

4 UNDERGRADUATE REGISTRATION FORM NAME Ted Rivette SS NUMBER 666-13-1487

ACTION CODES:
 A. ADD NEW COURSE
 B. CHANGE COURSE
 C. CHANGE SECTION
 D. ADD COURSE TO BE TAKEN PENDING
 E. CHANGE FROM ONE LETTER GRADE TO ANOTHER SECTION

Fill in the appropriate information with an action code. Have this card signed by your adviser and by those individuals affected by the change. Continue changes on reverse side, if necessary.

Academic Year 97-98
 Term Fall
 Check BO AT SR
 AFTER CHANGE: TOTAL NUMBER OF UNITS FOR THE TERM: 3

COURSE	DEPT	CR	SECT	UNITS	REMARKS
D	AMa	9.5a	0912	3	
D	Ph	106a	0109	3	
D	Ma	5a	0409	3	
D	C9	284a	0109	3	
D	Ch	3a	0106	3	
D	B/ch	110	0109	3	

SIGNATURE: [Signature] Dean of Students



- Drop Day is Wednesday!
- Bring Gloria Cookies Day is Thursday!
- Prostrate Yourself Before the Registrar Day is Friday!

THE CALIFORNIA TECH

VOLUME XCIX, NUMBER 9 PASADENA, CALIFORNIA FRIDAY, NOVEMBER 14, 1997

Geniuses of Junk to Test Their Skills! ME72 Students Prepare for Elaborate Engineering Problem Involving Golf Balls, Hockey Pucks, and Hose Washers.

BY WREN MONTGOMERY

The 13th annual Caltech Engineering Design Contest will be held on Thursday, December 4th, starting at 2 p.m. in Beckman Auditorium. Admission is free, and spectators are welcome. Students taking ME72 will show off their solutions to this year's design problem:

Sound easy? It isn't. Students are given a "bag of junk," containing: masonite, plexiglass, aluminum, a few ball bearings, a length of shafting, some brass bearings, a few pulleys and rollers and other miscellaneous junk.

Contest rules vary from year to year, but the contest is always exciting. Six years ago, the students designed and built electro-mechanical Sumo-wrestlers, trying to push opposing devices out of the ring. Five years ago, the students designed and built devices to collect more small pellets than their opponents. Three years ago, the student's devices collected balls from a trough. Two years ago the devices delivered a pre-loaded collection of ping pong balls to a drain. Last year, the devices had to herd golf balls into a central drain. This year's contest will be entirely different, and requires the devices to push hockey pucks, golf balls and hose washers out of their side of the table across an 8-inch high ridge.

The Massachusetts Institute of Technology has a similar contest for mechanical engineers: 2.007 — Introduction to Design. Woodie Flowers, the progenitor of the course, set it up to: "the overall goal off 2.007 is to help you learn to effectively execute the steps required to practice design in a systematic manner, which is vital if you are to become an effective design engineer."



Pictured above, the weapons used to capture the Dean and return him to the planet Reeeequertmiffe. This picture was taken at great risk to life and limb, and the FBI does not want us to publish it—or, maybe, it's just an ME72 photo [photo ungratefully taken from the Tech Archives].

THIS YEAR'S CHALLENGE

The contest was designed by Professor Erik Antonsson to provide a real world engineering atmosphere. Students learn about the design of new things and the solution of open-ended, ill-defined problems. It has been featured on CNN and *Scientific American Frontiers*.

At the start, each device (a maximum of 20 by 20 by 40 cm in size (about 8 by 8 by 16 inches) and 3.5 kg in mass (about 7.7 pounds)) is positioned within its 20 by 40 cm start zone on a 1.22 by 2.44 m (4 by 8 foot) table. The start zones are on opposite sides of a central ridge. The ridge is triangular in cross-section and is 20 cm (8 inches) high with a 50% slope on each side. Located behind each device at the start is a collection of "scorable items": 3 golf balls (each worth 1 point), 3 hockey pucks (each worth 2 points), and 3 hose washers (each worth 3 points). Additionally each device is worth 4 points. During the 30 seconds of electrical power (2 channels controlled by a joystick, plus 2 switch-controlled channels) each device attempts to empty its side of the table of scorable items. The device with the lowest number of points on its side of the table at the end of 35 seconds wins the contest.

ASCIT Election Results

The new BoC Secretary is Brigitte Roth

Bylaw changes:

Prop. 187 (Publishing of BoC Statistics)	FAILED
Prop. 665 (Clarification of Bylaw Amendment Procedure)	PASSED
Prop. 667 (Redefinition of Exec. Social Committee)	FAILED

The election becomes official at 8 PM Friday night unless protested to Myfanwy Callahan (myfanwy@ugcs), ASCIT ExComm Chair, with copies to kohl@cco and nbreen@ugcs. (Don't protest. Keep us happy.)

Nicholas Breen
 — Nicholas Breen
 Slave to the ASCIT Secretary (election chair)
nbreen@ugcs.caltech.edu

ASCIT Movie: To be or not to be?

BY JOE CARROLL

This Week's ASCIT Movie is: *Hamlet*.

On Wednesday, we located what may be suitable sound bulbs for the 35mm projectors, and there's a reasonable chance that everything will be back to normal by tonight. Assuming everything is okay, we couldn't have picked a better week for their return. This is the 1996 *Hamlet*, the majestic four-hour Kenneth Branagh adaptation.

Nothing in this film was done halfway. From its length (it is the second longest major studio film ever made, after *Cleopatra*) to its cast (a bevy of stars, including Gerard Depardieu, Billy Crystal, Robin Williams, Charlton Heston, Jack Lemmon, Kate Winslet, and Branagh himself), this *Hamlet* cuts no corners. Not only does it include the full text of the play, but it adds flashbacks to places the theater can only hint at, like Fortinbras' army on the march. The dia-

logue flows naturally without becoming singsong and annoying. *Hamlet* feels large, and not just in length; it was filmed on 70mm, after all, but at least 35mm is better than video.

Branagh, of course, is no stranger to Shakespeare on the big screen, having also directed film versions of *Henry V* and *Much Ado About Nothing* and acted in *Othello*. He set this version in the late 19th century, evoking the feelings of a time in the past, but not too long ago, that Shakespearean audiences must have felt upon the play's first production.

Because of its length, *Hamlet* will only be shown once, at 8 pm to accommodate those with relatively late dinners. If projector problems persist, we will try to get the word out as early as possible, but we will do our best to avoid them. (Heck, I'm excited about seeing this one, too.)

NEXT WEEK: *Wallace & Gromit and the Best of Aardman Animation*

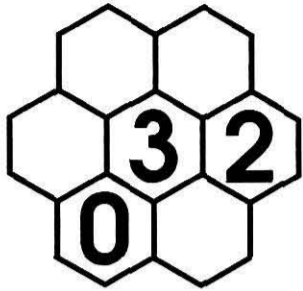
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Dean's Corner.....6	Media Guy.....4

PUZZLE

by Wei-Hwa Huang
Difficulty: Medium ∂∂

Fill in the rest of the grid with arrows so that every number has exactly that number of arrows pointing to it. Arrows must be pointing along one of the six hexagonal directions. Note that an arrow may pass through several cells before pointing to a number.

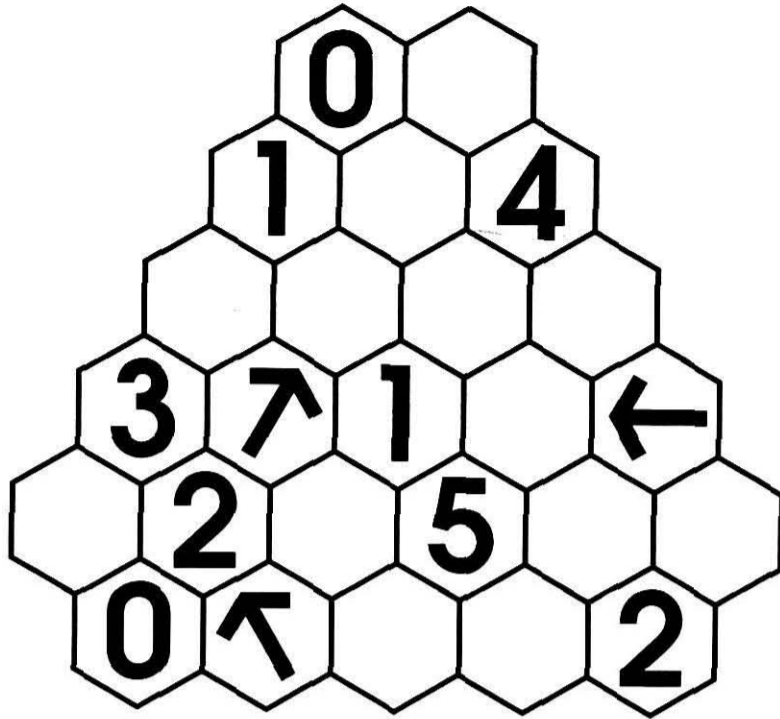
For example:



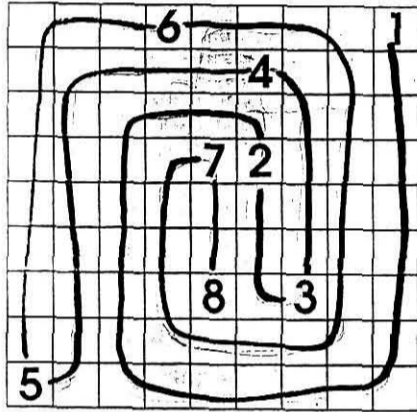
This is correct.



This is not.



Answer to last week's puzzle:



Puzzle solution courtesy Tanya Evans

ALL THE STAGE A WORLD

D.R. Sullivan

The Taming of the Shrew
Pasadena Shakespeare Company
East end of the second floor of the Plaza Pasadena.
8PM Thursday, Friday, Saturday; 3PM Sunday; through 23 November.
\$14.00; 564-8564 for reservations

The Pasadena Shakespeare Company is a true hole-in-the-wall outfit, but they perform good plays nonetheless. A few months ago they put on "Our Country's Good" (they specialize in, but don't restrict themselves to, Shakespeare) which I enjoyed, so I tried their current run of "The Taming of the Shrew". Some have said that this play needs to be seen rather than read more than most and I have to agree. Neo-western culture finds the apparent plot of "Taming" — subduing a forcefully married woman — less than appealing. The trick is to show Katherine (the shrew) and Petruchio (her husband) falling in love with each other on sight, and to suggest that Katherine's aggressiveness is a psychological defense against a shallow father and insipid sister. Then Petruchio's breaking of her becomes more of a lesson in how not to behave (he essentially outshrews her).

Most of the actors played their parts well. Lucentio al-

ways seemed a shallow Romeo, which made him unsympathetic, but his servants (who have sizable roles) did quite well, and Petruchio managed to seem to be a brute bully at the beginning and a loving husband near the end. Biondello was particularly charming.

The various director's touches greatly enriched the play, making sense of things obscure in the script: Katherine and Petruchio are clearly struck by each other, on first meeting; an apple (from Katherine) plays a subtle role in the "rotten apple" scene between Hortensio and Gremio; the dinner scenes at Petruchio's house are rounded out, making the lines clearer. The performance also cuts out the entire half-framework involving Christopher Sly, which I consider no loss.

THE CALIFORNIA TECH

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Advertising:	5 p.m. Monday
Announcements (Mints):	noon Monday
Letters to the Editor:	5 p.m. Monday
Unsolicited Articles	noon Monday

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Crime and Incident Beat

October 30, 1997

Theft - Bike

Magna mountain bike, valued at \$160, was taken from the south side of Booth.

Victim secured her bike at 11:15 AM. She returned to her bike at 11:30 AM, and discovered the bike missing.

Vandalism

Victim parked her vehicle at 150 South Chester at approx. 12:00 noon. Upon returning to the vehicle at 4:25 PM victim discovered the front windshield shattered. No other damage was found on the vehicle.

Theft - Stereo

A detachable Kenwood car stereo valued at \$200 was taken from a vehicle parked in the Wilson Parking lot. Victim parked her vehicle at 8:00 AM in the Wilson lot. Upon returning to her vehicle at 5:00 p.m., she discovered the car stereo missing.

October 31, 1997

Theft - CD

A CD valued at \$40 was taken from 287 South Hill.

Victim noticed her CD missing

at approx. 2:30 p.m. on 10/22/97. The CD (Space Adventure) was last seen approx. 10/12/97.

November 2, 1997

Suspicious Person

White male, 6'5" 165 lbs, black hair. Suspect was last seen watching TV in the 2nd floor lounge of the Avery House. Security questioned suspect, suspect stated that he had a friend that lived in the building. After further investigating, it was determined that the Caltech affiliated person did not want to see the suspect. Suspect was escorted off campus.

False Fire Alarm

Security responded to a fire alarm activation at the Lloyd House. The alarm was activated by students using a fog machine, which activated the smoke detectors.

Intrusion Alarm

Security responded to an intrusion alarm activation in the Braun Lab, at 11:18 p.m. Students working in the lab accidentally activated the alarm.

The Outside World

by Myfanwy Callahan

NEW YORK —

The United Nations Security Council passed a resolution to punish Iraq by banning travel by its officials. The United States has taken it upon themselves to respond to the Iraqi expulsion of American military inspectors militarily if necessary.

FRANKFURT, GERMANY —

The European Court of Justice ruled in favor of a German law enhancing women's access to public sector jobs. Thus preferential hiring practices may be used to counter discrimination, and affirmative action enters the European community.

LONDON, ENGLAND —

International health agencies plan a coordinated effort

to fight malaria in Africa. Serious concerns have arisen as strains of malaria have arisen that are resistant to some of the most effective drug treatments.

BARDERA, SOMALIA —

The worst floods in 30 years have killed over 130 people and threaten most of the country's food supply. Over the last three weeks, 300,000 So-

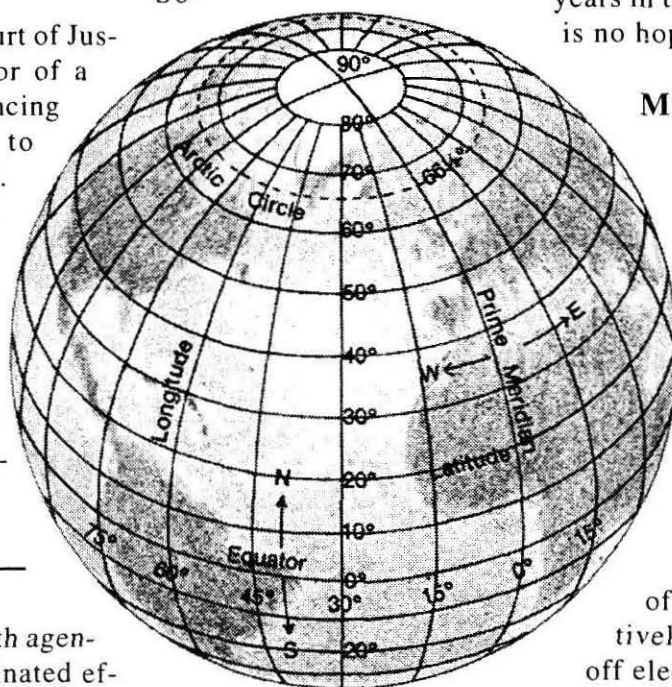
malis have been left without homes or food.

AMMAN, JORDAN —

Iraq's Foreign Minister stated that Iraq would stand by its expulsion of American weapons inspectors. He stated that Baghdad is responding to the American policy of sanctions which have crippled Iraq's economy over the last seven years in the view that "there is no hope."

MIAMI —

State officials seized over 5000 absentee ballots in an investigation into possible voter fraud in last week's mayoral election. The two candidates received 49.6 and 46.8 percent of the votes respectively leading to a runoff election this week.



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ADAM VILLANI: MEDIA GUY



by Adam Villani

Vampire Lesbians of Sodom and *Sleeping Beauty or Coma*

A co-worker of mine, Dave Barton, who started his own theatre company, Rude Guerrilla, produced and directed these two hilarious Charles Busch farces at the Huntington Beach Art Center the past two weekends. Okay, so the plays are already closed, but I'll at least tell you about it so you can check them out if ASCIT ever does them or look ahead to Rude Guerrilla's production of *Perfect Ganesh* in a couple of months.

Dave kept warning me for the week before the show that the plays were stupid. I assured him that stupid's okay if it's funny enough, which, fortunately, they were. *Sleeping Beauty or Coma*, the "opener", was a goofy and slight romp

through the 60s British mod fashion scene, with two designers (a man playing a woman and a woman playing a man) fighting over the "new face," enigmatic model Enid Wetwhistle, AKA Rose, AKA Briar Rose. Breezy throughout, *Coma* featured a lot of general Austin Powers-esque silliness and a great montage scene paying homage to Richard Lester and Michelangelo Antonioni.

Vampire Lesbians of Sodom certainly delivers on the title, chronicling two feuding lesbian vampires through history, with stops along the way in ancient Sodom, 1920s Los Angeles, and present-day Las Vegas. Big highlights were the performances of leads Joan Meissenburg as the succubus and Steven Parker as her victim the Virgin Sacrifice who later resurfaces in Hollywood as a grand old dame of the stage and in Vegas as a husky-voiced aging star with her own "boy toy" dancers. Neither play has anything important to say, but ribald comedies like

these are a refreshing change of pace and display of versatility from Rude Guerrilla's first production, abortion clinic drama *In the House of the Lord*. To get on the Rude Guerrilla mailing list, call 714-633-2844.

Fast, Cheap, and Out of Control

This disarming new documentary from Errol Morris (*The Thin Blue Line, A Brief History of Time*) intertwines profiles and interviews with four eccentric men whose occupations have something to do with animals: a lion trainer, a topiary gardener, a naked mole-rat specialist, and an MIT artificial intelligence robot researcher. All four men are tremendously engaging personalities, obsessed with their work and each with their own take on the relationship between man and the natural world. Morris' film is truly mesmerizing; his sense for editing and cinematography ensure that this has about as much resemblance to a Discovery Channel documentary as the movie *Heat* had to an average episode of "T.J. Hooker."

A.S.C.I.T. Minutes

10 NOVEMBER 1997

Present (at some point): BoD (minus Kiran), Maria Satterwhite, Brandon VandeBrake, Joanne Jang

(This week Bo = Mike W. and Luke = Mike A.)

Meeting opens at 22:15.

General Business

Cash - Joanne and Luke collect Fleming's and Ricketts's interhouse money for the term for parties on Saturday. Go to your corners and, when you hear the bell, come out dancing.

The Tech - It turns out that Mic had intended his last compensation schedule proposal to be inclusive of all business activities. That is, Mic would pay not only himself, but also the ad and circulation staff out of 20% of the ad sales. Since no one

was arguing last week that we were paying Mic too little, the BoD decides to stand by its previous decision. Mic will be asked to amend the current proposal to include a listing of duties relevant to all payments and it shall be considered active. Is this really the end? Am I never going to have to type the words "compensation schedule" again? A blessing from the Lord! God be praised!

Posada - CLASES wants the BoD's support for the annual AIDS walk fundraiser. We will invite representatives to meet with the BoD. If you are interested in supporting the fight against AIDS, then get in touch with CLASES.

Singapore - Some students from Singapore will be visiting campus and are interested in meeting with student lead-



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ers. Get in touch with Kohl (kohl@cco) if you're into this kind of thing.

Coffee House - Adrienne says that business is good. The BoD has earmarked \$1000 for further improvements. If you have any ideas, send em to ascit@cco. Lori is concerned that there is not a student head manager right now. In lieu of that individual, Luke will try to solicit ideas from all of the managers and waiters for what to do with the cash.

Officer Reports

Baldeep - The UROH letter is undergoing approval. Will be organizing the house dinners soon. Progress is being made in the design phase of the eventually to be web-based student used book market.

Adrienne - Was approached by some grad-monkeys about putting together a web registry of campus social events. There will be donuts at 01:00 Friday, November 14 on the Olive Walk. The BoD argues for awhile over where the money should come from and if we should have a backup plan in case of rain. There is some sort of debate over hot cocoa. It is decided to pay for the donuts out of the Special Events fund. There are some rumblings of interest for an ASCIT sponsored Rap/Hip Hop extravaganza. Word up.

Bo - Turns in the first draft of his turnover notes for the next Academic Director. If you are concerned about the fate of: the second floor of Winnett, frosh on grades, McRib, or the core curriculum, then please please please contact Bo (westover@cco).

Lori - Give any comments you have about Rotation to an IHC member near you. Stuff.

John - Gives us a run down on the state of ASCIT discretionary funds. We've depleted the prank fund down to \$15 so come to us only with cheap ideas. On the other hand, the Special Events Fund is bursting at the seams with more than \$1500. Come by a BoD meeting (Mondays at 10:00 in SAC 64) and make a sales pitch to get in on some of this cash.

John pitches a new idea to the BoD. He proposes that each member be given a small discretionary budget which we could dole out to people for what we individually consider worthy causes. The idea is to help facilitate spontaneity by lowering the activation potential of joy. There is a great deal of debate on this topic. John and Kohl support the idea, citing that we can promote good fun for a relatively small investment. Luke stops writing things down for a moment and expresses his disapproval. Alex does not want to have the power to distribute funds vested in an individual (no matter how little money we are talking about). Lori has some sort of fit but it is generally agreed that she is against the measure. John moves to "give each of us [BoD members] fifty bucks". Alex seconds the motion. The BoD votes 1-4-1 to kill the idea, with John in favor and Adrienne abstaining.

Luke - There will be an election Wednesday, November 12 to decide the office of BoC Secretary. Those three bylaw amendment proposals will also be on the ballot. Meeting with Stan Borodinski of Student Affairs on Tuesday, November 11 (for sure this time) to talk about getting money for a new ASCIT computer. Luke is confused about what to do with online voting for club funding. It is decided that the BoD will distribute

surveys sometime prior to the next budget meeting on which will be a reference to the online survey. Crazy bout slidebars.

Alex - My cat's breath smells like cat food.

Kohl - Brings up the BoD's meeting with Dr. Baltimore last Wednesday (November 5). Dr. Baltimore is inter-

ested in improving the numbers of women and minority students among the undergraduate student body. Luke feels like the BoD should put some work into this problem. The Student Quality of Life Committee is presenting its results on November 21. It is decided to delay action on this issue until that report is available. Kohl is going to dig up past ASCIT investigations

for review. Kohl would also like to meet with the outgoing VP for Student Affairs, Dr. Gary Lorden.

Meeting adjourned at 00:10.
Respectfully submitted,



Michael D. Astle
ASCIT Secretary

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9-11 pm

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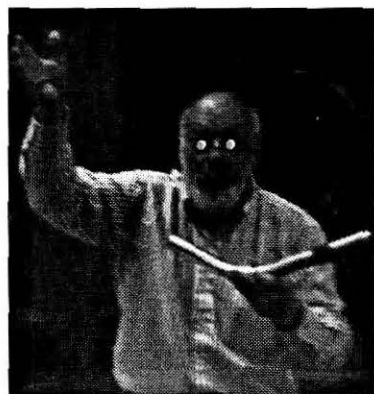
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House of Milli-Kan

by Jean-Paul Revel

Once upon a time, right on the edge of a treeless forest (pardon the oxymoron, but it is the truth) there was a place named Pass-a-Dean where there lived creatures called Micro-Kans, followers of a great chief, 1000 times bigger than they, named Milli-Kan. They lived together in the Hovse of Milli-Kan a.k.a. Caltech. Besides Milli-Kan, it had lots of other Kans, people of high rank which, along with him, had all been placed on the Nob-list for their rational insights and clear thinking. There were however many other-Kans, including Kan-Kans and just plain Kans. One of the few Kans which did not belong was the Aga-Kan, although getting him on board would have been a considered a worthy coup. Also missing were Shere-Kan, although once upon another time, a student kept one as a pet, and of course the Mohi-Kans, the last of whom... but that is another story.

The great Hovse of Milli-Kan, was subdivided into 7 Hovses, the kind one lives in. Each of these Hovses prided itself on the manner in which it was different from the others. Yet all fol-

lowed the great I-Kan motto, from "I think ... "to, "I know...", all the way to, "I knew I could".

Now at least one of the Hovses endorsed the teachings of the "The Book of the Law". The central tenet of this tradition is encapsulated in the statement: "Do what thou wilt shall be the whole of the Law" (Chapter I, stanza.... oops I lost it, I think, stanza 40). I read it on the Net on one of the Hovse's pages. but now can't find it again: Kan someone help me find it?) Although not explicitly stated people in a number of the other Hovses act as if they had a similar motto: so they selfishly indulge in activities which pleases them only, without regard of the consequences to others. One of the most obnoxious practices being the cult of fire (see the front page of last week's Tech). Of course one can take the "Book of the Law" pronouncements as an elaborate spoof. But just in case the author is (authors are) serious one must discuss it, for it could have some serious consequences.

Applying the philosophy expounded in the "Book of the Law" can lead directly to potentially

dangerous situations. Fire has fascinated Mankind and Kankind since their dawn. "Tiger, Tiger burning bright" says Blake in expressing the duality of fire (have you seen the Blake papers at the Huntington Library?). The beauty and grace of the Tiger, eyes like embers in the dark (are they green or red, may be yellow?) and the terrifying reputation of their jaws (have you seen the saber tooth tigers at the La Brea tarpits on Wilshire?) are appropriate images for the bounties brought by fire and at the same time the great dangers that fire represents for all of us.

Being burned is a frightening thing to contemplate, but is a definite possibility anytime fire or explosive material is being handled. Even specialized factories are known to explode accidentally, and specifically trained workers are maimed by fire and explosions. According to the LA Times it happened when a fireworks warehouse exploded in April killing 4, when ten escaped serious injury only by jumping off a fireworks barge

near Cape Cod in July, while two were killed in Illinois in a similar accident, and when 4 were killed very recently in downtown LA, never mind the injured, or the little boy who had a pocket full of caps, which went off when he fell, giving him second degree burns. Playing with fire under conditions where others could become involved is downright criminal. So it must be recognized that "Doing what one wilst" is a pretty extreme statement which must be moderated by common sense. As it

"Pish, a woman might piss it out," - Mayorial reaction an hour after The Great London Fire of 1666 began.

is said in the Icons of I-Kan "Thou shalt not take advantage of another I-Kan follower". Thou kanst indeed do what thou wilst, as long as thou does not take advantage of others. All members of the Kan clan have agreed to adhere to the latter pronouncement, when they joined the Hovse of Caltech. To think otherwise is I-Kanaclastic.

Now the "Book of the Law" might be valid on planets such as the ones inhabited by the Little Prince, where there was just a single inhabitant per planetesimal, be he prince or lamplighter. It cannot be extended to a society where one person's desire may be another's nightmare.

The Hovse of -Kan is de-

voted to rational thinking. In fact Milli-Kan was brought to Pass-a-Dean for the explicit purpose of establishing a school of the highest excellence for the sciences, where rational thinking and the truth are the basis for what one Kan do. Beliefs in invulnerability which underlie playing with fire are totally irrational. I heard the statement that playing with fire was OK because "cool" flames were used. The coolness of some flames is relative. Flames of many compounds have temperature in the vicinity of 2000°C. A cool flame obtained under special conditions (not a free flame in air) can have a temperature as low as 265°C. However exposure to 65°C for 1 second is sufficient to produce a burn on human skin. While the temperature varies at different places in a flame, it is clearly above 65°C in most of the flame, whatever the material that is being burned. It is true that one can "play tricks", minimizing exposure time, as when lions are taught to jump through flaming hoops, or using methods for lowering the temperature, as when walking on well prepared beds of coal, which minimize heat transmission etc... That does not eliminate the risk.

Even if one is not burned outright, other injuries are common. The cause of death in a fire is often due to inhalation of gases and smoke. The main killer is CO, carbon monoxide, which combines tenaciously

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Academics & Research Committee Minutes

OCTOBER 27, 1997

On Monday October 27 we had our first ARC meeting of the school year. We covered primarily 4 topics. First, the Physics Department would like help developing a uniform collaboration policy. Second, what has been the impact of two years with freshman on grades. Third, what problems with the Core curriculum should be addressed. Fourth, the 1997 edition of the Clue: Class Review, needs to be compiled. Fifth, the fact that there is an Ombuds Office, and that they would like to train Ombuds persons. Finally, we discussed class scheduling difficulties.

One professor in the Physics department made an unofficial request for student assistance in designing a collaboration policy for the physics department. The current policy, loosely adhered to goes something like "don't copy other's work directly." The benefit of having student input is that un-

dergraduates are familiar with what collaboration involves for these classes and the current problems these classes face. We could help define a set of guidelines for a policy, that professors could modify for individual classes. Perhaps the guideline could be a handout explaining what collaboration involves and examples of types of collaboration. This guideline could include examples like talking about problems, but not seeing others work, or the Physics 1,2 policy where you can work with anyone but must be able to reproduce your work

or an explanation. We thought that this would be a good general guideline.

Another function of the guidelines would be to resolve areas where collaboration policy is unclear. These areas include allowed sources of help such as undergrads who have taken the class previously and their materials,

...freshman are more concerned with high grades than with learning...

graduate students who know the material, course work from previous years. What materials are allowed as help tools, such as computer programs that reduce grunge work, i.e. Mathematica, and collaborative solutions on whiteboards. Other areas of confusion include discrepancies about class policy and interpretation by TA's and graders.

This concluded the collaboration policy section. We had four volunteers to draft a policy.

It has been two years since freshman were put on grades. The Core Curriculum Committee (CCC) is examining the impact of this change on the students. The ARC is requested to help gather data and give it to the CCC chaired by Harvey Newman. Some of the main concerns studied by the ARC that freshman are more concerned with high grades than with learning. The shadow of grades looms over freshman year, tainting its enjoyable aspects, and reducing its value as a time for exploration. A possible change could involve having shadow grades third term that have the possibility of becoming real grades.

Members of the ARC debated the worthiness of fresh-

man on grades. Rep. 1 "It's scary when they throw new material at you, while you are still getting used to the system, and are expected to earn high grades." Rep. 2 "No, two terms of pass/fail is really enough for acclimation." Rep. 3 "The administration thought that the sophomores had developed bad study habits due to a whole year of pass/fail, and so were unprepared for Sophomore year." Rep. 4 "But, there has been no conclusive proof that this new system has

Physics 2a has become more confusing for sophomores...

helped increase the GPA of the students, for example, Phys 2 grades have been about the same." Rep. 1 "I guess that it is easier to have two terms where grading is not as harsh, (freshman 3rd term, and sophomore 1st term.), and it does look good to have grades when freshman apply for jobs."

With the debate concluded, we moved to talk about the problems with the Core.

Physics 2a has become more confusing for sophomores, because the class intermittently switches topics from waves to thermodynamics, and vice versa. One result has been a record high enrollment in Phys 12. Another concern is that scheduling of the Core

ARC CONUTES ON PAGE 8

with Hemoglobin in the red blood cells, thus drastically reducing the O₂ transporting ability of blood. It is released very slowly, so repeated exposure increasingly reduces oxygen carrying capacity. A large fire roiling out of a fireplace can injure, if not by direct exposure to hot flames, then by introducing truly noxious gases into the room.

Fire is dangerous enough that one would do well not to wake that tiger. Between 1961 and 1972, 143500 people were killed by fire in the US, more than 3 times the number killed in action in Vietnam. Is it reasonable to play with fire and end up a statistic? And big fires usually start small. The great London Fire of 1666 started in a bakery. An hour later, at 3 am the mayor was woken up and is said to have pronounced (today this would be a none too savvy statement) "Pish, a woman might piss it out," and went back to bed. Several days later, the fire was out, having killed 6 people (only?), and destroyed 13000 houses, 100 churches, 4 prisons, etc...

It is most important that all of us act according to the laws and wisdom of Milli-Kan.

A Bientôt

Jean Paul Pavel

P.S. Many of my facts are taken from H. Rozzoti's "Fire", Oxford U. Press 1993. She is a Fellow and Tutor in Chemistry at St. Anne's College.

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ARC, CONTINUED FROM PAGE 7

has expanded out of its allotted morning time and into the afternoons. This causes problems for attending classes not in the Core, but necessary for individual majors. The math department has taken to putting classes at 8 am to resolve conflicts. The EE department has conflicting classes that are both required for graduation, that will be resolved by the creation of a new class. A third problem is that homework set due dates convergence on certain parts of the week instead of being spread out. This makes sense for unrelated classes, but in classes of the same department, where the majority of the students must take the related classes, professors could compare homework due dates. At the least, options for the homework due dates could be voted on by the class. A fourth problem is that the requirements for graduation are being shifted to different names or

deleted from the class schedule as the administration rearranges the schedules, ghosts in the handbook. An example is a class requirement for EE's who must take a 3 unit class in order to graduate, but the class has not yet been instated, it just appears in the handbook. Another problems in the EE department is that when classes shift names, sometimes they shift material as well. The result is that they no longer prepare the student for the classes that follow. An example of this is EE 14 which became EE 20. The final problem discussed was that students have a difficult time planning for required classes,

because the class times are not finalized until after the new terms starts, and some classes are offered only in some years, but these times are not preset.

We suggested that the old Phys 2a, 2c could possibly be recalled because they might be an improvement on the current class system (Secretary note:

I'm not sure if this person was serious or just venting.)

The ARC is getting ready to start compiling the comments for the '97 CLUE. About 1000 messages

need to be cut and paste into the CLUE format, and all must be read first. The Chair hopes that a system to queue the messages will be set up by winter break, so any ARC member can participate in the filing.

Random comments included such gems as "Can we make an anti-Clue? It would probably tell people a lot more."

From here we touched on the fact that the Ombuds office, directed by Helen Hasenfeld, would like to set up an Ombuds training program. This would involve teaching Ombuds what avenues for communication with the faculty and administration would be most effective, and communication tips.

Finally, we discussed scheduling difficulties, many of which are very counter intuitive. One professor scheduled conflicting classes that are both option requirements. APH is running a class third term, but has a class second term that builds on the techniques taught in the third term class. Students have a difficult time planning their schedules with just these types of hurdles, but not having set times for required classes until the term is already underway just makes it harder. Pro-

fessors are commenting that it is difficult to do reasonable schedules around 1.5 hour classes.

There are already committees working on these problems. The ASCIT BOD is working on resolving scheduling difficulties. The CCC is working to schedule changes in class times before conflicts and problems occur.

ARC members suggested possible additions to these committees. A student committee could advise the CCC. The entire schedule could be finalized the previous year, only excepting professors who are not sure of their location in the coming year. Lastly, the ARC could send out a campus e-mail asking for scheduling/class grievances, then propose solutions to appropriate channels.

This concluded the meeting. If you have any comments or suggestions e-mail me at devi@cco.

Devi Thota, ARC Secretary

...homework set due dates converge on certain parts of the week instead of being spread out...

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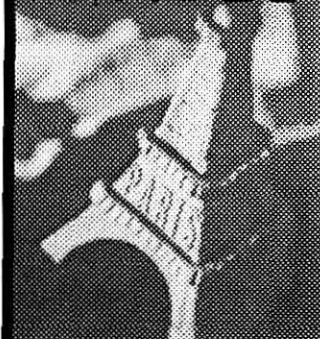
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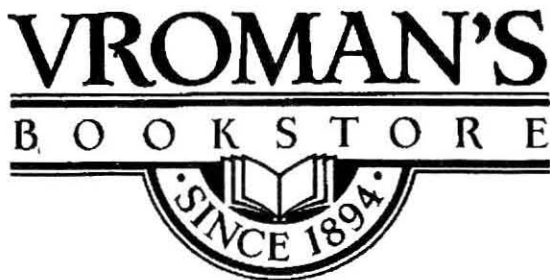
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DILBERT® by Scott Adams

Panel 1: I'M WITH THE CUBICLE POLICE. THIS IS A SAFETY VIOLATION.

Panel 2: IT'S PERFECTLY SAFE UNLESS YOU TAP IT WITH A FLASHLIGHT OR A DOG JUMPS ON IT.

Panel 3: THIS PLAYS RIGHT INTO MY THEORY THAT CUBICLES ARE LIVING ORGANISMS.

Panel 4: I HEARD THAT A STACK OF YOUR PAPERS FELL OVER AND KILLED A CUBICLE COP.

Panel 5: WHAT DID YOU DO WITH THE BODY?

Panel 6: I ENROLLED IT IN THE QUALITY WORKSHOP NEXT DOOR.

Panel 7: IT'S A TEMPORARY SOLUTION. THE WORKSHOP IS ONLY THREE DAYS.

Panel 8: ... WELL, THAT DEPENDS ON MANY FACTORS INVOLVING FEATURES AND USAGE.

Panel 9: DO YOU ENGINEERS HAVE A SECRET PACT TO WITHHOLD ALL USEFUL INFORMATION? YOU HAVEN'T ANSWERED ONE QUESTION AND IT'S ALREADY ... UM ... TWO O'CLOCK.

Panel 10: WE HEAR YOU GAVE INFORMATION TO MARKETING. JUST THE TIME OF DAY. HE WOULD HAVE FOUND OUT ANYWAY!

Panel 11: DOGBERT'S DATING ADVICE: WOMEN LIKE MEN WHO HAVE ACCOMPLISHMENTS. BUT THEY HATE MEN WHO BOAST.

Panel 12: I WILL BE YOUR DESIGNATED BRAGGER, ALLOWING YOU TO APPEAR HUMBLE.

Panel 13: ONE POTENTIAL PROBLEM WITH THIS PLAN IS THAT I HAVE NO ACCOMPLISHMENTS. IF SHE ISN'T WEARING MAKEUP, WE'LL BE HONEST TOO.

Panel 14: HI, DILBERT! HI, DOGBERT!

Panel 15: UH-OH. SHE'S A HUGGER ON THE FIRST DATE. I NEVER KNOW WHERE MY ARMS SHOULD GO.

Panel 16: I HOPE THIS DOESN'T SEEM AWKWARD, BUT MY WATCH IS SNAGGED ON YOUR BRA STRAP.

Panel 17: I LOVED IT WHEN YOU HUGGED YOUR DATE AND YOUR ARM GOT SNAGGED ON HER BLOUSE...

Panel 18: AND IT WAS HILARIOUS WHEN YOU TRIED TO FREE YOUR ARM AND ACCIDENTALLY RIPPED HER TOP OFF.

Panel 19: BUT THE BEST PART WAS WHEN YOU YELLED, "I'M AN ENGINEER, NOT A DIAMOND CUTTER, DANG IT!"

Panel 20: SHUT UP.

FoxTrot by Bill Amend

Panel 1: HI, SWEETIE. HOW'S THE CONVENTION GOING?

Panel 2: OH, WE'VE BEEN MANAGING JUST FINE. WHAT CAN GO WRONG IN FOUR DAYS, RIGHT?

Panel 3: NOW, THEN, ABOUT YOUR FLIGHT BACK TOMORROW... YOU GET IN WHEN - 7 P.M.? 8 P.M.? OH, 4 P.M. - THAT EARLY...

Panel 4: "STRESS"? NO, NO - THAT'S EXCITEMENT YOU DETECT IN MY VOICE. I SWEAR, DAD, EVEN I KNOW HOW TO RUN THE DISHWASHER CORRECTLY.

Panel 5: KIDS, I JUST GOT OFF THE PHONE WITH YOUR MOTHER. SHE'S PLANNING TO BE HOME SOMETIME AROUND 5 P.M. TOMORROW.

Panel 6: THAT GIVES US LESS THAN 24 HOURS TO CLEAN UP THIS LITTLE FLOOD WE'VE CREATED. WE'VE CREATED??

Panel 7: LOOK, LET'S NOT WORRY ABOUT WHO'S TO BLAME AT THIS POINT. I'LL ADMIT I'M TO BLAME FOR ALL THE WATER SNAKES. WATER SNAKES?!

Panel 8: JASON, YOU'RE NOT HELPING. ... THE FOUR-FOOTERS, AT LEAST. AAAA! (SPLASH! SPLASH! SPLASH!)

Panel 9: PETER, TRY OPENING THE BACK DOOR, MAYBE WE CAN DRAIN THE WATER THAT WAY.

Panel 10: YES! YES! IT'S WORKING! YOUR MOTHER ISN'T GOING TO RETURN TO FIND HER HOUSE IS ONE BIG LAKE.

Panel 11: UM, WHICH IS WORSE - A LAKE OR A SWAMP? WANT ME TO TURN THE WATER BACK ON?

Panel 12: OK, KIDS, HERE'S THE SITUATION: OUR HOUSE IS ONE BIG SWAMP OF SOGGY CLUTTER, AND YOUR MOTHER COMES HOME IN 22 HOURS.

Panel 13: THE WAY I SEE IT, IF WE WANT TO LIVE, WE'VE GOT ONE HECK OF A LONG NIGHT AHEAD OF US.

Panel 14: FLEEING FOR THE BORDER. CLEANING?

Panel 15: YOU KNOW, DAD, YOUR JOKES WOULD BE FUNNIER IF YOU DIDN'T ACT SO DEADLY SERIOUS. DRESS WARM, WE'RE HEADING INTO WINTER.

Panel 16: WELL, DAD, THE LIVING ROOM'S ALMOST DRIED OUT. THAT'S GREAT!

Panel 17: I MUST SAY, IT WAS GOING PRETTY SLOWLY UNTIL PETER HAD THIS AMAZING IDEA.

Panel 18: HEADS UP!

Panel 19: SORRY. ALTHOUGH I'M NOT SURE LEAF BLOWERS ARE REALLY MEANT FOR INDOOR USE. POINT IT DOWN, PETER! DOWN!

Panel 20: ROGER? KIDS? I'M HOME! HUNH, I GUESS THEY'RE NOT HERE. WELL, IT LOOKS LIKE THEY DIDN'T DESTROY THE HOUSE TOO MUCH IN MY ABSENCE. MOM'S HOME! YAY! YOWZA! WELCOME BACK, SWEETIE! YOU WERE ALL HIDING? HOW CUTE!

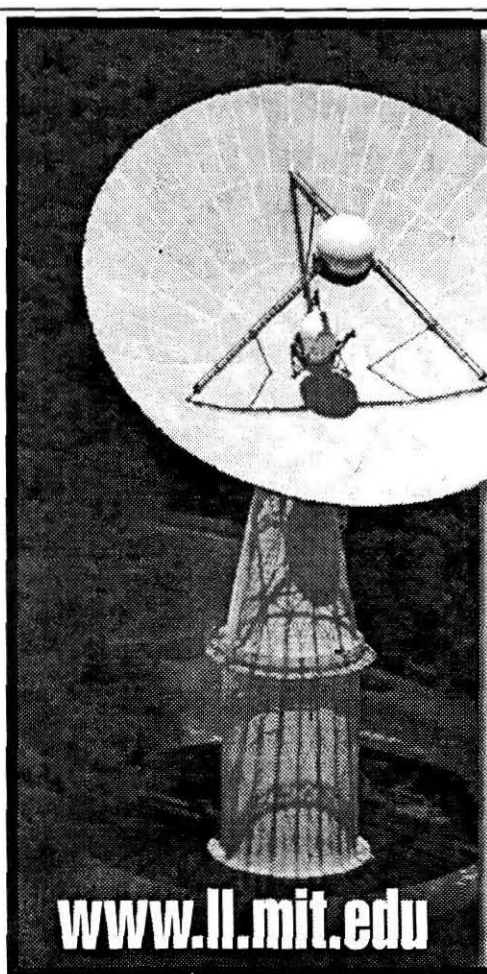
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Announcements

* "Build a Caring Community," by contributing canned and dry food items for the needy in the community. Collection barrels, run by the Caltech United Way Campaign, will be located around campus. This drive runs from November 10th until November 20th.

* All members of the Caltech community are invited to audition for Shakespeare's *Henry V*, TACIT's second-term production. The remaining auditions will be held on November 19th and 20th at 7:30 p.m. in Dabney Lounge. For further information, call Theatre Arts at Caltech, 395-6259.

The Gay/Lesbian/Bisexual Discussion Group meets on the first and third Tuesdays of each month from 7:30 p.m. until 10 p.m. in the Health Center lounge. This is a confidential meeting and does not imply anything about a person's sexual orientation—only that s/he is willing to be supportive in this setting. The group usually discusses a particular relevant topic and then moves on to the general discussion. Refreshments will be served. If you would like more information, please call x8331.

Sparrowgrass Poetry Forum, Inc. is offering a grand prize of \$500 in its new poetry contest. The contest is free and open to everyone, one poem per poet. Deadline is November 30, 1997. Send entries to Sparrowgrass Poetry Forum, Dept. LM, 609 Main St., P.O. Box 193, Sistrerville, WV, 26175. Poets may also submit poems electronically at <http://www.tinplace.com/sparrow> or by e-mail, Sistersv@aol.com.

Beginning November 12, and continuing every Wednesday into December, the Caltech Ballroom Dance Club will be offering free beginner Cha-cha classes, taught by Derrik Bass. Additionally, on Thursdays, the Argentine Tango will be taught by a professional instructor. Cost for the tango class is \$20 for four sessions (\$16 for undergrads). Refreshments and open dance time will follow each session. For more information, see the posters, and the web page: <http://www.caltech.edu/~ballroom>.

Events

The Distinguished Speaker Series of Southern California is moving into its second season. The events will be held at the Pasadena Civic Auditorium on eight different dates, at 8 p.m.. Tommy Lasorda will be speaking on December 11th, Colin Powell on January 21st, 1998, Dominick Dunne on February 26th,

Mints

* denotes a new announcement.

Elizabeth Dole on March 12th, Jean-Michael Cousteau on April 8th, and Maya Angelou on May 13th and June 10th. For more information, contact (800) 508-9301.

Sandy Mortimer explores "Egypt: of Pharaohs and Fables" on Friday, November 14, at 8 p.m. in Beckman Auditorium. This Armchair Adventures travel film showcases both the historical aspects of Egypt, and glimpses into life in the modern cities.

Actors from Theater West will present a dramatic reading of Oscar Mandel's four-act play "Water from an Italian Pump" on Saturday, November 15, at 8 p.m. in Caltech's Avery House. Mandel has written numerous dramas, essays, fictions, and works of poetry, and is currently professor of literature at Caltech. This event is open to the public, free of charge.

* "Where is El Niño?" is the topic for Wednesday, November 19th's edition of Airtalk. This 6-7 p.m. discussion, to be aired on KPCC-FM, 89.3, will feature Professor Andrew P. Ingersoll, and Research Oceanographer William C. Patzert, and host Larry Mantle. Call-ins can be made at 793-3667.

On Saturday, November 15, at 8 p.m., the Caltech-Occidental Concert Band will perform, in Beckman Auditorium. 3-D pictures of Mars will be shown during a performance of Gustav Holst's "Mars" from the suite The Planets. In addition, the program will include music by George Gershwin and excerpts from the musical Ragtime. This event is open to the public, free of charge.

For most Caltech events listed, further information can be obtained by calling 395-4652 or (888) 2-CALTECH, or through the Caltech website, <http://www.caltech.edu>.

Fellowships and Scholarships

* Work Abroad Meeting today, Nov. 14th in the Avery Library at noon: Learn about summer jobs abroad. Lots of handouts and useful information plus student speakers who have worked abroad. Bring your lunch or purchase lunch in Avery and eat in the library. FAR

Chateaubriand Fellowship Program, 1998-9, for graduate students in science and engineering, interested in working in French university. For more information,

write the Embassy of France, Office for Science and Technology, Chateaubriand Fellowship Program, 4101 Reservoir Road, NW, Washington, DC 20007-2176, or see their web page at <http://www.chateaubriand.amb-wash.fr>. Applications are due December 1, 1997. FAR

The National Science Foundation (NSF), in conjunction with the National Institutes of Health (NIH) and the Agricultural Research Service (ARS), welcomes applications to the 1998 Summer Programs in Japan and Korea. All qualified graduate students in science and engineering, including the biomedical, agricultural, and social sciences, are urged to apply. The postmark deadline for applications is December 1, 1997. For more information on the Summer Programs, including eligibility requirements, program descriptions, and application materials, access the NSF/Tokyo Homepage at <http://www.twics.com/~nsftokyo/summer98.html>. FAR

* The International Association for the Exchange of Students with Technical Experience will place juniors, seniors, and graduate students in summer or academic year long paid science/engineering internships abroad. The applications deadline is December 16th. Applications and brochures are available from Fellowships Advising or on the Web at <http://www.aipt.org/iaeste/html>. FAR

The Josephine de Kármán Fellowship Trust is pleased to announce the availability of ten fellowships in the amount of \$7,000 for 1998-99. All studies must be carried out within the United States and expended within the United States. Fellowships are open to students entering their senior undergraduate year and graduate students entering the terminal year of a Ph.D. program in Fall 1998. For application information, visit the Financial Aid Office. Applications must be postmarked no later than January 31, 1998. FAR/UFA

Applications are now being accepted for the 1998-99 National Academy for Nuclear Training scholarships. Scholarships are \$2500 each and will be awarded to eligible students majoring in nuclear engineering, power generation health physics, or chemical, electrical, or mechanical engineering with nuclear or power options. Applicants must be U.S. Citizens, have minimum 3.0 G.P.A.s, and be full-time sophomore, juniors, or seniors in 1998-99. Preference will

be given to students demonstrating specific preparation for employment in the U.S. nuclear power industry. Scholarships are renewable. Applications and information are available in the Financial Aid Office. Applications must be postmarked by February 1, 1998. UFA

* Seniors interested in journalism as a career may wish to apply for the Newhouse School of Public Communications fellowship for Masters programs in journalism at Syracuse University. Students receive full tuition, \$1,100 per month living stipend, up to \$1,500 for moving expenses to Syracuse, NY, \$800 for travel, up to \$1000 for books and fees, and a paid professional internship with a newspaper. Applicants must be U.S. citizens, and members of underrepresented groups in the journalism field. Fellowships Advising can send you more information on the program or contact the program director, Jane Lorraine at jalorrai@suadmin.syr.edu. Applications are due February 10 and GRE general test scores are required for application. FAR

The American Society of Naval Engineers is offering \$2,000 undergraduate scholarships and \$3,000 graduate scholarships for the academic year 1998-99 to students who are interested in naval engineering. Applicants must be U.S. Citizens, must demonstrate a genuine interest in a career in naval engineering, and must be applying for either their last year as an undergraduate or co-op undergraduate program, or one year of graduate study leading to a designated degree at an accredited college or university. The deadline to submit applications is February 15, 1998. UFA

The Backpacker Outdoor Scholarship Program is offering twenty-five \$1000 scholarships in three categories: Outdoor Leadership, Environmental Leadership, and Outdoor Writing. Students may apply for more than one scholarship, but can only be awarded one. The scholarship is open to any full-time undergraduate student, any major, attending a four-year college. The student must maintain a 3.0 G.P.A. average or better and must be a junior or senior the year the scholarship is used. The application and submission requirements are available in the Financial Aid Office. Entries must be postmarked by February 16, 1998. UFA

* California residents who plan to attend graduate school in California should apply for the California

Graduate Fellowship Program. The application deadline is March 2, 1998. Information booklets giving details and application procedures are available from Fellowships Advising. Information is also available on the Web at <http://www.csac.ca.gov>. FAR

Graduate Fellowship for Women and Minorities in the Physical Sciences, the National Physical Sciences Consortium offers awards to graduating seniors who are female or a member of a minority group for Ph.D. level study in Astronomy, Chemistry, Computer Science, Geology, Material Science, Mathematical Sciences, Physics and sub-disciplines of these fields. E-mail npsc@nmsu.edu or call (800) 952-4118 to request an application which is provided in diskette format. FAR

The American Electroplaters and Surface Finishers Society is offering scholarships to undergraduate juniors and seniors and graduate students who are interested in careers in the electroplating and surface finishing industry. Undergraduates must be full-time and must be majoring in metallurgy, metallurgical engineering, materials science or engineering, chemistry, chemical engineering, or environmental engineering. Applications must be submitted by April 15, 1998. UFA

The Jewish Family and Children's Services offers financial support for Jewish individuals and their families. Individuals may apply for up to \$5,000. Special scholarships are available for study in Israel. Eligible students must have financial need, have at least a 3.0 G.P.A., and be residents of San Francisco, the Peninsula, Marin or Sonoma counties, or the Bay Area. There are no deadlines—applications are accepted throughout the year and are available in the Financial Aid Office. UFA

For information on the listed fellowships, assistance with essays, or clarification of questions, contact:

FAR - The Fellowships Advising and Resources Office.

For information, please contact Lauren Stolper at lauren_stolper@starbase1.caltech.edu. To make an appointment, call x2150.

UFA - The Undergraduate Financial Aid Office.

For information, call x6280, or stop by 515 S. Wilson for an appointment.

To submit an event for the Mints, contact mints@caltech.edu by noon on the Monday prior to its inclusion.

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