

Volume XCVI, Number 23

Pasadena, California

Friday, April 21, 1995

Nikon to Support Caltech SEDS Space *Endeavour*

from Nikon Inc.

Melville, N.Y., April 18, 1995 — For the first time, Nikon has joined the Students for the Exploration and Development of Space (SEDS) at the California Institute of Technology (Caltech), to participate in an important study of gamma-rays aboard the Space Shuttle *Endeavour* in July. Nikon will provide the students with an F4s camera, a 58mm f/1.2 lends, specially designed for space viewing applications, and an MF-24 Multi-Control Back. Nikon will also consult on the photography aspect and provide technical assistance to the students.

"We have chosen the F4s because it is a rugged camera that will be able to withstand the rigorous conditions in outer space while providing clear, bright, top-quality images," said Richard LoPinto, vice president of Nikon's Photo Marketing Division. "We are pleased to assist the students of Caltech in furthering man's knowledge of outer space on the *Endeavour* mission."

The project, Gamma-ray Astrophysics Mission, California Institute of Technology (GAMCIT) was designed by the students to detect gamma-ray bursts. Gamma-ray bursts are characterized by a rapid increase in the observed gamma-ray flux, followed by an exponential decline to the background levels of low earth orbit. These bursts represent one of the most energetic and violent phenomena observed in the universe.

While many experiments have studied gamma-ray bursts, their origin remains one of the great mysteries of modern physics. In order to search optical flashes associated with these bursts, an electronic system will trigger the F4s to collect images when a gamma-ray burst is detected. The discovery of even a single optical flash coincident with a gamma-ray burst might well provide the key to the cause of these phenomena.

Nikon equipment continues to fly on every manned space flight and has since Apollo 15 on July 26, 1971. Twice a year, Nikon representatives fly to Johnson Space Center in Houston to train astronauts in how to take pictures in space. Each training session begins with two to three hours of classroom instruction. Next, the Nikon pros and the astronauts board a full-sized shuttle simulator for several hours of hands-on equipment practice, followed by end-result evaluation.

Nikon also continues to supply photographic equipment to visiting news photographers attending launches. Since these news photographers must be four miles away from the launch site and the equipment, the Nikon technical representatives train and assist the photographers on the use of remote photography. Nikon pros also assist with the installation of remote cameras at special sites at each launch complex, at NASA's request.. (Nikon began this service with the Apollo 15 launch.)

Nikon Inc. is the U.S. distributor of world-renowned Nikon 35mm cameras, speedlights and accessories, Nikkor lenses, Nikonos underwater photographic systems, Nikon eyewear, Nikon sports and recreational optics, electronic imaging products, and biomedical, industrial, ophthalmic and surveying instruments.

Caltech Awards Outstanding Scholars

Gisela Rodriguez Sandoval is Awarded Mabel Beckman Prize

Gisela Rodriguez Sandoval has won the 1995 Mabel Beckman Prize. This award is dedicated to the memory of Mabel Beckman who supported Caltech as a friend and benefactor for over fifty years. The prize bearing Mrs. Beckman's name is awarded annually to a woman student upon completion of her junior or senior year and is made in recognition of demonstrated academic and personal excellence, contribution to the Institute community, and outstanding qualities of character and leadership.

Gisela, a senior in biology, has demonstrated qualities of outstanding leadership and service during her four years as an undergraduate at Caltech. She has been a very active dents at Caltech. Gisela will be honored with the Mabel Beckman Prize at commencement on June 16, 1995.

Stanley Grant III and Flora Ho Win Hinrichs Award

Stanley Grant and Flora Ho are the winners of the 1995 Hinrichs Memorial Award. Established by the Board of Trustees, this award is given in memory of Frederic W. Hinrichs, Jr. who served for more than 20 years as a dean and professor at the Institute. In remembrance of his honor, courage, and kindness, the award bearing his name is made annually to seniors who have made the greatest contribution to the student body during their undergraduate years at the Institute. The award also recognizes students of outstanding character, leadership, and responsibility. Stanley was selected for the exceptionally capable leadership and service he has provided during his years at Caltech. He has been both secretary and president of Ruddock House, as well as Junior Class President. In addition, he has served on several significant committees, including, most importantly, his role as Chairman of the Interhouse Committee. As IHC Chair, Stanley did a superb job of allowing others to fully express their views while guiding the group to well-considered goals. He has worked very hard to represent the

opinions of the student body. Stanley is a model for all student leaders and has enormous respect from his fellow students.

Flora was selected for her outstanding leadership and skills for the service she has provided to her fellow students during her years at Caltech. She has held numerous important offices and served on several important committees. Most notably, she has been the ASCIT Director for Academic Affairs for the past two years. Among other things, she was responsible for overseeing the project that put the undergraduate teaching reviews (CLUE) on-line on the World Wide Web. She coordinated the 1994 Student-Faculty Conference, which addressed campus concerns via Honor System, Improving Communications, Quality of Teaching, and Core Curriculum subcommittees. As Chair of the AS-CIT Educational Policies Committee, she drafted a proposal for freshman pass/fail policy to present to the Academic Policies Committee. Their dedication to service, their ability to lead a broad group with diverse viewpoints, their personal integrity and strong interpersonal skills make both Stanley and Flora valuable and influential members of the Caltech community. They will receive the Frederic Hinrichs, Jr. Memorial Award at commencement.

Don't Like Campus Life? Read this!

Do you have any complaints, suggestions, or ideas about improving campus life at Caltech? If so, contact the Student Affairs Advisory Committee which is designed to discuss various issues related to the quality of life at Caltech and execute the changes necessary to improve life at Tech. Some issues that have already been discussed; having the lawn mowed around student houses at 10:00 am instead of 8:00 am, extending library hours after 1:00 pm, abolishing the need to have advisors sign add cards, etc. Student life at Caltech could improve greatly; however, the committee needs your suggestions, no matter how trivial, for implementing any needed changes. Please send any suggestions to saffcom@ugcs.caltech.edu or speak directly with the students, faculty, and administrators Sally Asmundson, Kevin Austin, Jim Beck, Dann Eckstein, Steven Frautschi, Leah Foechtorle, Barbara Green, Richard Murray, Mike Pawson, Rees Price, Saurabh Saha, Kathleen Tozer, Kim West, and Jian Zhang.

Japanimation Across the Nation

Have you ever heard of anime, or perhaps Japanimation? Maybe you've heard it's really cool. Drop by this Friday and Saturday at 7pm to see what it is about. Friday:

My Neighbor Totoro; Patlabor(movie 1) Kyuuketsuki Miyu #1-2

Saturday:

Koko wa Greenwood 1-4 Laughing Target KO Century Beast Warriors 1-3

Meet the First Director of Technology Transfer

by Jessica Chang

Due to increasing interest among the Caltech community, an Office of Technology Transfer was recently created. The position of director of the office will be filled by Mr. Lawrence Gilbert. The Entrepreneur Club invites you to join us and welcome Mr. Gilbert on Thursday 4/27 at 4:30 pm in Baxter Lecture Hall. He will give an informative talk about patents titled "Intellectual Property as a Vehicle for Forming Start Ups," as well as share with the audience what his future plans are as the director of the Office of Technology Transfer. Refreshments will be served at the meeting.

patent attorney who was formerly the Director of Patent Licensing at MIT and Boston University. A founding member of the Society of University Patent Administrators (now acronymed AUTM), he has been a frequent lecturer on patent matters to the University community. His background also includes contribution of several articles to Les Nouvelles, the journal of the Licensing Executives Society. Mr. Gilbert has been engaged in university patent administration since 1966, and has been actively involved in creating over twenty university start-ups, such as Health Payment Review and Summit Technology, in the past 12 years.

and involved member of the Freshman Admissions Committee, the Academic Policies Committee, and the Core Curriculum Task Force. She has demonstrated her concern for the future of Caltech and its undergraduates by representing the undergraduate opinion while serving on these important committees and others.

She was involved in establishing the Women's Center at Caltech and assisted in the selection of its director. She also helped start a Big Sister/Little Sister program for the freshman women. Her efforts have helped strengthen support for women stu-

California Tech Meeting Place Changed!

The staff of *The California Tech* will meet in **SAC 33** (by the gaming room) tomorrow instead of in the Coffeehouse. Everyone is welcome to attend! Mr. Gilbert is an experienced



S Letter to the Editor S

My complaint about Chris Foley

It seems that before I launch into this letter, I should tell you that it's hard to fathom just how foulmouthed Chris Foley is. One of my objectives is to give you the following information (which Foley wants concealed from the public). He leads me to believe that he is lackluster. He can't discuss anything without talking about solipsism. This state of affairs demands the direct assault on those pathetic philosophies that seek to traduce and discredit everyone but uncontrollable recidivists. Foley represents a new breed of ugly deviants. He is living in a dream world. Cannibalism is the driving force behind his morals. Nevertheless, "complacent" is his middle name. I can barely contain myself from going into a laughing fit when I see one of these petulant slobs.

Above all, Foley is so sappy, I could barf. What will be the next object of attack from his camp? You can observe a definite bias in his practices relating to yellow-bellied simple-minded antagonists. He is not just revolting; he's illiterate, too. I undoubtedly do not intend this letter to be in any way misinterpreted as a personal attack on Foley. His ideals occasionally differ in terms of how cynical they are, but generally share one fundamental tendency: They foment callous forms of political tyranny. Why doesn't he try doing something constructive for once in his life? One could argue that it's a sad world where inconsiderate counter-productive scoundrels have the power to advocate treacherous ideas.

Foley is not known for interpreting facts rationally or objectively. It is ridiculous that I have to be faced by vermin whose insecure viewpoints are constantly treated with apathy. He always sounds like he's reading a prepared speech. Granted, I will let his record speak for itself. But you probably know exactly what I mean. I must protest Foley's use of belligerent losers to portray crass children as used-car salesmen. Lest I forget to mention this later, the cliches of Foley's practices are well-known to us all. I was, however, going to forget about the whole thing when it suddenly occurred to me that Foley's statements are closed-minded to the core. Foley's claims are pure tripe. For those of you who don't know, there is little doubt that Foley is deliberately manipulating the facts. In a nutshell, I don't see how Chris Foley can be so sententious.

Ken Walsh

Please send submissions for letters to the editor to The California Tech, Caltech 40-58, Pasadena, CA 91125, or by electronic mail to editors@tech.callech.edu. Deadline for submissions is Monday at 5pm on the week of publication. The editors reserve the right to edit or refuse to print any letter for any reason.

(Write`tor



ATTENTION:

To ensure that we have sufficient funds to meet your full need for this academic year, we have established a deadline to adjust your Caltech financial aid for 1994–95.

FINANCIAL AID RECIPIENTS

If you wish to:

- request a Federal Direct Stafford or PLUS loan
- request any other type of adjustment to your 1994–95 award

we strongly encourage you to request a revision by May 1 at 5:00 p.m. All requests should be made in writing and submitted to the Financial Aid Office (mail code 12-63) by this date.

Please contact the Financial Aid Office before May 1 if you have any questions.

Thank you for your cooperation.

Editorial

Walsh and Foley: A Duad of Dolts

Before I project myself into this diatribe, I have some preliminary remarks to make. It is a sad day indeed when once-respectable students resort to copious and extensive degrees of perjorative appelations. Chris Foley and Ken Walsh are a prime example of such scum. Not only are abundant amounts of negative remarks slung through the mud at directed targets, but strong evidence reveals that the name-bashing is not only spurious, but also foulsmelling as well. It is with great regret that I adopt when mechanized procedures can be used to generate dangerous text like those of Messrs. Foley and Walsh. The long and short of it is that the two primary co-targets take a jocular attitute toward the whole matter, and make a mockery of our publication by employing it as a forum for their levity.

I cannot fathom what motivations would bring persons that were once honorable to this sorry state. Both curs (I balk at labeling them examples of homo sapiens, them being neither men nor sapient) whine constantly without any regards to truth and morals. Excessively decorative language is utilized in order to mask capricious and plaintive comments. We here at The California Tech cannot condone such provocative behavior. That the text is generated unwarrantly without self-restriction does nothing to ameliorate us with regards to the entire affair. If any kernel of truth had ever existed in the original argument, it has been

long lost to antiquity along with the Staff of Moses. We shall no longer pussyfoot around these pusillanimous mockeries of literature.

Indeed, both suspects flaunt their words as if it contained high pizzazz and stylistic metaphorical speech. In truth, it is nothing but undying pleats and pleats of staccato grandiloquence. For example, who can tell the whys and wherefores of their rhetorical questions? Each one is equally senseless and precocious in its own way.

I have even less to say about their characters. Through this insane affrontation, I have less regard for them than a single iota of psoriasic malady. These pubescent excuses of puerility only serve to show the rusticity of the extreme malarkey they are attempting to foist upon our weary eyes. Allow me to indulge myself in some apostrophe. Ah, if only their modes of expression were more reticient, I would have eternal gratitude to the powers that be. The interplay between the two is a prime example of inexpediency, and their ineptitude with the handling of prevarication only serves to make them appear as if an immense set of thesauri. I am confident that our readers will tolerate these histrionic quarrels no longer.

In summary, I yearn for the return of terse, prosaic, and more champaign verse to our language and the stamping out and abolishment of extreme redundancy and doublespeak such as this.

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Wei-Hwa Huang

The Calij	fornia Tech					
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SUMMER WORK-STUDY **APPLICATIONS** NOW AVAILABLE

Information and applications for 1995 Summer Work-Study are available in the Financial Aid Office. If you are interested in Summer Work-Study, please submit the required application as soon as possible, but no later than June 1, 1995. Your entire aid application must financial be completed by June 1 to be considered. If awarded, the work-study funding will begin with the July 3rd payroll period.

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Caltech Cycling Rounds the Bend One Last Time

by Michael Kantner

On April 2, Caltech Velo hosted a bicycle race on campus. Approximately 60 students from across California competed against each other in a miss and out criterion. The race was held in the Lura parking lot, north of Beckman Institute. Each of the 6 races started with several laps containing primes, prizes awarded to the first person across the finish line, and ended with the miss and out. In the miss and out, the last person to cross the finish line was removed until only 3 people were left. The final 3 then sprinted for 1st, 2nd, and 3rd.

Jason Maron, in his first race of the year, was Caltech's entrant in the Men's D race. Being a poor sprinter, he was the first person removed during the miss and out. Cyrus Behroozi, in his second Men's C race of the year, placed 8th. He recently moved up from the D category to the C category, and is racing well. Michael Kantner placed 6th in the Men's B race in an uneventful race.

Caltech's women were even more successful. Keri Ryan and Jody White raced in the Women's A category. Keri, in her first race, placed 5th. Jody, who is currently ranked 16th in the state, place 2nd. Going into the final turn, Jody, Beverly Anderson (SDSU), and Regna Meenk (UC Riverside) were grouped together. Jody chose to sprint up the outside. Beverly, slightly ahead of Jody, chose a line that kept Jody boxed in against the curb. Jody was squeezed out, and settled for 2nd. Regna, having the entire inside lane to herself, nearly nipped Jody at the line, but finished 3rd. Jody also collected several primes during the race.

In the overall team standings, Caltech finished 7th for the day. Most racers had a good time, including Scott Yu (UC Davis), who said, "Overall it's been the best weekend that I've had for this year. I hope Caltech puts on the same race next year. I'll definitely do it and I'll try to convince more Davis riders to go down and do the race."

For more information on collegiate cycling, contact Michael Kantner at x4882 or *cycling@cco*. One day racing licenses are available, and there are races for all skill levels.

Final Cycling								
Results:								
School Day P	oints							
UC San Diego	239							
CP Pomona	175							
UC Riverside	83							
UC Irvine	81							
UCLA	75							
SDSU	69							
CALTECH	65							
CSU Fullerton	47							
CPSLO	28							
UCSB	22							
CSU Northridge	19							
UC Davis	7							
Claremont	4							

Caltech Men's Volleyball Finishes 13-7

by Richard Chin

The Caltech Men's Volleyball Club played its last three matches of the season over the last two weeks. Inconsistency, which had been a problem before the break, again reared its ugly head.

When Caltech visited Pasadena City College, the club brought a team that was plagued with injury and illness, forcing several starters off the floor and others to reach for the painkillers and antihistamines. Coupled with a lack of consistent practice resulting from spring break, the team succumbed quickly to a motivated PCC squad in a quick three sets.

Angry with its poor performance at PCC, the club then traveled to La Sierra University the following Tuesday, determined to redeem itself. The starters were present and healthy again, so the only worry was the lack of practice. The first game showed the rustiness of the Caltech squad as it gave up a large lead to the La Sierra team. However, the fluidity and cohesiveness reappeared as the players re-familiarized themselves with each others' quirks and abilities, and Caltech started to come back. Unfortunately, the lead that La Sierra built in the beginning was too great for Caltech to overcome, and La Sierra ended up taking the game, 15-12. The second

game showed Caltech's true mettle as the squad came out with all guns blazing. Andreas Masuhr and Brendan McKenney clicked with the passing, allowing Chad Edwards his pick of options: allow Mark Lonergan to hit over the block from the right, Stuart Demcak or Ken Wiberg to hit over the block in the middle, or Masuhr or McKenney to hit over and around the blocks from the power side. Strong serving from all members and formidable defense and blocking allowed Caltech to take the game quickly. La Sierra began to wake up to the fact that Caltech was a much stronger team that it had appeared in the first game, but it could not muster up the offensive weaponry or defensive scrambling necessary to keep up, and Caltech took the match in the next two games.

Caltech was then psyched up for its last match of the season against Cal Poly Pomona, which it had beaten earlier in a heart-stopping five-set match. However, Caltech again started poorly, giving up a big lead and not being able to recuperate in the first game, giving CPP an early advantage. CPP became a bit complacent in the second, though, and Caltech was able to firm up it entire game in the second and third, blowing away the CPP squad with such authority that the match seemed to be a foregone conclusion. Unfortunately, the same complacency struck the Caltech squad in the fourth, and after an arduous side–out battle, CPP came out victorious, 16-14. The last set was not much better for the Caltech squad as the excited CPP team prevailed in a 15-11 game.

As the indoor season ends and the team's thoughts turn to grass and beach venues, the Caltech Men's Volleyball club can say that it is pleased with its success this past year, as it more than recovered from personnel losses from the previous year's squad to be able to string together a 13-7 record. Though most members will still be around for the next year, the team would like to thank graduating senior, middle blocker, Daniel Chang, and postdoctoral fellow, setter, Dave Perkel for their outstanding efforts and contributions to the team, and we hope that they are as successful in their future endeavors. Furthermore, the team would like to express its thanks and appreciation to coach Aaron Kiely, who is taking a hiatus from coaching for the next year, for the sacrifice of time and energy he made in supporting the squad. Finally, most of all, the team would like to extend special thanks to its most devoted friends and fans-you know who you are-without whom the season would not have been possible.





The ASCIT MOVIE Showing Tonight! Baxter Lecture Hall 7:30 and 10:00 pm Only \$1.50 ASCIT/prefrosh \$2.00 all others

next week:



LAEMMLE THEATRES

ESQUIRE 2670 E. Colorado Blvd. (818) 793–6149

> Nick Nolte Greta Sacchi

Jefferson in Paris

Daily 5:00, 8:00 p.m. Sat-Sun Bargain Matinee 2:00 p.m. **COLORADO** 2588 E. Colorado Blvd. (818) 796–9704

Academy Award Winner Best Foreign Film



Daily 5:30, 8:30 p.m. Sat-Sun Bargain Matinee 2:30 p.m. Caltech Jazz Bands to appear at local jazz club, The Baked Potato. Reservations are recommended. General Admission \$8., Students \$4. For further information please call 818-564-1122.







by Topher Hunter

After much unfortunate delay, the ARC finally met last Sunday. Our main agenda item was to determine what major issues we would devote our time and energy towards. Among the issues that we will be facing this year:

. At the last Faculty Board meeting, Frosh were put on grades third term, with shadow grades second term. This new policy will take effect next year. The shadow grades will only appear on frosh pink slips, and will not be available to the Registrar's Office. Due to the strong support among the Faculty Board, and a split opinion among the students, the ARC will not be expending energy to contest this change.

 Also at the Faculty Board meeting, Dean Kiewet tabled his own "Dump the D" proposal due to lack of current support. The ARC is in agreement that we intend to fight this policy when it resurfaces.

• The ARC will try to get the Registrar's Office to change some of the course titles on our transcripts so that they better indicate the course material. The most important class on this list is Ma 1.

• We will be taking a survey in a few weeks on student-Registrar relations. We are interested in finding out what facets of our relations should be improved/changed/polished.

• The Caltech Course Catalog has several confusing and/or disjoint areas, and we would like to identify and improve these areas.

If you have any questions, comments, or ideas on the ARC, contact your house rep, one of the reps-at-large, or the chair or secretary. Here's a complete list of the ARC members:

Ken Walsh, chair Topher Hunter, secretary Eric Dickson, Blacker Prista Charuworn, Lloyd Kohl Gill, Ricketts Paul Vigil, Fleming Irene Wong, Page Dave Bacon, Ruddock Chris Walker, Dabney Jessica Chang, At-Large Jennifer Miller, At-Large



by Topher Hunter

The Prefrosh are coming! The Prefrosh are coming! For those two or three Prefrosh out there who might actually read this column, the Y News is a weekly notice of events and activities from the Caltech Y. The Y is an independent student service organization dedicated to the improvement of cultural and social life on campus. If you'd like to find out more about the Y, we're upstairs in Winnett Center, or you can find one of the members of the ExComm, the student body that plans, organizes, and runs many of the Y's events.

Today is Earth Day, and celebrations are going on from 11am-2pm on Winnett Quad. Drop by and enjoy fun and educational activities related to the 25th anniversary of Earth Day.

Remember, folks, the Y mountain biking trips are every Tuesday and Wednesday afternoon. Drop by the Y for details. Along the outdoor vein, Mickie's Hiking Trips are still happening. There's a hike tomorrow, and another one next Saturday.

If you're interested in helping out with International Day, call Chris our events.



95-96 ASCIT Club Budget

ANIME:	120
CALTECH CHRISTIAN FELLOWSHIP:	450
CLASES (CALTECH LATINO ASSOCIATION	
OF STUDENTS IN ENGINEERING AND SCIENCE	E): 300
CALTECH SPACE SOCIETY:	300
CALTECH Y:	900
ENTREPRENEUR:	300
FACEPLANT:	60
a price and parts given " log price that given the given " B Bream Baars Baars .	450
JAM ROOM:	750
KOREAN STUDENT ASSOCIATION	150
PREMED CLUB:	150
SEDS:	390
SELF DEFENSE:	120
SPECTRE:	150
STUDENT SHOP:	600
SWE (SOCIETY OF WOMEN IN ENGINEERING):	210
TANG SOO DOH:	150
VELO:	225
VSA (VIETNAMESE STUDENT ASSOCIATION):	150
WOMEN'S GLEE CLUB:	210
TOTAL:	\$6,135
BUDGETED FOR CLUBS:	\$7,000

To club representatives,

THE REMAINS:

If you plan to have a social event that is open to the whole campus, you are eligible to apply for money that is budgeted to the executive social committee. The BOD would decide whether the money should be granted or not.

\$865

Since some notable clubs did not hand in a request before the budget meeting, we have left some money (\$865) for these clubs. If you feel your club needs money, please contact the treasurer (kannas@ugcs) or the secretary (ascit@cco).

Club money will be dispensed in a form of a check and will be given term by term. You will have to contact the BOD (well, the treasurer) when you need your check. Please be ready with the following info: whom the check should be addressed to, the mailcode that it should be mailed to, and the contact person. Although it might not be strictly enforced, requests for checks for a certain term should come before drop day of that term.

We encourage clubs to advertise their social events in the Tech! We are inclined to be generous to clubs that are notable for having "open" events where many ASCIT members can participate.







Changes in weight or appetite

Changes in sleeping pattern

Feeling guilty, hopeless or worthless

Inability to concentrate, remember things or make decisions

□ Fatigue or loss of energy

- C Restlessness or decreased activity
- Complaints of physical aches and pains for which no medical explanation can be found
 - Thoughts of death or suicide

If this sounds like you, don't ignore it. Because your doctor can help.

If the symptoms on this list sound familiar, tell a doctor. Because if you have several of these symptoms for two weeks or more, you could have clinical depression. It's a medical illness that can be effectively treated in four out of five people who seek help. For a free booklet about clinical depression, call us at 1-800-228-1114.

> National Mental Health Association

1-800-228-1114

Getting Money for College Just Got Simpler... and More Affordable, Too.

Introducing the New / Individual Education Account

You know the problems with college loans. They're a hassle to get. And you worry about how you're going to pay them back.

Well, there's something new that can help. It's the Individual Education Account, recently created by the President and the Congress. It's great for undergraduates and graduates, too. Here's how it works:

- *Borrowing for college is simpler*. You can get your loan directly through your college. No more confusion about where to go for a loan. No more red tape.
- *Loans are more affordable.* The new direct loan program lowers fees and interest rates for all types of college loans.
- You pay back as you can. You can tailor your repayment plan to match your ability to pay. That means you can start a business, do community service, or take other jobs you want without being burdened with a big, fixed debt early in your career.
- *Refinancing is available.* If you have more than one loan, an IEA can help you consolidate them and refinance in a way that makes more sense.

Sound good?

Then call your financial aid officer or 1-800-4FEDAID to get all the facts.



THE NEW INDIVIDUAL EDUCATION ACCOUNT The better way to finance a college education.

William D. Ford Federal Direct Loan Program U.S. Department of Education



Crossword

edited by Wei-Hwa Huang

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- Across
- Caesarian section? 1. Estate
- 5.
- 10. Francis "Pip" Pumphandle, e.g.
- 14. Misplace 15. Make happy
- 16. Opera opus
- 17. Mine entrance
- 18. Straight as a rule

composer

36. "Toy" car?

37. Fill up

35. Io's volcanic level

- 19. Knocks
- 20. It's now in the 30s
- 22. Leslie Ann Warren in Clue
- 24. Line up
- 25. Shade 26. Carrier
- 29. Traditional Caltech visitors 34. "Pomp and Circumstance"
 - 61. Rent out 62. Lips
 - 63. Pressure type
 - 64. Pressured

38. Cramps

42 Luster

47. Clique

56. Rove

39. Funny fall

40. Not my stuff

45. Importuned

52. Camp light

60. Church recess

41. James Pierce feature

46. Black Plague vector

48. Took out to dinner

57. Pig in "U. S. Acres"

59. Boss in "Final Fight"

43. Traditional Caltech celebrations

- 65. Mark on a manuscript

- Down
- 1. _ in the face Fuss
- 2.
- Take it or leave it 3.
- 4. Madison Avernue goal 5. Adobe and Aldus, e.g.
- 6. Foreigner
- 7. Harass hoarsely? Inventor of the elevator 8.
- 9. Karpov's game?
- 10. Stopper
- 11. Grade B toothbrush?
- 12. Mellow
- 13. Data ____: pinball company
- 21. Declare
- 23. Jonathan of Liars
- 26. Down there
- 27. Run away
- 28. 32-down, wide-mouthed
- 29. Forces
- 30. Rita's partner
- 31. "'ip, 'ip, ____!"
 32. What a 28-down person does
- 33. Detested
- 35. Library or credit
- 38. Five corpuscles 39. Peanutman
- 41. Defeat
- 42. Momma's mom
- 44. Hoffman or Streep
- 45. Smoothed
- 47. Shut
- 48. Pitfall
- 49. End of one's ____, so to speak
- 50. Sidle
- 51. Scum of society
- 53. What Wei-Hwa Huang does
- 54. Hoarfrost
- 55. Bird home
- 58. Droop

loneliness is usual but not habitual. i am jealous of those who go to work and school each day. the jerk left without saying a word. everything is noise. i need a friend, i have no friends. i lie in bed mulling over past love affairs. what is she doing right now? will the agony ever end?

Freative Forner

Fever Poem

no one will talk to me cuz they don't want to get sick.

telegram sam. weenie vision and the california blues.

my world is delirium and confusion, hot and cold.

i always need more water but i never want it.

by Mark Nelson

Kreative Korner Policy

Guidelines for Submissions

Submissions are generally creative works, such as narrative, fiction, drama, poetry, artwork, or photographs Essayists are encouraged to submit to The California Tech. Most cartoons should probably belong in the Inside World.

- All submissions must be in by the Tuesday preceding the issue in which the submission is to appear. Submissions may not contain libelous material without consent of those being libeled. It is the responsibility
- of the author(s) to check on this fact. Suspicious submissions will not be printed.
 Submissions may not contain vulgarities. The editor has judgement on what constitutes a vulgarity.
 Submissions must be turned in by e-mail, Macintosh disk, or 3.5" high-density IBM compatible disk
- All submissions will be submitted to the Totem after publication unless explicit instruction is given by the Au submissions will be submitted to the *Totem* after publication unless expirit instruction is given by in r(s) to the editors to the contrary. The author must be part of the Caltech/JPL community. Certain waivers for alumni, friends of the commu
- nity, etc. may be made at the editor's discretion. 7. The editor reserves the right to edit, shorten, disallow any submission, or take exceptions to these rules.

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Goddamn CCO Reps: Social Commentary

by J. Random HercFrosh III and Lauren

Today's Target: Frosh Grades

In the event that any of our dear Pre-frosh readers haven't yet heard the glorious news, we will now retell it. You ('da pre-frosh) are going to be graded third term next year! The reason that this is glorious news is simple: its happening to you, not us. Anyway, just to cover our rears, we would like to officially say that the following article is not meant to encourage frosh to take their own lives (or anyone else's for that matter). In fact, any frosh who attempts to do so as a result of reading this will be branded with a giant "S" (for "Stupid") on his forehead. That said, let us move on...

All we can say is, "Thank goodness!" Finally, the Caltech administration has taken steps to reclaim our title as the school with the highest per capita suicide rate. In keeping with the aims of this undertaking we would like to encourage the distribution of Millikan Library roof keys to the entering freshmen. We feel this is a more important resource than those silly South masters-I mean how can watching TV in the SAC compare to hurtling over 100 feet to a concrete walkway and your demise? If the administration is concerned about the mess, they could instead supply entering freshmen with vouchers for an unlimited supply of Coffeehouse chili-cheese fries so that they may gorge themselves to death (please note, this suggestion was submitted by Mitzi, our correspondent in Jerusalem, Israel). Other alternative means of suicide for frosh include erecting a $1N^2$ pool in the Ath courtyard and allowing frosh to dive in-judged for style, hang-time, and splash radius. Submitted by those wacky frosh: constructing a guillotine at the expense of the Shaft. And finally, death by cat (please note, this suggestion was submitted by Ero Jes), we believe he was volunteering the services of those great scientists, Bohr, Oppenheimer, Feynman, and Rat.

sources, and the creativity to invent new and exciting ways to die. Remember, suicide *is* a spectator sport!

And now, in the spirit of past articles...... When we were frosh, we got to flick third term. When we were frosh, we got to flick third term. When we were frosh, we got to flick third term. When we were frosh we got to flick third term. When we were frosh, we got to flick third term. When we were frosh, we got to flick third term. When we were frosh, we got to flick third term. When we were frosh, we got to flick third term. When we were frosh, we got to flick third term. When we were frosh, we got to flick third term. When we were frosh, we got to flick third term. When we were frosh, we got to flick third term. When we were frosh we got to flick third term. When we were frosh, we got to flick third term. When we were frosh, we got to flick third term. When we were frosh, we got to flick third term. When we were frosh, we got to duck third term. When we were frosh, we got to flick third term.....





FoxTrot



FoxTrot



by Bill Amend

by Bill Amend

by Bill Amend



by Bill Amend

FOUL BALL, FOX

But we must underscore the importance of admitting only those frosh who have the drive, the re-



April 21, 1995

How Would Loss of the In-School Interest Exemption Affect Students?

The FY 1996 budget resolution is in committee and the in-school interest exemption is in jeopardy of nonexistence. The cut will save a projected value of \$12.4 billion over five years.

If the in-school interest exemption for student loans is eliminated, students' debt burden will increase significantly. The figure shows the effect on a student who borrows the maximum allowable amount. *Source:* Data from the American Council on Education. Analysis by NIICU.



Caltech Elects Trustees on Marriage, Not Merit

Opinion

by Zackary Berger

You are eligible for election to Caltech's Board of Trustees (the Trustees, prefrosh, comprise 'Tech's highest governing body) if you are rich, well-connected, or smart. A quick dip into the Catalog's back pages, and some free association (i.e., university presidents and Nobel laureates are smart, CEOs are well-connected, and "private investors" are just rich), turns up these estimates: Twenty-five of the Trustees are w.-c., four are smart, and four distinguished by their wealth. The figures are only approximate, and the categories overlap, but you get the idea: an active brain is praiseworthy and a full billfold deserving of admiration, but a Rolodex stuffed with phone numbers of the powerful elicits something close to awe.

We can now take up the first paragraph of a recent Public Relations news release: "[Caltech] is pleased to announce that Gayle Wilson, wife of California Governor Pete Wilson, has been elected to membership on [the] Board of Trustees."

The average Techer is curious, and skims through the next six paragraphs for further details about Gayle's life. She's a career volunteer (good) with an interest in children's education (even better) and scientific literacy (excellent). She won the Westinghouse in high school, and followed it up with a bachelor's in biology from Stanford. So it's been a productive few decades for Gayle, and the Wilsons have much to be proud of. The reader, though, wonders: if I were a Westinghouse winner (it's not impossible to find one on this campus), and devoted myself to some years of volunteer work in science education, would I be eligible for election to the Board of Trustees?

No. Listen to the press release's first paragraph, which according to journalism's tenets comprises the most important information—its core ("...wife of...Pete Wilson") tells us all that Public Relations, and by extension the Institute, thinks we need to know about Gayle. Gayle is Pete's wife, no matter what else she has done. When the Trustees think of Gayle, Pete immediately pops into their head unbidden; and as a strong candidate for the Presidency, Governor Wilson must take up a lot of space in the brain.

What have we learned? If you want to become a member of the Board of Trustees, and you are of average accomplishment, the fastest route to election is marriage—preferably to someone powerful, who bids fair to become even more powerful. That way, when the Trustees think of you, they can't help but think of your spouse; it's as if both of you come up for a vote at the same time.

When you see Gayle Wilson, that is, be polite; you might be talking to a future First Lady.



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HALF-DOGBERT.



Since I gave a preview for this last time, I won't use up too much space telling you how great this new film from Czech animator Jan Svankmajer is. It only played for one week at the Nuart, but if it shows up on the midnight revival circuit or on video, I strongly encourage you to see it. The film combines many previous versions of the Faust legend with Svankmajer's

own disturbing vision and is not solely animation, but a mixture of marionette work, live action, and animation. Svankmajer's work never fails to amaze and really touches something deep in our subconscious.

Tank Girl

This new movie based on the Dark Horse comic book of the same name is a fun, cartoony ride about a postapocalyptic young woman (Lori Petty, from *Point Break*) fighting against the evil Department of Water and Power (led by *A Clockwork Orange's* Malcolm McDowell). Tank Girl has chutzpah to spare as she tears up the desert in her big tank with its big gun, and makes for a great hero. A lot of women have found this movie to be very empowering, and it's easy to see why; director Rachel Talalay has truly made an action movie by, for, and about women, unlike efforts like *Aliens* or *T2*, good in their own right, but which basically just cast women in men's roles. As far as I'm concerned, the action scenes weren't very original or thrilling, and the movie as a whole is a bit uneven, but it's nevertheless an enjoyable and important film.



April 21, 1995 ASCIT Minutes 4/19/95

A pointless waste of precious Tech space. The ASCIT minutes. 4/19/95. Shhhhhhh. Present: The BOD - Ken and Tom + Wei-Hwa, Laura Verhoff, Albert T. Lee, Johanna, Terry, Dov, Darth.

Prelude: A young man walks down a long, narrow hallway. The stillness of the air is cut by a rousing cry as the man enters the cramped alcove known as SAC 64. Dave is late, crawls into a chair, and screams "Party!" The cry having gone unheeded, the Meeting of the Bored, misspelled only for effect and because I'm tired, begins at 4:10 PM. Johanna asks for money for the Page Social Team for this term and last term. ASCIT has no idea what the funding for interhouse events will be for this term, but Jon and Kanna give Johanna the check for last term. Johanna takes the check with an eager glare in her eyes, and leaves. SAC 63.

Albert T. Lee, president of the Korean Students Association, complains that ASCIT docked their budget by 1/3. Albert asks for an increase in club funding by \$100. Jon says that advertising club events and making them open to the Caltech community are both very good things for clubs to do (hint). Dave did a calculation of each club's budget vs. the number of people in the club, and thus determined exactly how much each club is getting per member. Other members of ASCIT possibly looked at the amount ASCIT gave to the clubs last year, and still other members of ASCIT might have beaten dead fish against their heads and counted numbers of spots seen to determine the amount of money to give clubs. However, ASCIT is pleased to announce that they didn't go overbudget this year. Hip-hiphooray. I guess the dead fish worked. Albert is told that each BOD does budgeting for clubs differently; thus, no club can truly be sure of how much money they receive in a given term. If the students were to elect a bunch of Satan worshippers to the BOD, I'm sure the CCF wouldn't get nearly as much money as they asked for. Plus, whoever they sent to the budget meeting might never return. Or might return in pieces. Laura Verhoff tells Al that ASCIT cut her budget in half (by \$2000), so he shouldn't complain. Laura also mentions that any club wanting funding for a social event open to campus can always ask the Social Director for funds (but our social director is Greg Steiert, Mr. Frugality, and you pesky clubs better have a good excuse why you might want to entertain the student body). Al Lee leaves. SAC 62. The election fairy magically appears, covers all of the voting boxes and ballots in dillweed, and magically transports them back to Nabroozi, where they must have been before the election. Special thanks to Carrie Griffin, the new election chair, for conducting a wonderful election. Carrie will next be conducting Mahler's 6th, followed by another election. A complete program of the works conducted by Carrie this term will be available at the end of the year, but where, I'm not going to tell you. Congratulations to Grace Yang, for winning a highly contested race against "no" for ASCIT Ath Man. Laura Verhoff wants to know exactly where the BOD wants her to make cuts in the Ath Budget. Apparently, it was the understanding of the BOD

that the Ath Man could use her leftover money from last year. The BOD agrees to talk with (translation - we'll email you, maybe see you a few times while going to classes, and then most likely all assault you in the DRL office with small arms fire) Laura and Grace and Darth and someone from the Ath department regarding Ath

funding. Laura leaves. SAC 61. Special Question: What does "Ath" the prot who signed it. stand for? they have the nerve to ask you if you know a PROF sign a sheet of paper. And then BOTTLE of ethyl alcohol until you have stockroom to give you a SINGLE Answer: the unwillingness of the Bio Laurent and Steven Skovran enter. The room suddenly becomes much cooler. Laurent and Steve give AS-CIT the Little t budget for last year. No major lawsuits are included in the budget. Gavin enters. SAC 64 once more. Apparently, the Little t spent way too much money last year. However, the Little t also made way too much money last year. ASCIT therefore owes the Little t less that was budgeted by last year's BOD. Motion to pass the Little t budget passes 5-0-1. Wrangler and Bugle Boy abstain. Gavin wants the W-2 forms he gave to Laurent and Steve about 9 months ago. Laurent and Steve smile and leave. SAC 62.

Kanna asks, "Can't we just pay Wart?" We agree to give Wart \$50. The owls are not what they seem.

Greg needs manpower. Before I go on, let me say there's this stupid video game in the game room in the SAC, and that every time I have to type these stupid minutes, I'm forced to listen to this awful theme music. Death to video game junkies. Thank you. The manpower will be distilled from the ASCIT social team. Chairs will be moved asunder, and the world will alight with the cries of the prefrosh. We decide upon food for the prefrosh party. Greg says, "Know the EE social hour? Multiply that by 5 or 6." I can't wait. Why am I shivering?

The Ghost of Joan Marie Gimble wafts throughout SAC 64, and recites its solemn chant. Noooooo Sexxxxxxxxx withhhh the Preeeeeeeee If If IfrRRRrrwo osssshhhhhhhhhhhhhhhhhhhhhhhh

DISCUSSION ON THE Inside World!!!!!!! Wei-Hwa and the Editors (their next gig is at SAC 33 on Friday at 12:15) refuse to print the Inside World until it becomes recognized by ASCIT to *exist* as an entity. James Honaker goes to the whiteboard, writes 3x2=6, stares at it, and then quickly erases it. The idea is to create a separate editor for the IW and let them be legally responsible for the IW. We discuss if this editor would get paid, how we would find one, and other things. The editors give the BOD the threat of either recognizing the IW as a separate publication or seeing it lost. IW talks are tabled - The Tech Business Manager Appointee is here! Francisco Gutierrez walks into SAC 6.. I give up, and James Honaker officially withdraws from the race for Business Manager. The Secretary immediately excuses himself to go clean his leg of James' signature. We interveiw Francisco. He's taking 72 units. What the LOOK. If somebody can take 72 UNITS in ONE term, they can do anything. Why we needed to interview this guy is so far beyond me, it's out the door. It's

sitting in ITS little room ALL DAY, taking about 80 UNITS, never interacting with PEOPLE, and then every so often it COMES ON CAM-PUS and asks people how THINGS HAVE BEEN when in reality their house might have BURNED down or their best friend might have been EATEN by oh never mind while THIS MAN, this BEAUTIFUL man, FRANCISCO GUTIERREZ, let me say that again, FRANCISCO "THIS MAN" GUTIERREZ, I wish I could say that in color, is actually signing up for things, taking an active role in this simply fierce environment (no, I have no idea what I'm talking about by this point but who cares) (you do) (well too bad) (DON'T YOU LOVE PAREN-THESES), being an all around GREAT guy, and everything IN ALL CAPITAL LETTERS. I want people to throw him a parade JUST FOR SIGNING UP. Dave calls the other appointee, Tae Kim, and Dov keeps coming and going from SAC 64. The interview decision will be held next week. Gavin comes in, asks one question, and Francisco leaves with Dov. The law of conservation of Gavins requires there to only have been one Gavin, but I never wrote down that he left, so I guess there are two.

Inside World Discussion resumes. (SnazzY) James wants us to vote on ideas on the nature of the inside world. (look - i'm e.e. cummings) The BOD is given a straw poll. Does the IW exist as an entity? Straw poll passes, 5-0-1. Dave moves that the IW should exist as an entity, and the motion fails, 3-0-3. James moves that the IW SHOULD exist as an entity and an important publication that more undergrads would read IF IT WERE to exist, and that it has a certain amount of coolness that doesn't exist anywhere else SHOULD it exist at all. James' motion passes 4-0-2. The straw poll is taken that the IW, if it WERE to exist, should have a separate editor, and the straw poll passes 5-0-1. James stands up and moves that there is an editor of the IW, and that the editor should have the title, "Editor of the Inside World who is cooler than all other editors," by virtue of the entity of the publication of the Inside World, SHOULD it actually exist. Motion passes 4-0-2. The thing is tabled. Game Over.

Everyone leaves. ASCIT. Your tax dollars aren't pay-



The California Tech

Typographical Errors

by Wei-Hwa Huang

Typographical errors are everywhere. With the advent of new technology, we have spell-checkers and grammar checkers that help us to correct this. Unfortunately, sometimes a misspelled word may totally throw off the meaning of the sentence, yet fit the grammatical structure very nicely. A prime example happened in this publication two issues ago, when our very own spell-checker substituted the word "obviousness" for "obliviousness," throwing off the entire meaning of the sentence in a somewhat humorous way.

Below are some examples that actually found their way into print.

"My dear fiends: How are you doing? I am having a very nice time here...'

"For that you should go the Pubic Information office located in the second floor."

"If you are considering having a baby, then you may want to think about beast-feeding."

"Please come to ancient Japanese training hall and learn about marital arts.'

"The landlord insisted that no female should be allowed in the bra without a man.'

"Miss Patricia Middleton, a qualified vice instructor, sang Ode to Joy on Sunday night.

"Mrs. Jane Smith, 79, of Pasadena, Ca., dined this week at her home. Service and cremation will be held next Thursday at 2:00 p.m."

"Take your old leftover bones and simmer them for several hours in a large pot with water and a few diced vegetables. It will make very delicious soap.

"The bride was gowned in white silk and lace, while the color scheme of the bridesmaids' gowns and flowers was punk."

"This reporter plans to follow the policemen to the scene of the bottle." "Ms. Thompson has set up a campaign against incestuous relationships

at the house where she loves with her parents." "Before they left the White House, Mrs. Reagan presented each of them

with a small engraving of the Execution Mansion to keep as a memento."

"We apologize for the error in last week's issue in which we state that Mr. Arnold Smith was a defective in the police force. This was a typographical error. We meant, of course, that Mr. Smith is a detective in the police farce, and are sorry for any embarrassment caused."

What's your funniest typographical error? Send it to gp@tech by Tuesday, April 25. Entries may be actual or fictional. The funniest one in the opinion of the judge will win a nice check for \$10. Don't forget to send your oncampus mailing address.

Last Week's Answers **Cubism for Fun**

1. Terry's answer was to put the 6 triangles into a hexagon, as shown above. See, now it looks like a cube, viewed along a body diagonal. Other interesting answers were to fold the triangles into 6 squares, then making a cube; or making an octahedron, which has cubical symmetry!

2. A trick question. You don't need to glue any pieces to cut the cube into 7 congruent parts; just cut it into 7 equal square slices!

3. You can handle each dimension with 2 cuts allowing stacking, so you can do it all in 6 cuts. To prove that 6 cuts is minimal, look at one of the cubes in the center. It has six faces, and each of those requires а separate cut.

4. The angle is 120 degrees. No vector algebra was necessary; if you extended the pattern you'd see that A, B, and C were just the vertices of a regular hexagon.



ing us, and it shows.

Submitted instead of going to a Science, Ethics, and Society Class: Dave "I bought two copies of the Ph 7 notes by accident" Relyea: ASCIT Secretary

DISCLAIMER - I take no responsibility for how boring anyone was during this meeting. I also take full reponsibility for everything I have said. I lied, and I did it for the AS-CIT dream. A dream of hope for our kids. Yes, I shredded government documents. I lied to the government committee. Jon McDunn was OUT OF THE LOOP. (Ken Walsh, however, was with the Loops) I have told untruths about my fellow members

SUE ME. (Odd. Little t people come one of them was gray. to ONE meeting, and I'm mention-

If you can read this then you have very good ejesight

5,6. The basically unique solution for placing 16 knights on a chessboard so that each knight attacks four others is to place them as the vertices of a hypercube, as in the diagram.



of ASCIT, and about myself. This is 9. 1 = green; 2 = pink; 3 = tan; 4 = red; 5 = blue; 6 = white; 7 = gray; 8 = one of them. But SO WHAT. So brown; 9 = orange; 10 = black; 11 = violet; 12 = yellow. Yes, we did say that

ing lawsuits.... Hmmmmmm......) Congratulations to Peter Weichman, who answered the most questions correctly out of the list of nine. Closely behind were the other two participants, Glen Hermannsfeldt and Joseph Christopherson.

Deadlines for Submission

Comments? Send mail to editors@tech.

Letters to the Editor — 8 P.M. Monday Events and Notices — 8 P.M. Tuesday Unsolicited Articles — 8 P.M. Tuesday Regular/Semi-Regular Columns — 11 P.M. Tuesday Articles, News Submissions — 11 P.M. Tuesday Art/Photo Submissions — 8 P.M. Wednesday



WOMEN STUDENTS: We are a happily

married couple, physician and writer, who are confronted with the unexpected and painful reality of infertility. We are looking for a young woman (21-34, Caucasian) who might consider egg donation on our behalf. As well as the altruism involved, there is ample remuneration. Anonymity and privacy are essential. If you would like further information, please contact Ana, the nurse practitioner at our doctor's office, who is helping us with this process. When calling, please state you are responding to a "Personal Search." This will advise the office of your association with us. Please call (818) 440-9161 between 8 a.m.-5 p.m., Monday-Friday

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Notices

most The Caltech Y, the Caltech Environmental Task Force, and the Graduate Student Council present the 25th anniversary celebration of Earth Day 1995 Today, April 21st, between the hours of 11:30 and 2:00 p.m. in the Winnett Quad. The Caltech Earth Day will include environmental information tables, T-shirt coloring, chalk on the walk, electric cars, food, an Earth Day card, tree planting, and much more.

mon The signups for the IHC appointed faculty student committees and for IHC secretary and Food Chair are currently on the wall in Winnett. The deadline for sign-ups for IHC Secretary is Monday, April 17th at 9 p.m whereas the deadline for all other signups are yet to be announced. Interviews for IHC secretary will begin on April 25th.

num The Engineering AS Division announces a new course: E2, "Engineering And Entrepreneurship" with instructor Dr. Simon Ramo, co-founder of TRW. The course intends to cover such subjects as the nature of practical engineering; entrepreneurship; financing a company; manufacturing; the role of government; the international economy; environment, safety, and liability; and large versus small companies. Discussion will center around a number of current issues, such as electric vehicles, supersonic transports, the information superhighway, interactive television, genetic engineering, andothers. The course will be given First Term, 1995/1996, on Tuesdays at 1 p.m. at the Ramo Auditorium.

Guitar classes are now being offered for the Spring term for all levels of guitar players. Held in the Student Activities Center Room 1 each Tuesday, Darryl Denning will offer beginning lessons from 4:30-5:30 p.m., intermediate from 3:00-4:00 p.m., and advance lessons from 5:30-6:30 p.m. For more information, please call (213) 465-0881.

Sharyn Slavin, Assistant Vice President for Student Affairs, and Stan Borodinsky, Student Affairs Administrator, invite you to stop by the Coffeehouse on Friday afternoons from 2 to 4 p.m. to talk with them. All students are welcome, and free drinks will be available. Please drop by and get to know Sharyn and Stan. They will be happy to answer questions or provide assistance

The Caltech Muslim Student Association will hold Muslim Friday Prayers weekly in the Y-lounge at 12:15 p.m.

"Take a Break and Spend Some Time with Friends." The office of the International Student Programs would like to invite you to our Open House for coffee, tea and conversation. Every Wednesday from 4:00 p.m. - 5:30 p.m. at the office of International Student Programs, Olive Walk. Open to the entire Caltech community.

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Announcements

FROSH denotes a new announcement.

rium, prices will range from \$19.00 to \$25.00 with student rush tickets going on sale half an hour before the preformance begins at \$8.00 depending on availability.

Members of the Los Angeles Chamber Orchestra will be preforming in the Dabney Lounge on Sunday, May 7th, at 3:30 p.m. in a Paco A. Lagerstrom Chamber Music Concert. This free connert will include works by Mozart, Beethoven, Dohnanyi, and Handel, as well as the premiere of Tania French's "Ancient Echoes.

Hom The 16th annual "Bandorama" featuring the Caltech Jazz Bands and The Caltech Concert Band will be held on Saturday, May 13th, at 8:00 p.m. in the Beckman Auditorium. Both bands will be directed by William Bing in this free concert.

Robin Williams narrates the Armchair Adventure "Amedeus-A Traveler in Italy" today, April 21st at 8 p.m. at the Beckman Auditorium. Admission prices range from \$8.00 to \$6.50 through the Caltech ticket Office (x4652), with a \$2.00 discount to Caltech students and faculty, and half price TECHTIX on Friday, April 22nd.

The New Vic Theatre of London presents a satirical version of The Hunchback of Notre Dame on Saturday, April 22nd at 8 p.m. in the Beckman Auditorium. Ticket prices will range from \$25.00 to \$31.00, with a \$2.00 Caltech discount and half price tickets on April 22nd.

The Caltech Jazz Band will once again perform at the world famous jazz club, the Baked Potato in Old town Pasadena on Sunday, April 23rd at 8:30 p.m. The last two years the band played to a sold out audience, so reservations are recommended. General admission is \$8, students only \$4.

Robert Haag, pianist, will perform a Paco A. Lagerstrom Chamber Music Concert featuring Beethoven's Sonatas Op. 109, 110, and 111 on Sunday, April 23rd at 3:30 p.m. in the Dabney Lounge. Admission is free.

The Capitol Steps will perform on Friday and Saturday, April 28th and 29th, at 8 p.m. in the Beckman Auditorium. A group of current and former Congressional staffers who first began performing their musical satire as entertainment for a Capitol Hill office party, The Capitol Steps have recorded a number of albums including "Workin' Nine to Ten," "Sheik, Rattle and Roll" and "The Joy of Sax." Ticket will be priced from \$25.00 to \$31.00, with \$8.00 tickets being sold one-half hour before the performance subject to availability.

The Coleman Chamber Ensemble Competition Winners Concert will be held in Sunday, April 30th at 3:30 p.m. in the Ramo Auditorium. Winners from four categories of the competition will perform. Fifty free tickets to this concert will be available to Caltech Students with I.D. from the Caltech ticket Office (x4652). Tickets are regularly priced at \$10.00 a piece.

The Friends of Caltech Libraries (FOCAL) Book Drive will be conducted throughout the month of April. Any and all kinds of books, records, and tapes are being sought in preparation for the Friends' Jumbo "Pre-Owned" Book Sale (an annual fundraiser sponsored by the group), which will be held this year on Friday, May 5th. Please bring your donations to Millikan Library (first floor) during weekday business hours.

From the

Counseling Center

HOST Begining on Tuesday, May 9th, the Counseling

Center will be holding a Management Worshop on

Relaxation and Stress. Dr. Jon Pederson and Tay

Sandoz, M.A., will teach interested students a vari-

ety of relaxation techniques aimed at the manage-

ment of daily stress. The workshop, which will be

held over four consecutive Tuesdays between the

hours of 12:30 and 1:30 p.m., will include some lec-

ture material but will primarily consist of individual

exercises in relaxation techniques including muscle

tensing, imagery, passive and active concentration,

and an introduction to non-mystical meditation. The

focus of the workshop will be on practical methods

for everyday use, which can be learned quickly with

daily practice. All interested in attending are asked

to contact the Couseling Center at extension 8331.

The Gay, Lesbian and Bisexual Support Group

meets the first and third Tuesdays of each month at

7:30 p.m. in the Health Center Lounge. This confi-

dential meeting is open to all Caltech community

members looking for a supportive context in which

to address questions and concerns about sexual ori-

entation - including coming out, being out, self-

discovery, coping with families.... We begin with a

focus topic but move to whatever is feeling most rel-

evant to the group that night. Refreshments are

Coming Events

muJohn L. Heilbron, Fairchild Scholar at Caltech.

will be giving a Seminar on Science, Ethics, and

Public Policy entitled "The Sun in the Church: Ca-

thedrals as Big-Science Facilities." on Thursday,

April 27th at 4:00 p.m. in the Judy Library. Refresh-

18031 The Caltech Guitar Program presents An Evening

of Baroque Music with The Huntington Ensemble

on Sunday, April 30th at 7:00 p.m. in the Dabney

lounge. The program fro this free concert will include

works by Handel, Vivaldi, Boismortier, and others.

How Led by Jim Dolan, Research Geologist at USC,

the Caltech Management Association will be host-

ing a Field Trip to the Active Sights in the Los An-

geles Region on Saturday, May 6th from 8:00 a.m.

to 4:30 p.m. Field trip participants will have the

opportunity during the trip to examione updated

research results and paleoseismologic trench data on

both well known fault lines like the Santa Monica

and Hollywood faults as well as more detailed infor-

mation on previoulsy unrecognized Mac Arthur Park

and Echo Park Coyote Pass faults. Paleoseismologic

data from these faults may have important implica-

tions for understanding the earthquake behavior of

the large buried thrust faults that underlie most of

metropolitam Los Angeles. The trip will leave from

and return to IPL, and will cost \$25.00, with a box

lunch included. Only 25 participants may join in,

and all reservations are due by Friday, April 28th.

All interested in participating are asked to call ex-

ison The male and female drummers of San Jose Taiko

create a contemporary repetoire by fusing traditional

Japanese, Latin, Brazilian, and African rythms in their

Saturday, May 6th preformance "Taiko! Taiko! Taiko!" Starting at 8 p.m. in the Backman Audito-

tension 6382 for more information.

ments will follow this open-campus lecture.

served. For information, please call 395-8331.

The Pasadena Symphony will be holding a free concert Saturday, May 6th, at 10 a.m. at the Pasadena Civic Auditorium (300 E. Green Street, Pasadena). The program will include Beethoven's Piano Concerto No.4 and Tchaikovsky Symphony No. 4. Tickets are available through the Pasadena Civic Audito-

rium Box Office at phone 449-7360.

Talks, Lectures, and Seminars

Dr. Anthony Leonard, professor of aeronautics at Caltech will discuss examples of vortices, the "muscle and sinews" of fluid motion, in his lecture "Vortices in Nature and Technology: The Good and Bad" on Wednesday, April 26th at 8 p.m. in the Beckman Auditorium.

The Society of Calligraphy will be holding a free lecture by Stan Knight on Friday, May 12th at 7:30 p.m. at the Robbins Building, Pasadena City College. The lecture will focus on the consideration of the basic elements in design and their application to calligraphy. The "building blocks" of calligraphic design: letterform, color, space, texture, scale , contrast, imagery colorfully illustrated, and their individual importance will be discussed.

Club Announcements

"The Caltech Swedish Club will meet on Sunday, May 14th at 3 p.m. at 446 S. Catalina Ave, Apt. 202 in Pasadena. Anybody interested in speaking Swedish or in Scandinavian culture is welcome. Swedish refreshments will be served. For more information contact either Mika Nyström (e-mail: mika@cs.caltech.edu, phone: x6237, 568-0501) or Lena Peterson (e-mail: lena@pcmp.caltech.edu phone: x6994, 683-9102).

The Caltech Anime Club will host a "really cool" anime movie marathon this Friday and Saturday at 7 p.m. On Friday, the Anime Club will show "My Neighbor Totoro," "Patlabor movie 1", and "Kyuuketsuki Miyu #1-2", followed on Saturday by "Koko wa Greenwood 1-4", "Laughing Target" and "KO Century Beast Warriors 1-3

Internships and Competitions

HONH Polygram Records is currently seeking college interns for this summer. The internship benefits include prospective college credit, work experience, and free CD's as well as the opportunity for future fulltime employment. All prospective students are asked to call Karen at Polygram, (310) 996-7283

IBM Research Division solicits proposals from students interested in working on computational Science Projects each summer starting this year. Prospective candidates should be students within one year of their Ph.D. and beyond. The projects can be in any of a wide range of areas such as Astrophysics, Biology, Chemistry, Computer Science, Engineering, geology, Mathematics and Physics. The deadline for applications is May 5th for the summer of 1995. Apply through e-mail to epytte@watson.ibm.

The Mathematics Department is pleased to announce two categories of prizes offered to Caltech undergraduates: the E.T. Bell Undergraduate Mathematics Research prize of \$500 to a junior or senior for the best original mathematics paper, and The Morgan Ward Competition for freshmen and/or sophomores. \$75 will be awarded for the two to four best entries of a mathematical problem with a solution or significant contribution toward a solution. Complete details will be mailed and are also available in the mathematics department at 253 Sloan.

Each summer a student-run internship placement program at the University of California at Berkeley offers students at other universities the opportunity to take advantage of housing and travel accommodations in Washington, DC. A summer internship in Washington, D.C. is an invaluable experience. "Cal in the Capital" Internship Program encour-

Fellowships and Scholarships

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

The John Gyles Education Fund is again this year offering financial assistance to students in the United States. Canadian or American citizenship is a requirement. Awards are available for all areas of postsecondary study. A minimum GPA of 2.7 is required. Criteria other than strictly academic ability and financial need are considered in the selection process. Selected students will receive up to \$2,500. Deadlines for 1995 are June 15th, and November 30th. Applications must be mailed by those dates. Students may receive applications by sending their request, along with a self-addressed, stamped (US 32 cent) No. 10 envelope to: The John Gyles Education Fund, Attention: R. James Cougle, Administrator, P.O. Box 4808, 712 Riverside Dr., Fredericton, New Brunswick, Canada E3B 5G4

The Ebell of Los Angeles is announcing the competition for the Ebell/Flint Scholarship. Applicants must be U.S. Citizens who are legal residents of Los Angeles County, attending an accredited college or university in Los Angeles County and must be registered to vote here if eighteen years of age or older. Applicants must be unmarried, full-time undergraduates and have a GPA of 3.25 or above. Applications and all supporting documents must be returned to the Financial Aid Office by April 24, 1995.

1995-96 Merit Award applications are now available at the Financial Aid Office. Current Freshman. Sophomores, and Juniors are eligible to apply. Merit Awards are based on outstanding scholastic achievement as demonstrated by exceptional performance in formal classes and/or in independent research, and not on financial need. The deadline for submitting completed applications to the Financial Aid Office is 5:00 pm on April 28, 1995.

FIND/SVP is offering eight scholarships totalling \$25,000. Under the Tools for The Future Scholarship Program, eligible students can apply for two \$5,000 awards with 40 hours of FIND/SVP research services and a paid summer internship; or for six \$2,500 awards. To be eligible for these awards, in the Fall of 1995 you must be in an undergraduate or master's degree program in business, library science, computer technology, information studies, market research, or journalism/communications. You must also be a legal resident of the U.S. Completed applications and all supporting documents are due no later than April 28, 1995.

MINIJCPenney is awarding two \$10,000 scholarships to students in the Southwest region. To be eligible, applicants must be no older than 21 as of April 29, 1995, must be a current student in good standing, must be a U.S. Citizen, and must be available for a local "finalists interview" at the store where their application was submitted. Other details of the scholarship are available on the application form, which must be obtained at, and returned to, a JCPenney's store. Everyone submitting a thorough and complete application will receive a free t-shirt. Applications are due at JCPenney (in either the junior's or young men's departments) on April 29, 1995.

Orville Redenbacher's 1995-96 Second Start Scholarship Program is offering twenty-five \$1,000 scholarships to students who are age 30 or older, enrolled, or who will be enrolled, in a degree program parttime or full-time on an undergraduate or graduate level. Applications are judged on the following 3 criteria, ranked in order of significance: 1. Entrepreneurial spirit, as reflected in the applicants 500word essay, 2. Financial need, and 3. Academic performance, if applicable. Applications must be postmarked by May 1, 1995.

BODH Summer Work-Study: Information and applications for 1995 Summer Work-Study are available in the Financial Aid Office. If you are interested in Summer Work-Study, please submit the required application as soon as possible, but no later than June 1, 1995. Your entire financial aid application must be complete by June 1 to be considered. If awarded, the work-study funding will begin with the July 3rd payroll period.

The Coalition of Higher Education Assistance Organizations announces three \$1,000 scholarships and ech

on



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Save up to 35%	BURGER	Save up to 35%	information.	nancial Aid Office to pick up a COHEAO postcard The postcard must be submitted by April 1, 1995 The complete application is due to COHEAO or June 1, 1995.	
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