees positions.

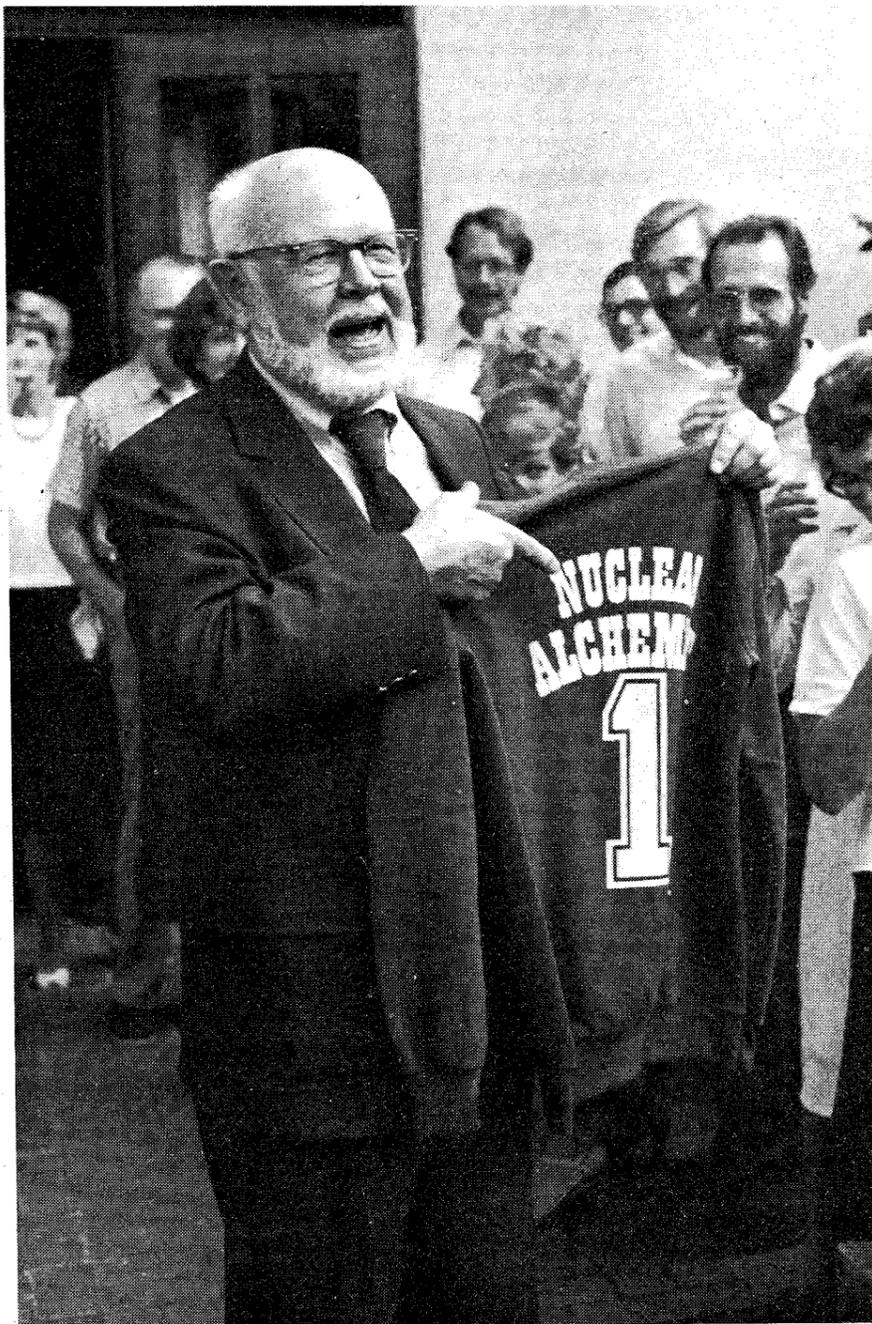
The local wisdom goes like this: Caltech students are highly intelligent, certainly persuaded of the value of education, and live in our community as local residents with local concerns while students at Caltech. Surely, they must swarm to the polls on election day! Unfortunately, though,

the reality is that only 15 students living on campus voted in the local School Board election last spring—an election where there was a clear philosophical choice among the candidates regarding education.

It should delight students then to know there is another opportunity to redeem this sad voting record. November 8 is election day when Trustees will be elected for Pasadena City College (PCC) Districts 2 and 4. District 4 includes the Caltech campus. I, as an active community citizen, will be facing Roger Gertmenian, the incumbent on the Board.

Y!

Betzen



Willy Comes Home to Caltech

A reception for Willy Fowler was held in Dabney Gardens on Friday afternoon. Caltech faculty from all divisions, staff, and students attended.

Far left, Willy Fowler.

Center, Fowler makes an address at Friday's reception.

Bottom, From one Nobel Laureate to another, Fowler chats with Feynman.

Near left, Fowler displays his "Nuclear Alchemist" sweatshirt, in Ohio State colors, given to him by friends.

"Or maybe your thinkin' 'bout a Nobel Prize?"

"The Nobel Prize? Nope, I'll explain,

All I really want is my little choo-choo train."

from "Willy at the Throttle" (sung to the tune of Casey Jones), composed for the occasion

This year, there is just no excuse for not voting. Your Sample Ballot arrived in the mail last week with a perforated self-addressed post card attached to apply for a ballot by mail. Those cards must reach the County Registrar by November 1 in order of receive a ballot prior to the election. This method allows you to vote quickly and painlessly in the comfort of you own dorm or laboratory. Of course, you may wish to personally walk into the voting booth on November 8 in the Circadian room on the PCC campus. The voting area will be well marked.

The candidates will be on campus November 1 at the brown bag lunch in Winnett Club Room 1. Come hear us discuss our educational viewpoints.

Sincerely,

Susanna Miele

Vote Miele

from page 2

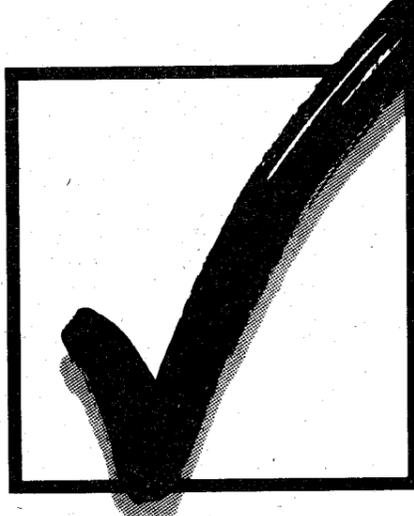
ty. It is a wonderful school that has offered a myriad of students (like myself) opportunities not to be found elsewhere—to senior high school students, to Caltech families, to foreign students, to college students wanting their first years near home, and to those seeking technical training. It's even open to those who want to learn just for its own sake!

But PCC is in trouble. Funds are drastically cut, teachers' morale is low, there are fewer classes and more students in most. it is time to try some new leadership: VOTE FOR SUE MIELE ON NOV. 8. This is the only vote on the ballot; turn-out will be low. Your vote counts!

Sincerely,

Manny Delbrück

A REMINDER...



Get To Know Northrop

We'll be on campus this Fall to interview individuals with a background in:

- Engineering
- Math
- Computer Science
- Physics

Check with the Placement Office for specific requirements.

We'd like to get to know you.

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Football Team Wins

from page 1

following a terrible punt by the visitors. Phil Scott completed a 15-yard pass to Brian Brunn, and the Beaver ground attack pushed it most of the rest of the way into the end zone, with Phil Scott taking it in from the three. Scott added the conversion, and when Jonathan Brown scored from the one in the second quarter, the Beaver lead became 13-0. After this touchdown, the Bengals mounted their only sustained drive of the game, a march which culminated in a six-yard touchdown run which narrowed the margin to 13-7. The Beaver offense put the game away in the second half, however, scoring the game's final touchdown on a five-yard pass from Phil Scott to tight

end player/coach Gene Tashima.

For the most part, the Beaver defense snuffed out the Bengals' offensive efforts. Caltech's defensive line neutralized the enemy blocking, enabling linebackers Tim Magee, Pete Rodriguez and Pat Harrison, and defensive backs Don Thomas and Vincent Riley to make the lion's share of the tackles. The Beaver pass defenders rarely had a chance to show their stuff as the Bengal quarterback's passes were usually too errant for either them or the intended receivers to reach.

The Beavers will attempt to raise their record to 4-1 when they face El Cajon tomorrow at 1:30 here at Tech.

Soccer

from page 1

scored his second goal of the game to break a 1-1 tie with 15 minutes left in the game. Evan Cromwell added a much needed insurance goal as Oxy later added a penalty shot for the final score. Steve Hawes played his best game to date in goal with several point blank saves. The back line of Ned Wingreen, John Sahr, Bob Mostert, and Terrence Barr led the way to victory with their outstanding defence. Shutting down the Oxy offence for most of the game.

The victories raised the conference record to 3-6, and with another victory, a 4th place finish in the league is possible.

Fencers Begin Season

by Chien-Wei Han

The Caltech fencing team started its season with a loss to Cal State Northridge on October 22.

The men's foil team consists of Scott Grossman, Andre Burgoyne, and Kurt Anderson. They had tough bouts and lost 6-3. The men's epee team were James Bell and Kenny Bell. They also lost, 8-1. The men's saber team were Lee Sunderlin, Chien-Wei Han, and Peter Konopka. They were

overwhelmed 9-0.

Contrary to the men's losing streak, the women's foil team won 10-6. The women fencers were Barbara Turpin, Phyllis Li, Karla Peterson, and Daniela Bonafede. Barbara and Phyllis each won three bouts and lost one; Karla and Daniela each won two bouts and lost two.

This Saturday the Caltech fencing team will meet Cal State Fullerton at Fullerton.

X-Country

from page 1

Pomona-Pitzer. Jennifer Hause took third overall in 18:06 (3000 meters) to lead the team. The other four Caltech runners were Clea Bures (12th), Diane Creveling (13), Jarita Holbrook

(tie, 16), and Marit Jentoft-Nilsen (tie, 16). Nagle of Claremont led the pack with a time of 16:19.

Both teams are now preparing for tomorrow's (October 29) SCIAC league finals at Redlands. Coach Leroy Neal expects Caltech to do well.

Weekly Sports Calendar

Day	Date	Time	Sport	Opponent	Location
Sat.	10-29	10:00 am	Soccer	Pomona-Pitzer	Pomona-Pitzer
Sat.	10-29	10:00 am	Water Polo	Occidental	Occidental
Sat.	10-29	11:00 am	Cross Country	SCIAC Finals	Redlands
Sat.	10-29	1:00 pm	Fencing	Cal State Fullerton	CS Fullerton
Sat.	10-29	1:30 pm	Football	Covina Demons	Caltech
Sat.	10-29	2:00 pm	Women's Volleyball	Pomona-Pitzer JV	Caltech
Tue.	11-1	6:00 pm	Women's Volleyball	Claremont-Mudd-Scripps	Claremont
Wed.	11-2	4:00 pm	Water Polo	Pomona-Pitzer	Caltech
Wed.	11-2	7:30 pm	Soccer	La Verne	La Verne
Fri.	11-4	7:00 pm	Women's Volleyball	L.I.F.E.	L.I.F.E.
Sat.	11-5	TBA	Cross Country	Pomona Invitational	Claremont Cty Cl.
Sat.	11-5	TBA	Water Polo	SCIAC Tournament	Whittier
Sat.	11-5	10:00 am	Soccer	Redlands	Redlands
Sat.	11-5	1:00 pm	Fencing	UCLA	Cal State L.B.
Sat.	11-5	1:30 pm	Football	Mexicali Spartans	Caltech
Sat.	11-5	2:00 pm	Women's Volleyball	Pacific Christian	Caltech

GSC Volleyball Scores

Results of Wed. Oct. 26

A LEAGUE

Up-Setters outset Six Hitters 15-4, 11-15, 5-3
 Jet Setters flew by Ruddock 11-15, 15-6, 11-6
 Tapir outwitted Brute Force 15-9, 13-13
 Kong's Killers pounded HP's 15-13, 15-4
 Fleming flipped Page 15-10, 15-13

B LEAGUE

Hydraulic Jumps bashed Besops 15-9, 13-15, 15-5
 Smashers smashed Jerry's Kids 15-9, 15-0
 Chow Dogs devoured Magnum Force 15-6, 15-5
 Scurves twisted Tire Irons 15-7, 15-4
 Face survived a Strange Bruise 15-12, 15-3
 Gangbusters busted Reynolds Numb-ers 8-15, 15-11, 15-4
 Overpaid Amateurs played with We're Mudd 15-3, 15-6

The Fantasticks

These are the last weeks to see the longest running musical in the history of the western world.

October 28 and 30 at 8:00 pm
 November 2, 3, 4, and 5 at 8:00 pm
 November 6 at 3:00 and 8:00 pm

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OWC Brown Bag

On Tuesday, November 1, the OWC will have a Noon Brown Bag in Clubroom 1. It will be a Candidate's Forum with Susanna Miele, the challenger and Roger Gertman, incumbent. They are running for the District 4 seat on the Pasadena City College Board of Trustees. Caltech is in District 4. They will both give a 10 minute presentation, then the floor will be open to questions and discussion about the future of PCC.

It is important for members of the Caltech community to be aware of events, especially those dealing with educational issues, in the surrounding community. Many students, faculty and staff take advantage of classes and programs that are offered at PCC. Everyone is urged to attend this program and decide for themselves who to vote for in the election on November 8.

Master's Tea

The MOSH is having a first-term tea on Thursday, November 3, from 2 to 4 pm. All undergraduates welcome.

announcements

FOCAL Dinner

Glenn L. Brudvig, director of information resources at Caltech, is guest speaker at a dinner meeting of the Friends of Caltech Libraries (FOCAL) tonight, October 28. Brudvig, who took over his new post in July this year, will speak on "Future Directions for the Caltech Libraries, or How to Stay Afloat in the Rising Flood of Information."

Brudvig came to the Institute from the University of Minnesota where he was director of the Bio-Medical Library and of the Institute of Technology Libraries. At Caltech he has a new position which was created to develop information technology transfer as well as to have responsibility for the Institute libraries.

The FOCAL dinner, which is open to the public, will begin with cocktails at 6 pm at the Athenaeum. For reservations, call Gloria Thomas, x6411.

Square Dance

Come join the fun at this term's Square Dance. This event, open to everyone, will be Saturday, October 29, from 8 to 11 pm in Dabney Lounge. The calling will be done by a professional caller and will start at the beginning level. Even if you've never square danced before, you'll have a great time. This event is sponsored by the CCF and the Caltech Y, and both admission and refreshments are free.

SWE

It means "Society of Women Engineers." Interested? Want to find out more about what SWE does? SWE presents an informal session and an opportunity to become a member, this Monday, October 31, from 3-4:30 pm in the Y Lounge, upstairs in Winnett. If you have any questions or can't make the meeting, contact Melissa Farrell at 449-9192.

H&SS Ad Hoc Study

The first meeting of an ad hoc committee to study Caltech's Humanities and Social Science curriculum for the upcoming Faculty/Student Conference will be held today at noon in the Y Lounge; all interested parties are welcome to attend. Probable major topics for discussion include diversity of curriculum (or lack thereof), the Freshman writing requirement, and Freshman humanities in general, although the discussion will be informal and new topics are welcome. Bring your lunch, your ideas and a friend. If you can't attend, you can contact Glen Crawford, x6182, or Paul Filmer, 793-7656, for more information.

Math Lecture

Irving Kaplansky of the U. of Chicago will deliver the 1983 Alaoglu Memorial Lecture in mathematics on Tuesday at 4:15 pm in 22 Gates.

Toymaker & Son

Next Wednesday, Nov. 2, noon on the Quad, the dramatic dance presentation "Toymaker & Son," based on an allegorical Christian message, will be showing. The performers, working with Youth With a Mission, are college students and young adults from Western Europe, Canada, Australia, New Zealand, and with United States who have toured through those areas and have been received well by a wide variety of audiences. This event is co-sponsored by the Caltech Y and the Caltech Christian Fellowship.

Lost

A red cap with a stuffed fabric rhinoceros head on the front was last seen during the Ruddock-Fleming interhouse softball game. The Ruddock pitcher wore the hat during the game. The hat is my personal property, and a part of my rhinoceros collection. I would appreciate it if anyone who finds it would return it to me at Ruddock House. Thank you.

—Rick Kremen

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