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

BY WILEN 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.

The contest rules vary from year to year, but the contest is always exciting. Six years ago, the students designed and built electro-mechanical samo-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 students' 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 build 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 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 90 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.

This Week's ASCIT Movie is: Hamlet.

On Wednesday, we located what may be suitable sound balls 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, Kenneth 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 dialogue flows naturally without becoming singsong and annoying. Hamlet feels large, and not just in length: it was filmed on 75mm, 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

IN THIS ISSUE

THE USUAL STUFF
Announcements ........ 12
DISSERT........ 10
The Outside World .... 3
ASCIT Minutes ......... 4
Dean's Corner ........ 6

This Week's Features

Taming of the Shrew .... 6
Logic Puzzle ......... 2
ARC Minutes .......... 7
Crime "n' Incident Beat .... 3
Media Guy ........ 4
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.

\[
\begin{array}{ccc}
3 & 2 & 0 \\
0 & 1 & 4 \\
3 & 7 & 1
\end{array}
\]

Answer to last week's puzzle:

\[
\begin{array}{ccc}
4 & 0 & 5 \\
2 & 5 & 2 \\
6 & 1 & 8
\end{array}
\]

This is not.

\[
\begin{array}{ccc}
3 & 2 & 0 \\
0 & 1 & 4 \\
3 & 7 & 1
\end{array}
\]

Puzzle solution courtesy Tanya Evans
LAEMMLE THEATRES

ESQUIRE
2670 E. Colorado Blvd.
(626) 793-6149

Wings of the Dove

Daily 4:25, 7:00, 9:35 p.m.
Bergen Matinee 1:45 p.m. Sat-Sun

COLORADO
2588 E. Colorado Blvd.
(626) 796-9704

Eve's Bayou

Daily 5:00, 7:30, 10:00 p.m.
Bergen Matinee 2:30 p.m.

RED DOOR CAFE

NEED A PLACE TO RELAX DURING THE DAY...COME CHECK OUT THE RED DOOR CAFE

Sandwiches, pizza bagels, pastries, bagels & cream cheese, ice blended & espresso drinks.

Fruit smoothies AND 14 Trader Joe's juice flavors to choose from.

RABABA CALLAHAN

The Outside World

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.

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.

MARS IN 3-D

Beckman Auditorium
California Institute of Technology
Saturday, November 15, 1997 8:00 p.m.

See 3-D pictures from the surface of Mars from JPL's Mars Pathfinder while the concert band performs Gustav Holst's "Mars" from 'The Planets'.

Other music by George Gershwin, Morton Gould, and Daniel Kessner

Soloists: Brigitte Roth, Vocalist and Joanne Lazzaro, Flutist
Guest Conductor, Daniel Kessner

Free Admission, No Tickets Required!

For Further Information, please contact the Caltech Ticket Office at (626) 395-4652
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 ASCTT 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 assumed 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 Jean Meischenburg 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 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 - CLAES 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 CLAES.

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

--- ADAM VILLANI: MEDIA GUY ---

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 ASCTT 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 assumed 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 Jean Meischenburg 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 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 - CLAES 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 CLAES.

Singapore - Some students from Singapore will be visiting campus and are interested in meeting with student lead-
Coffee House - Adrienne says that business is good. The BoD has earmarked $1000 for further improvements. If you have any ideas, send them 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

Buldee - 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 10:00 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 inklings of interest for an ASCIT sponsored Rap/Hip Hop extravaganza. Word up.

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 disagreement. 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 proposal. Alex is confused about what to do with online voting computer. Luke is confused about what we indi vidual ly consider the prank fund down to $1500. The BoD argues for further improvements. If you have any ideas, send them to ascit@cco. Lori 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
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 House 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 House of Milli-Kan, was subdivided into 7 Houses, the kind one lives in. Each of these Houses prided itself on the manner in which it was different from the others. Yet all followed the same procedure of endorsing 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 House's pages, but now I can't find it again: Kan someone help me find it? (Although not explicitly stated people in a number of the other Houses act as if they had a similar motto: so they selfishly indulge in activities which please them only, without regard of the consequences to others. One of the most obvious 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 tar pits 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 L.A. never mind the injured, or the little boy who had a pocketful 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 wills" is a pretty extreme statement which must be moderated by common sense. As it is said in the Icons of I-Kan "Thou shalt not take advantage of another I-Kan follower". Thou kanst indeed do what thou wilt, as long as thou dost not take advantage of others. All members of the Kan clan have agreed to adhere to the latter pronouncement, when they joined the House 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 House of -Kan is devoted to rational thinking. In fact Milli-Kan was brought to Pass-a-Dean for the explicit purpose of establishing a school at the highest excellence for the sciences, where rational thinking and the truth are the basis for what one Kan do. Beliefs in a vulnerability which underlies 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 at many compounds have tetrapod in the vicinity of 2000°C. A cool flame obtained under special conditions (not a fire 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 monoxyde, which combines tenaciously.
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 design 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 undergraduate students 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. A n other 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, 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 freshman grades.

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

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

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 Cocnes on page 8

The promise of technology is access. The promise of access is information. So it follows that information cannot stop at the border, no matter what constitutes that obstacle. Oracle Corporation is committed to creating seamless networks, and world class solutions. This is your best shot at creating a global revolution in the age of information.

We invite you to explore the world of opportunity at Oracle Corporation. Oracle offers generous compensation and unparalleled benefits. Please forward your resume to: Oracle Corporation, Attn: College Recruiting, 500 Oracle Parkway, Dept 2092, Redwood Shores, CA 94065. Email: hr@us.oracle.com. Fax: (415)251-8424. Equal talent will always get equal opportunity.

Information Session: November 17, 7:00 pm, The Athenaeum (Win a trip to Cancun)

Interview Dates: November 20 and 21

www.oracle.com
ARC, CONTINUED FROM PAGE 7

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

FEATURES

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 converge 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 problem in the EE department is that when classes shift in the morning time and into the afternoon time at 8 am to resolve conflicts, this would involve teaching Ombuds what avenues for communication with the faculty and administration would be most effective, and communication tips.

Random comments included such gems as "Can we make an anti-Cue? 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. AP 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 under way just makes it harder. Professors 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 time 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@coe.

Davi Thota, ARC Secretary

--- CLASSIFIED AD ---

BACK PAIN • Headaches • Sciatica • Arthritis • Neck Stiffness • Hands • Feet • Numbness • Call toll free 1-800-314-2516 for recorded information. Positive results in 4 weeks or $ back.

OUT AND PROUD

Caltech/JPL Outlist

www.cco.caltech.edu/~caloutlist.html

ACADEMY BARBER SHOP

27 N. Catalina Ave., Pasadena

Open Tues.-Sat. 7 A.M.-9 P.M.

(818) 449-1681

Rag Time on Green

RESALE CLOTHING WOMEN

1376 E. Green St. • Pasadena

(818) 796-9924

STUDENT TRAVEL

Stop talking about it, book your flight at

JUST GO.

213-934-8722

1010 Wilshire Blvd, Los Angeles, CA 90025

www.sta-travel.com

We've been there.

--- THE BOSTON CONSULTING GROUP ---

BCG is a premier management consulting firm specializing in strategy consulting

All graduating seniors and PhD Graduates interested in consulting should submit a cover letter, resume, transcript, and SAT/GRE scores to Diane Mellett, PhD, at the Career Development Center.

PhD Graduates

PhD Resume Deadline: November 14, 1997
PhD Round 1 Interviews: December 9, 1997
PhD First Round Interviews: January 6, 1998
PhD Final Round Interviews: January 1998

Graduating Seniors

Associate Resume Deadline: December 5, 1997
Associate First Round Interviews: January 14, 1998
Associate Second Round Interviews: February 17, 1998
Associate Final Round Interviews: March 1998

THE BOSTON CONSULTING GROUP, INC.

The Worldwide Leader in Corporate Strategy

1100 Boylston Street, 7th Floor Boston, MA 02116

www.stboston.com

--- THE BOSTON CONSULTING GROUP ---

BCG is a premier management consulting firm specializing in strategy consulting

All graduating seniors and PhD Graduates interested in consulting should submit a cover letter, resume, transcript, and SAT/GRE scores to Diane Mellett, PhD, at the Career Development Center.

PhD Graduates

PhD Resume Deadline: November 14, 1997
PhD Round 1 Interviews: December 9, 1997
PhD First Round Interviews: January 6, 1998
PhD Final Round Interviews: January 1998

Graduating Seniors

Associate Resume Deadline: December 5, 1997
Associate First Round Interviews: January 14, 1998
Associate Second Round Interviews: February 17, 1998
Associate Final Round Interviews: March 1998

THE BOSTON CONSULTING GROUP, INC.

The Worldwide Leader in Corporate Strategy

1100 Boylston Street, 7th Floor Boston, MA 02116

www.stboston.com

--- THE BOSTON CONSULTING GROUP ---

BCG is a premier management consulting firm specializing in strategy consulting

All graduating seniors and PhD Graduates interested in consulting should submit a cover letter, resume, transcript, and SAT/GRE scores to Diane Mellett, PhD, at the Career Development Center.

PhD Graduates

PhD Resume Deadline: November 14, 1997
PhD Round 1 Interviews: December 9, 1997
PhD First Round Interviews: January 6, 1998
PhD Final Round Interviews: January 1998

Graduating Seniors

Associate Resume Deadline: December 5, 1997
Associate First Round Interviews: January 14, 1998
Associate Second Round Interviews: February 17, 1998
Associate Final Round Interviews: March 1998

THE BOSTON CONSULTING GROUP, INC.

The Worldwide Leader in Corporate Strategy

1100 Boylston Street, 7th Floor Boston, MA 02116

www.stboston.com

--- THE BOSTON CONSULTING GROUP ---

BCG is a premier management consulting firm specializing in strategy consulting

All graduating seniors and PhD Graduates interested in consulting should submit a cover letter, resume, transcript, and SAT/GRE scores to Diane Mellett, PhD, at the Career Development Center.

PhD Graduates

PhD Resume Deadline: November 14, 1997
PhD Round 1 Interviews: December 9, 1997
PhD First Round Interviews: January 6, 1998
PhD Final Round Interviews: January 1998

Graduating Seniors

Associate Resume Deadline: December 5, 1997
Associate First Round Interviews: January 14, 1998
Associate Second Round Interviews: February 17, 1998
Associate Final Round Interviews: March 1998

THE BOSTON CONSULTING GROUP, INC.

The Worldwide Leader in Corporate Strategy

1100 Boylston Street, 7th Floor Boston, MA 02116

www.stboston.com

--- THE BOSTON CONSULTING GROUP ---

BCG is a premier management consulting firm specializing in strategy consulting

All graduating seniors and PhD Graduates interested in consulting should submit a cover letter, resume, transcript, and SAT/GRE scores to Diane Mellett, PhD, at the Career Development Center.

PhD Graduates

PhD Resume Deadline: November 14, 1997
PhD Round 1 Interviews: December 9, 1997
PhD First Round Interviews: January 6, 1998
PhD Final Round Interviews: January 1998

Graduating Seniors

Associate Resume Deadline: December 5, 1997
Associate First Round Interviews: January 14, 1998
Associate Second Round Interviews: February 17, 1998
Associate Final Round Interviews: March 1998

THE BOSTON CONSULTING GROUP, INC.

The Worldwide Leader in Corporate Strategy

1100 Boylston Street, 7th Floor Boston, MA 02116

www.stboston.com
Macmillan Computer Publishing's hot new rebate program is an unlimited green rebate machine that puts money in your pocket for every book you purchase. The more books you buy, the more bucks you get.

Just find the computer book you need, follow the instructions on the rebate form available at Vroman's Bookstore, and you'll receive $10 back for every book with a suggested retail price of $14.99 or higher. No questions. No hassles. Just clear solutions and money back.

695 E. Colorado Blvd.  
Pasadena, CA 91101  
(626)449-5320  
e-mail:vromanbk@aol.com & El Molino

Southern California's Oldest & Largest Independent Bookstore
Unlike class, you might want to show up for this.

Learn to get the job you actually want at JobDirect's JobDrive.

One of life's unfortunate realities is that after college you have to get a job. Some argue you might even want a career. And to make it easier, Visa's sponsoring JobDirect's JobDrive. The JobDrive's purpose is to help seniors entering the job market succeed in getting the jobs they want.

JobDirect's JobDrive will roll into town via a technology bus that has fifteen laptop computers equipped with sophisticated Internet technology to connect candidates with job opportunities. Also at the bus, you'll learn the skills to help you put together a resume that stands out, interviewing skills that will get you the job, and you'll even get some tips that will help you use credit responsibly. So stop by the JobDrive. After all, it's been said 80% of success is just showing up.

JobDirect's JobDrive is coming on Tuesday, November 18th.

www.rankit.com  www.jobdirect.com
The Gay/Lesbian/Bisexual Discussion Group meets on the first and third Tuesdays of each month from 7:30 to 9 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 they are willing to be supportive in this setting. The group usually discussed a particular gay or lesbian issue and moves on to the general discussion. Refreshments will be served. If you would like more information, please call x3831.

Sparrowgus Poetry Forum, Inc. is offering Caltech students its new poetry contest. The contest is free and open to everyone, one poem per poet. Deadline is November 30, 1997. Send entries to Sparrowgus Poetry Forum Dept., LM, 609 Main St., P.O. Box 193, Sisterville, WV, 26175. Poets may also submit poems electronically through http://www.tinplace.com/sparrow or by e-mail, Sisterv@aol.com.

Beginning November 12, and continuing every Wednesday in December, the Caltech Ballroom Dance Club will be offering for its beginner Cha-cha classes, taught by Derek Bass. Additionally, on Thursdays, the Argentine Tango will be taught by a professional instructor. Cost for the tango class is $10 per class or $40 per 4-week term. To register, call (800) 508-9301.

This drive runs from November 15th and 20th at 7 p.m. in Danby Lounge. For further information, call Theatre Arts at Caltech, 395-6259.

The application deadline is March 2, 1998. Information booklets giving details and application procedures are available from Fellowship Administration. Information is also available on the Web at http://www.caltech.edu.

Graduate Fellowship for Women and Minorities in the Physical Sciences - The National Physical Sciences Consortium offers awards in November 1997 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 application materials, see their web page at http://www.caltech.edu.

The National Science Foundation (NSF), in conjunction with the Institute of Human Studies (IHS) and the Agricultural Research Service (ARS), welcomes applications to the Web at http://www.caltech.edu.

For more information, see their web page at http://www.calsage.org/sum89.html.

The Josephine de Kármán Fellowship Trust is pleased to announce the availability of ten fellowships in the amount of $7,000 for 1998-1999. All students must be majors in senior undergraduate or co-op undergraduate programs. Applications are due December 16 and are available from FellowshipAdvisory@HC. Caltech. Applications and brochures are available from Fellowship Advisory or on the Web at http://www.caltech.edu.

The Josephine de Kármán Fellowship Trust is pleased to announce the availability of ten fellowships in the amount of $7,000 for 1998-1999. All students must be majors in senior undergraduate or co-op undergraduate programs. Applications are due December 16 and are available from FellowshipAdvisory@HC. Caltech. Applications and brochures are available from Fellowship Advisory or on the Web at http://www.caltech.edu.

For information, please contact Lauren Stolper at lawren_stolper@stanford.caltech.edu.

For more information, call 6220, or stop by S155. 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.