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*see page 5*

# The California Tech

VOLUME CI, NUMBER 5

PASADENA, CALIFORNIA

OCTOBER 22, 1999

## STEM CELLS RESEARCH COULD EFFECT CURES

BY TECH STAFF

Beckman Auditorium filled early Wednesday night as an audience that included many senior citizens came to hear Caltech Neurobiologist David Anderson discuss the status of his ongoing research involving stem cells from the neural crest and the possibility of using "cells rather than drugs to treat diseases." Stem cells, undifferentiated cells that researchers generally culture from animal blastocysts but are also found in pristine state in adult organisms, are capable not only of self-renewal but also of differentiation into one or more cell types. Some stem cells, dubbed totipotent, can differentiate into any and all tissues that exist within and outside of the embryonic environment when signalled by the right extracellular factors or master genes.

In spite of this fascinating potential, stem cell research has been a contentious topic in politico-scientific forums, and it is now illegal to use government funds to perform research using any cells, stem or otherwise, from human embryonic tissue. Sweden has no such ban, and Anderson noted that there has been very promising results using fetal foreskins and other human embryonic tissue applied in a clinical setting. Anderson does not use any human embryonic cell lines in his lab, nor is he in any way involved with nuclear transfer or organismal cloning technologies.

Anderson, a Research Fellow of the Howard Hughes Medical Institute, has focused his recent research on identifying the extracellular factors that send neural crest stem cells down the path of differentiation into neurons and glial cells. Researchers have speculated that if they could direct the proper factors or stimulate the appropriate gene activation in physiological sites affected by some disorders, they might be able to regenerate damaged tissue or restore degenerated function.

In the question and answer session, Anderson noted that recent research has discovered multipotent stem cells in the human brain, reversing decades of thought holding that once brain cells die, they cannot be replaced. To most Techers' chagrin, Anderson also noted that stress seems to be the foremost killer of brain cells.

BY JUSTIN KAO

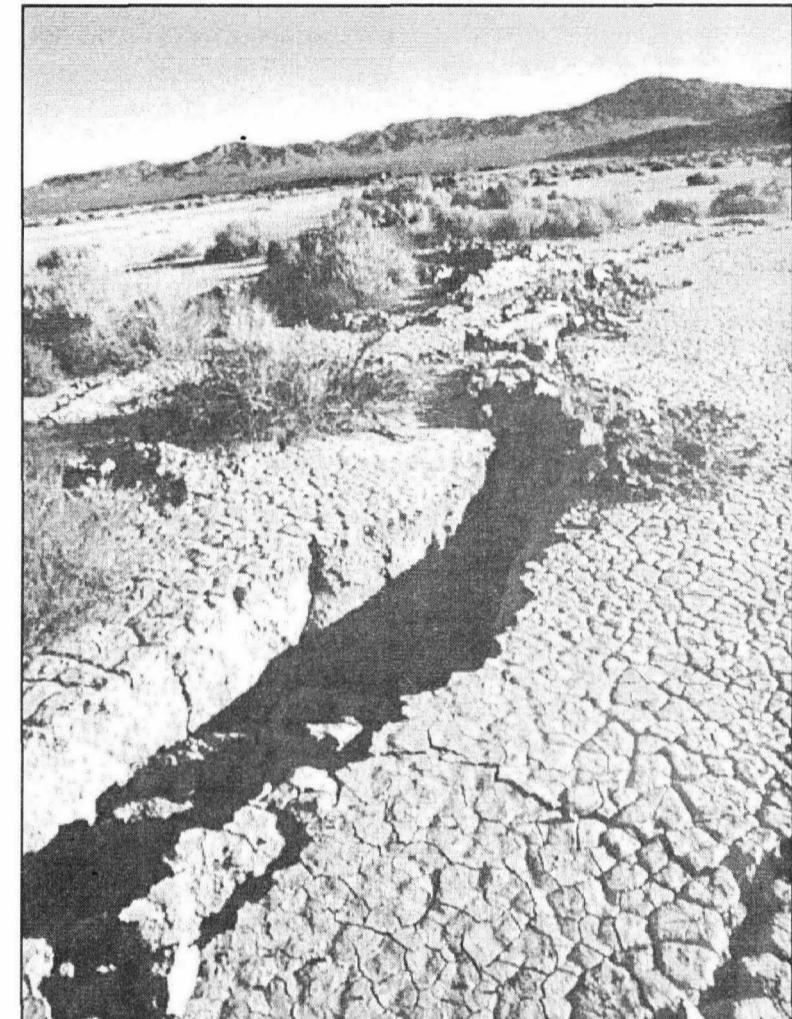
At 2:46 last Saturday morning, Southern California was shaken up by a 7.1 earthquake, centered approximately 30 miles north of Joshua Tree and caused by the formerly "inactive" Lavic Lake fault.

Although it is the third largest quake in California in the last century, the Hector Mine quake caused very little damage and only one death, as its epicenter was far from LA and other large cities. Described by one student as "like being on a ship," the shaking caused by the Hector Mine quake was only a smooth rolling motion by the time it reached Pasadena.

Despite the minimal damage caused by the quake, it has nonetheless shaken things up here at Caltech. The Caltech Seismology Lab, in conjunction with the United States Geological Survey office across Wilson, is well known for its work on earthquakes. As native Southern Californians already know, reporters from all over the LA area descend on Caltech after every major earthquake, and this quake was no exception. One person in Geology and Physical Sciences commented, "they pretty much automatically come here - we joke that you can tell how large the quake is by how many news vans show up." Re-

porters were not the only ones to flock to Caltech's geologists though. Many students, either still up at 3 am or woken up by the quake, streamed towards the geology building in the wee hours of the morning, going right to the source for information on the magnitude and epicenter. Eventually, they were asked to clear out of the media room to make room for reporters. John Marquis, webmaster for the Seismo Lab, commented that as far as earthquakes go, this was a "good" earthquake, causing minimal damage yet still producing large amounts of data. By bizarre chance, the Hector Mine quake was pretty much centered on the largest undeveloped area in Southern California. The only human activities in the area are military exercises by the Marine base at Twentynine Palms. Marquis added that the low damage from this quake hastened the departure of the media, giving the scientists more time to study the earthquake.

Caltech scientists wasted no time in beginning their study. This earthquake was both unusually large and unusually located. The Lavic Lake fault had been surveyed decades ago and determined to be inactive, based on the complete lack of earthquakes along it in over 10,000 years. An earthquake of this



Rupture at Hector Mine

magnitude now occurring on the Lavic Lake fault is rekindling debate on a variety of issues. Some say that the fault was mismapped and really was active after all, while others believe that earthquakes can happen further apart than we think. Caltech scientists are currently in the field to resolve this issue.

Another theory that has been lent additional credence by this quake is that the boundary between the Pacific and North American plates is moving away from the San Andreas and towards various faults in eastern Mojave shear zone that presently relieve only 10-20% of the strain.

## CS1 vision revealed by Epstein, Chandy

BY VIKRAM DENDI

CS1 is among the most populated classes on campus. I can bet there are at least a few frosh who are tapping away into JJ at this moment. There are many love-hate stories related to the course, and especially JJ. The Tech felt that it would be a good cause to approach the CS department to look at their side of the equation, and try to complete the picture. So, I accosted (well, actually I took an appointment) Dr. David Epstein and Dr. Mani Chandy. Epstein is known to every undergrad enrolled in CS1 as THE professor and Chandy is one of the senior-most professors in the CS department.

Despite that there seems to be a change in the way CS1 is taught this term from last year, Chandy said that the curriculum was es-

sentially the same - C is still taught, but the major change was in how best to teach C or C++ or Java for that matter. The department felt that the critical question of computer science is how to teach programming which is much more important than teaching CS. So, they recruited the person who has made it his mission in life to teach programming well: Dr. Epstein. His methods differ from last fall's class, mainly in that JJ is used as an introductory programming language. It is fully the intention of the department to teach C in this term; C++ and Java in CS2, 3.

JJ was developed by Dr. Epstein as a programming language directed at learning programming fundamentals. Although another popular name for it among students is Java Junior, Epstein felt that it was better called JJ.

The first step in this learning process is to learn instructions in JJ that translate into C or Fortran 90 instead from Java. So, it could just as well be called CJ or FJ. The advantage of using a language designed to teach these concepts is that the error messages are designed for people that are learning, whereas languages that expect professional programmers as users provide cryptic error messages, expecting the user to understand the compiler's intent. JJ

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PLEASE SEE CS1 ON PAGE 5

# Letters



## LETTERS TO THE EDITOR



### *Rotation secrets must be unveiled*

Bravo Jason Meltzer! [Innerspace, October 15, 1999] I fully agree that most of the Rotation Rules are a ridiculous perversion. As Jason points out, science is about sharing information and open inquiry; I would venture to add that these are fundamental principles that college should convey.

But at Caltech, one of the first things frosh encounter are the secretive Rotation Rules.

I am particularly concerned about the secrecy of the picks procedure. The only remotely valid reason for keeping the procedure secret is that it might be played. Well, as Jason points out, if that is so then the procedure is flawed and a good, hard, and OPEN look at it is needed to fix it.

If it ain't broke, what have the upperclassmen got to hide? We'll never know, since it is a Rotation Violation to tell anyone how the picks procedures work until they are upperclassmen themselves and have a vested interest in perpetuating a system under which they have all the power. . . Or at least, that's how it appears. And the appearances are menacing indeed. Clandestine meetings with unknown rules the very nature of which one is not allowed to inquire about. (And how is inquiry castigated? Read Sec. V.3e—any punishment the

IHC wants! Hope they are feeling merciful that day.)

Now, I still have enough faith in the Honor Code to believe that the Houses really do try to take into account the preferences of the frosh in a fair way, and I'm not paranoid enough to actually think the upperclassmen really are engaged in a massive conspiracy and that the IHC would sentence someone to death. But as Dean Revel has recently pointed out, the Honor Code is how we are supposed to behave, but not necessarily how we do behave. Therefore, even at Caltech, we must remember Lord Acton's admonition: "Absolute power corrupts absolutely." If it hasn't happened already, it is only a matter of time before frosh get screwed by an abuse of power they don't and can't know occurred.

Respectfully submitted,  
Derrick Bass

### *Rotation secrets in place for a reason*

To the Editors:

Last week's Innerspace column on rotation rules makes an important point. I agree that the rules regarding what can and cannot be said are overly restrictive and confusing, inhibiting the dissemination of useful information. However, I found the attacks on other rules in this column to be less convincing.

Oddly, Jason rails against the alcohol and driving rules,

and then goes on to voice his support for the rule barring extraordinary gifts. These rules are all part of the same overarching principle: to keep the Houses from going to excessive lengths to recruit particular frosh. In fact, the two rules Jason opposes are just special cases of the one he approves. Frosh are unlikely to have easy access to either alcohol or transportation when they first arrive, and so any house which supplied one of these would be offering a valuable gift indeed. To follow Jason's own example, just as it would be "out of line for a House to buy a frosh a sports car," it would be equally out of line for a House to provide a free taxi service or limitless beer supply. Perhaps in this way the rules are redundant, but I think the purpose of this redundancy is to emphasize the kind of favors that should be disallowed.

The more dangerous argument in the column, perhaps, is the one that the IHC picking rules should be opened to public viewing. Jason believes that this information would allow the frosh to make a "fully informed decision." But what kind of information does this provide? The decision each frosh is supposed to be making is that of which house would be a best fit for him, and the ranking sheet is supposed to express the frosh's preferences about this decision so that the IHC can place him appropriately. How exactly do the picking rules inform this decision? Surely they don't contain information about the character

of each house. The only possible information that could be gleaned from the rules is information about manipulating the system to get into a particular house. If the frosh does not know the procedure used to place him in a house, it is something of a gamble to stray from his sincere preferences on the ranking sheet to a ranking that he thought would make him more likely to get in to his top choice. However, if he knew exactly what the rules were, the risk would evaporate as he would know just how his chances depend on his rankings.

Jason has anticipated this argument. "Will they provide such insight into Rotation that people can 'play the system' to get into a particular House? If they would, maybe the system should really be changed!" Certainly I agree that if we had a picking system for which the optimal strategy was the sincere ranking of preferences, there would be no need to keep the procedure secret. However, it is a consequence of Arrow's Theorem in political science that the only such system is a dictatorship. I suppose we could toss the whole ranking sheet idea and have the IHC chair assign frosh to houses by himself, and it would be perfectly safe to open the rotation rules. However, I don't think many people would be happy with this system either. The alternative is to use a system which can be manipulated, and in that case it should be kept secret for reasons which I have already discussed.

A system which allows everyone to have some choice in their own fates and that of their houses requires careful balancing to function successfully. This balance is manifested in the restrictions imposed by the rotation rules. Certainly some fine tuning is still needed with these rules. However, they are not so arbitrary and unnecessary as Jason believes.

Respectfully submitted,  
Travis Hime

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**or by electronic mail to:**  
*editors@tech.caltech.edu*.

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## Y ASCIT?

A.S.C.I.T.  
Minutes

OCTOBER 18, 1999

**Present:** BoD (Danny in at 22:41), Tim Crosby, George Zamanakos, Wren Montgomery, Marc Favata

Meeting called to order at 22:03.

**Dealing with Guests**

Tim requests a check for funding movies once approximately every two weeks this term so we tell him to come back next week since Danny wasn't there yet.

George presents a budget from the ASCIT/GSC End-of-Rotation party and talks about how it was a success. He proposes another ASCIT/GSC party for second term. Garrett proposes pushing the Halloween party funds to this party second term. The BoD agrees that this sounds like a good idea.

Wren complained about the Web and Video Library projects.

**Project Reports**

Coffeehouse - Baldeep says it will be opening next Monday. Really.

ASCIT copier - Derek has contacted Rachel Delgadillo at graphic arts about fixing copier so it should be fixed soon.

Rotation Survey - The IHC will be meeting tomorrow night at

8pm to discuss what to be put in the rotation survey which should come in the mail soon.

Open IHC meeting - This will be held sometime in the future, specifically to discuss rotation.

ISO - The IHC will meet with Parandeh Kia, the director of international students to discuss international students and the house system.

At this point Danny arrives and there is a flurry of check-writing and receipts exchanged.

Marc says "The ASCIT movies suck and they should be cancelled."

Baldeep requests approval of funds to buy a scanner for ASCIT in order to make records from ASCIT less paper based and more web-based. The BoD approves this expenditure.

Meeting adjourned at 22:53.

Respectfully submitted,

Hanna Kim  
ASCIT Secretary

## Y news

by Elisa Chiang

The Caltech Y is an organization that gets involved in student activities. When there's a need by the students of Caltech, we try to do what we can. We hold many events throughout the year that cover a broad spectrum of interests. Last Sunday, we sponsored Tea at Huntington Gardens to encourage undergrad/grad/faculty/alumni/staff integration. The event was a great success with 88 participants. We plan many community service activities like Project Angel Food where we deliver food to HIV patients and Beach Clean-ups. (more info later) We also do cultural events like International week and trips to the Getty Museum. Each year, we sponsor the Y Hike, a week of backpacking before school starts. We also hold other outdoor events like this Sunday's Day Hike. Decompression is a big event we have every term the weekend before finals where we have lots of food and entertainment. This year, we also held the event Compression before school started to get ready for the new year. The Y also helps fund events for other clubs and organizations. We also rent camping equipment and have

discounted tickets to movie theaters and theme parks.

**THIS WEEK:**

Anyone interested in Angel Food, please email Ying at [ying@cco.caltech.edu](mailto:ying@cco.caltech.edu). Food is delivered during the lunch hour on Fridays and takes about 1 hour. This week, we will meet at Steele House at 11:50. You don't need a car, we have transportation.

The first Beach Clean-up of the year will be held this Saturday, Oct 23. We will meet at 9:00 in front of the Red Door Cafe and return around 3:00. We have a budget to provide lunch but you probably want to bring some money. (Depend on how many people go, you may or may not have to pay anything for lunch.) You may want to bring a water bottle. If you want to swim, bring a swimsuit, towel, etc.. We will be going to Venice Beach. Transportation is provided. If you would like to come or want to know more information, please email [polaris@cco.caltech.edu](mailto:polaris@cco.caltech.edu). (NOTE: you do not have to RSVP to come, but it would be nice)

For all people who have FEDERAL WORK STUDY, we can pay you \$12 an hour for any community service work. Sorry, frosh can't work until 2nd term. Sign up at the Caltech Y or call x6163 for more information.

Other Y events for this week include a Day Hike to Mt. Baden-Powell on Sunday Oct 24th. Escape the stress of mid-

terms with a hike to the 9399' summit of Mount Baden-Powell in the Sheep Mountain Wilderness. The 9 mile hike will take us on a loop including Throop Peak and Mt. Burnham. From the top of Baden-Powell, we'll have one of the best view in the Angeles: a 360 degree panorama encompassing mountains, desert, and the ocean. Bring a day pack, lunch, at least 2 quarts of water, trail snacks, hat, sunscreen, sturdy shoes, and a jacket. We will meet Sunday morning at 7:30 am in front of the Red Door Cafe. Transportation will be provided. If you're interested, please email [Erin](mailto:erin@its.caltech.edu) and [elynn@its.caltech.edu](mailto:elynn@its.caltech.edu) by noon on October 22nd.

The Y is also sponsoring a noon concert this Friday. The Zookeepers will be playing at the Winnett Patio from noon until 1:00 pm. To find out more information about the band, their website is [www.thezookeepers.com](http://www.thezookeepers.com).

Be on the lookout for more Y events. The Caltech Y is located at Steele House. Our meetings are every Monday at 12:15. We welcome anyone who is interested in learning what the Y does or who wants to get involved to come. Bring your ideas, your friends, and your lunch.

If you would like to get emails about Y-events, Y-outdoor events, or Y-community service events, please email Elisa at [polaris@cco.caltech.edu](mailto:polaris@cco.caltech.edu) with what time of email list you would like to be placed on.

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# Movie



# The Ticket Stub

By Justin Ho

American Beauty (A-) rated R: for depictions of self-gratification, descent into decadence, catharsis in the midst of a mid-life rejuvenation that is violently cut short

No other movies come to my memory that match "American Beauty" in cinematographic elegance, with the exception of certain black-and-white movies which hold a special significance for nostalgic reasons. Portraying anonymous suburbia and the middle class ordinary as both an attainment of the American dream but concomitantly the source of much dysfunction isn't a novel cinematic invention, but there is a light-dark struggle quality(represented most physically by the lighting scheme) to "American Beauty" which is simply awesome: the dinner conversation where its emotionally-drained participants are bathed in an eery glow while surrounded by darkness; a scene where Burnham and a newly-acquainted druggy friend hide in the shadows from bright illumination a few steps away. Much praise has been given to the film's aesthetics and therefore, this divergence from plot summary or content critique might be developing an already axiomatic point, that is, that "American Beauty" is visually stunning. But I can't emphasize enough how unique "American Beauty" has become while using a setting that is so ordinary. Without the benefit of some exotic locale, like the sub-Saharan Desert in "English Patient" or a crapped-down version in "The Mummy", suburbia has nonetheless never looked more amazing, or depressing.

In addition to being a dysfunctional family psychodrama, there's an under-current of the discrepancy between capitalist success and emotional bliss. To all who chance a casual encounter with Lester Burnham(Kevin Spacey), his life is beautiful. The rose bushes are pruned, the expensive-looking house stands amidst a trimmed lawn, and like a throw-back to friendly

'50s sitcoms, the members of the nuclear family file into the meticulously-spotless family car. But SUVs have the capacity to be suburban assault vehicles, the pretty house is only a facade for confrontation that erupts inside, and the roses are always more tantalizing to the sight than the touch. Therefore, what meaning economic security? In what develops as a movie which highlights the divide between the visually enticing and its harsh reality is the symbol of the rose—as a motif for the seductive and wicked Lolita-esque cheerleader, as a representation of a suburban lifestyle which abounds with materialist abundance but is likewise saturated with thorny resentment. What Lester Burnham delineates is how progressive many have become in subjugating emotion. The mid-life crisis is a typical staple in our culture, but it isn't only a realization of individual mortality which fuels the impulse to degenerate to behaviors past. The need for an emotional surge doesn't come arbitrarily without a rejection of the torpid state, a condition which the middle-ager nevertheless finds him/her-self and for which he/she can cast no blame except oneself. Except in Burnham's case, his apathetic interaction with life itself is also engendered by a suffocating family atmosphere.

The tension among Lester, his Martha-Stewart-on-crack wife Carolyn (Annette Bening), and goth-resembling daughter Jane(Thora Birch) is apparent from the few minutes of the family's morning ritual. The frantic movement lacking any courtesy for other members, the non-existent conversation in the morning commute, and of course Lester's sardonic criticisms of the two vessels he lives with implicates a lot of torment in the Burnham household. But hidden behind a first-person omniscient narrative voice and vapid facial expressions, Burnham's critiques of the family structure never extend beyond his mind, creating a scenario where Carolyn remains either oblivious or in

denial of the crumbling family unit and Jane feels antagonistic toward her stoic parents. Jane's antipathy extends beyond teenage angst, Carolyn's obsession with appearances transcends comfort, and Lester's daily masturbatory practices during his morning shower escape "normal." But while we may be unable to relate to the dying family, Lester invites us at every turn to mock the dissection of his miserable life, just as he seems to do so at every moment.

Yet, Lester is not entirely masochistic. Enjoined by his obsessive wife who ironically and hypocritically tells Lester to play a larger role in their daughter's life, the two sit in the audience of a half-time show of a basketball game featuring a high school dance troupe in which Jane participates. Yet, while she and the other girls perform their interpretive dance, Lester's attention is fixated on the body of Angela(Mena Suvari). In the first of several hallucinogenic fantasies which turn progressively erotic, she beckons him in a flurry of succulent rose petals. Soon, he envisions her suspended from the ceiling above his bed, rose petals slowly floating toward him. As an equally quirky character who is obsessed with being un-ordinary, she welcomes Lester's ad-

vances, much to the chagrin of Jane who had somewhat accepted her best friend's attractiveness and promiscuity. And in Lester's pursuit of Angela, he begins to change his life habits, becoming more vocally resentful of his wife's inattention to emotion and her eschewal of his conjugal advances. In time, he begins to pump iron and under the influence of an introspective teenager who moves into the house next door, begins to smoke pot as well. Meanwhile, Carolyn is tormented by her inferiority to the regional real estate king and her occupation-centric lifestyle, becoming increasingly antagonistic toward herself and her failures. While she wraps herself in her few successes, she only begins to realize her emotional emptiness and impotency while Lester pursues control over his life. In time, their loveless marriage turns only more poisonous.

As Lester seeks greater control over his well-being,

often at the expense of his family's opinion of him, he becomes more the anti-hero.

While the reclamation of his autonomy despite upper management in a slave-driving firm or the abuses of his family is a noble cause, he simply replaces it with a different subservience.

Pot serves as a transient escape

and equally un-enlightening,

and when he quits his job to work at a fast-food joint, he is ultimately more destructive than containing his resentment. To fulfil her desires, Carolyn consummates an affair with her superior rival, though taking precaution to separate the bubble of an impeccable family life with sordid pleasures. Ultimately, her fragile condition is never amended. In the final moments of the film, Lester's catharsis finally implies a rejection of both paths he has taken with a poignant flash of nostalgia. The moments since his happiness, and equivalently his happiness in the past, are irreclaimable, and the ending is somewhat appropriate in so much as highlighting the fall from grace as unforgivable. But the means of attaining the ending are a bit too contrived. In addition, though the portrayal of the stereotypical army sergeant as a patriarch is a departure from more trite representation and cleverly acted it is an odd piece in the puzzle. Though the military family offers an occasional foil to the Burnham family, the elements of the second family do nothing else if only to otherwise illustrate the heterogeneity of suburbia. Nonetheless, the movie is supported by an excellent cast led by Kevin Spacey and Annette Bening. The rest is lovely.



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# News

## CS1

CONTINUED FROM PAGE 1

by using the advanced languages of C, C++ and Java. Chandy added that, after about the first six weeks into this term, JJ would give way to C and that if one is able to write good programs in JJ, they should be able to do so in C without much of a problem. It would also serve as a base for the Object Oriented programming that is the core concept for the second term.

Regarding the initial complaints that students had about the JJ programming environment, Epstein said that these problems seemed to have been solved on their own. The error messages, incompatibility with browsers, etc., are not problems anymore probably because the students have learnt to use the optimum environment required for JJ, and also because there is a command line version of JJ available.

When asked about the course load in CS1, and about how difficult the course is, Epstein replied that there were students who spent a lot of time basically because they were beginners. Those who have programmed before seem to do it much faster. Chandy felt that this observation should be seen in the perspective that we are looking at progress at the end of just four weeks. He felt that at the end of six weeks, the course won't be as rocky, and most of the students would have caught up.

Does this mean that by the end of the course, all the students would be on an equal level as far as their programming skills are concerned? Epstein placed the emphasis of this course on 'responsible programming.' Students who have programmed before but don't have a background in these concepts are as new as the rest. So, at the end of the course, all the students would have learnt something new, and be prepared for other courses that might require good programming skills.

Fielding a direct question on how the department and professors know if a course has satisfied its objectives, Chandy responded that they have different ways of getting feedback. It comes from other instructors whose classes these students go on into, from other faculty on campus who use these students for research, and most importantly from the students themselves as they graduate. He cited what a group of six recently graduated students told him about what they learnt here.

They had felt that the emphasis on 'Careful design' that Caltech CS department places helps the school create some of the best, and most dependable programmers in the country. This emphasis, they had felt, was what is helping create a industry standard in programming: 'Caltech level programming'.

Epstein felt that the course was progressing smoothly. When asked if he had a message to the students, he felt that since it is a pass/fail class, students would not

have too much to worry if they apply themselves to their work. Furthermore, he felt that the students should take the opportunity to say "ok, I know am going to pass this class, but here is my opportunity to go a lot further. I have the support of a whole system: TAs, instructor and other students. I can really dive into programming, and not just do what the assignment says and stop."

On a sign off note, Chandy related his vision for the Caltech CS student. He hopes that the Caltech student would be synonymous with 'thinking programmers', programmers who think and create much more reliable, clean and robust programs than those who just hit the keyboard right away. He felt that every class in the department stresses the fact that careful design gives reliable and better performing programs, and this mindset is what would make the Caltech student stand out in the world. CS1 is where it all starts.

But then again: last night while I was wearily typing out some LISP procedures for a CS assignment in UGCS the night was considerably brightened up by a smiling (and ah so pretty...) young lady who walked in. What made the experience so much more interesting was the Tee she was wearing...

The front simply said:

JJ

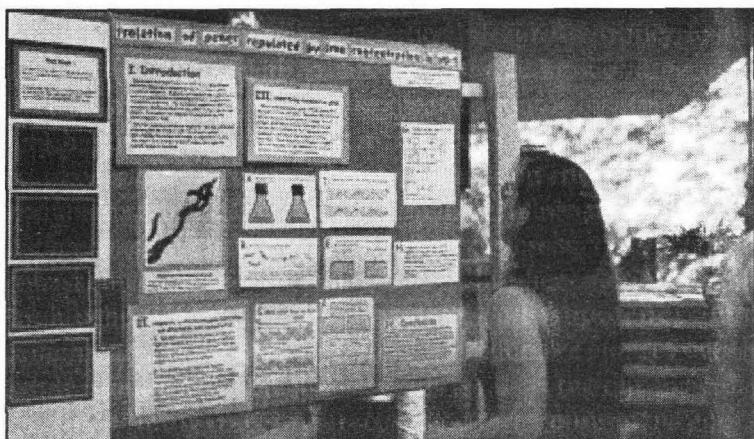
and this is what was on the back (causing me to burst out in laughter): A picture of Jar Jar saying

me's a programmer too!  
nuf said.

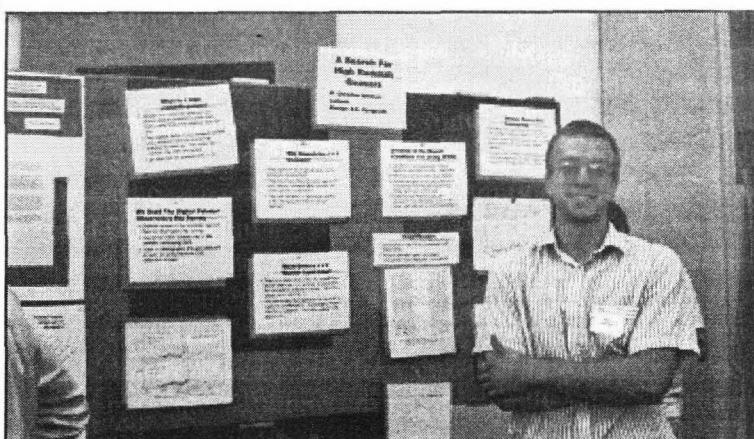
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# Dean

## Dean's Corner

### Of Codes and CoDs!

by Jean-Paul Revel

Two members of the Board of Control and I have just returned from attending a conference organized by CAI, the Center for Academic Integrity, which is self described as "a consortium of 200 Colleges and Universities" seeking "to encourage campus conversations about" Academic Integrity. This foray took us away from the dangers of an earthquake (glad it caused no damage here), right into the teeth of a hurricane (fortunately a mild experience for the three of us). More to the point, however, was that it provided an opportunity to think about our own Honor Code and compare it with that at other institutions, like Duke, Miami, Rice, and a large number of other state and private institutions. While we always knew that Caltech was special, we did not realize how truly unique is the degree of confidence that the Institute places in its students. None of the other schools seem to trust their students to the extent that we do. Of the schools represented at the conference, Rice comes closest perhaps. The Rice student "is placed on his or her honor" ... "not to violate the trust placed in him in any way ("On my Honor," the Rice Honor System booklet, approved May 1958, rev. April 1960). Rice does not insist that a proctor be present during exams, but the person in charge can remain in the room. It also allows students to leave the examination room unescorted. There is even a provision for self-scheduled tests, but they must be arranged for beforehand and must be taken in an assigned room. Other institutions are much less permissive, as becomes evident by reading statements of their Honor Codes. None of the codes are a philosophical statement to live by, as is the case at Tech. No one else but us gives the students so much responsibility. No one goes as far as we do in making the Honor system an educational tool rather than punitive one. No one else divides its judgement of a student's actions into a Neutralization and then a Protection decision. At other institutions, the infractions are closely codified and followed by often harsh punishments. For example at the U. of Miami (I could have picked any of many other Institutions), sanctions go from expulsion from the University, to suspension, final disciplinary probation or strict disciplinary probation, disciplinary warning, reprimand, University service or other appropriate action. One particularly harsh measure,



## Dean

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hotly debated at the conference, struck many participants as a sort of scarlet letter. Cheating on a test can result in being branded by a grade of XF, to indicate that the F was given because of academic dishonesty. This grade remains on a student's transcript. Perhaps this harshness should be put in a statistical perspective. Prof. D. McCabe of Rutgers has found that more than 75% of (male) college students cheat at least once in their academic careers (McCabe, D. & Bowers, W.: Academic dishonesty among males in college; J. of College Student Development, 35, 5-10, 1994) As pointed out at the

conference, the Internet may well contribute to an increase in cheating by making it easy to obtain copies of papers, notes etc., which can be used fraudulently. I was led to muse about what good are grades, if they do not reflect the students' mastery of their subjects? Grades seem to be an end in and of themselves, when they really should be an indicator of a student's understanding of the material. A poor grade in homework or an exam should mobilize a student to redouble his/her efforts. It is frightening to imagine that there are some who do not try to remedy their shortcomings, choosing to cheat instead. A possible consequence of course is that unprepared or poorly trained person will be released in an unwary world. Oh yes, these

people might make it to Medical or Graduate School, but who would want such people to be involved in the design of critical components, which, should they fail, might jeopardize the unwary user? It is rather scary to imagine someone who cheated his way through school as a surgeon in the operating room, or at a terminal, designing airplane wings, or automobile tires. To come back to the conference, I must remark that most of the schools represented were mostly not our peers, in size and in selectivity and in overall excellence. Neither Harvard nor MIT were represented, in fact, no Ivy League school was. So I went to the web to see on my own what such schools were doing to enforce academic discipline. I found that Princeton and Stanford have "Codes", lists of proscribed behaviors. Harvard has an Administrative Board with no student members, and a Judicial Board which includes students. It hears cases outside the purview of the Ad

Board.

(<http://www.registrar.fas.harvard.edu/handbooks/student/chapter4/adboard.html>). MIT on the other hand, does not have a "Code", although they have a COD (Committee on Discipline). A cheating scandal at MIT last year has raised the question as to whether they should adopt a code, perhaps modeled on ours, or that at Wellesley (<http://wt.mit.edu/V112/N0/cheating.00n.html>). While checking out their site, I found another (<http://www.cwru.edu/affil/wwwethics/>) which deals specifically with ethical problems in Engineering and Computer Sciences and might be of interest to readers of The California Tech. All in all it was a most enlightening week end, and does Caltech ever look good!.

A bientot..

*Jean Paul Revel*

Jean Revel

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# Mints

## ANNOUNCEMENTS

**The Gay/Lesbian/Bisexual Discussion Group:** extends invitations to the Gay/Lesbian/Bisexual Discussion group, which meets on the first and third Tuesdays of each month from 8:15 p.m. until 10:15 p.m. in the Health Center lounge. This is a confidential meeting and does not imply anything about a person's sexual orientation. The group usually discusses a particularly relevant topic and then moves on to the general discussion. Refreshments are served. For more information, call x8331.

**The California College Republicans** are currently expanding across campuses in Los Angeles County. It is a volunteer organization that works to get Republican candidates elected, while focusing on issues and putting on events that are of interest to college students. If you would like to start a chapter at Caltech in time for the 2000 election, email Amanda Gregory, Southern Vice Chair California College Republicans, at [agregory@usc.edu](mailto:agregory@usc.edu), or call her at (562) 425-8509.

**The Dean of Students Office needs tutors** in all areas -- help is especially needed with the main Institute requirements e.g., MA1, MA2, PH1, PH2, CH1, etc. The pay is \$8.50 per hour. A strong understanding of the subject matter, patience, and the ability to communicate well are the qualities needed as a tutor. If you are an upperclassman and would like to be a Dean's tutor, please stop by the Dean's Office to see Sandra located in 102 Parsons-Gates.

The Vice President for Student Affairs Office is looking for **readers to assist a graduate student** starting immediately. Computer Science or Engineering majors are preferred. A basic understanding of the subject matter, flexibility, and good communication skills are necessary. Hourly rate paid. Please call or email Jerri Greene, x6321 [jerri@caltech.edu](mailto:jerri@caltech.edu)

Attention **safe crackers**, South Lake Italian Kitchen will crack open their pizza ovens if you can crack open their floor safe. Safe is jammed and a creative solution is needed - only the contents need be intact. Call Donna at 626-792-5984, 524 S. Lake Ave.

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## EVENTS

**Pasadena City College** will be dedicating their new Physical Education/Sports Complex and Aquatic Center. Thu., Oct. 28, 4:00 p.m. The ceremony will be held in the Hutto-Patterson Gymnasium on campus. Refreshments will be served.

The International Dyslexia Association presents "**What is Dyslexia and Related Learning Disabilities?**" Tue., Oct. 26, 7:30 p.m. at Westwood Presbyterian Church, 10497 Wilshire Blvd, W. Los Angeles. For more information, contact Lindsay Kappas, 805-480-0342

Artists Eleanor Antin and Ruth Weisberg discuss "**The Soul of the Artist**" Sun., Oct. 24, 11:00 a.m. at the Skirball Cultural Center, 2710 N. Sepulveda Blvd., LA, CA 90049. Tickets are \$10 (general) and \$5 (students), to order call 323-655-8587.

**Zany Scientist Beckman** presents family show at Caltech, Sat., Oct. 23, in Beckman Auditorium. Paul Zaloom is Beckman, the zany, high-energy scientist on the award-winning CBS series, *Beakman's World*. In the highly interactive show, Beckman uses children and the occasional adult to demonstrate scientific principles. Tickets at \$10 for adults and \$5 for children. For more information, call 1-888-2CALTECH.

"**Melody of China**" performs at the Skirball Cultural Center, Thu., Oct. 21, 8:00 p.m. For tickets, call Tickets L.A. at 323-655-8587.

Fullerton civic Light Opera Co., Inc. presents "**Damn Yankees**" to perform Oct. 24 at 2:00 p.m and 7:00 p.m. and the Plummer Auditorium, 201 E. Capman Ave. in Fullerton, call 714-526-3832 for more information.

The first movie to screen in the German Film Series for Fall 1999 term is *Wir Koennen Auch Anders* ("We Also Know How to do it Differently") (1993). It will show on Wed., Oct. 27, 1999 in Baxter Lecture Hall at 7:30 p.m. This film features English subtitles. For more information, call x3610.

Auditions for **Shakespeare's Merchant of Venice** will be held in Dabney Lounge Fri., Oct. 25, 7:30-10:00 p.m.; Sat., Oct. 23, 1:00-3:00 p.m.; and Sun., Oct. 24, 1:00-5:00 p.m. If you cannot make one of these times, leave a message at the TACIT office, x6259.

**ACM programming mini contest** on Sat., Oct. 23 to determine the three teams Caltech is sending to the competition, will be held in UGCS, if interested mail [wnoise@ugcs.caltech.edu](mailto:wnoise@ugcs.caltech.edu).

Caltech Division of Humanities and Social Sciences presents **Pulitzer Prize Winner Dr. Edward J. Larson** in "The Scopes Trial in History and Legend, at the Beckman Institute Auditorium, Fri., Oct. 22, 4:00 p.m. For more information, contact Marion Lawrence at 626-395-4087 or [marion@hss.caltech.edu](mailto:marion@hss.caltech.edu).

Opening reception for "**Metonym Ocean Size**" by **Jermiah Day**, Sat., Oct. 23 4:00-6:00 p.m., an exhibition of photographs and text which inaugurates Caltech's outdoor art space located behind the Recycling Center on Holliston Ave. Call 395-4248 or 395-6803.

The **Emerson String Quartet** will perform works by Shostakovich, Zwilich, and Beethoven, Sun., Oct. 24, 3:30 p.m. For information call 395-4652.

**Geological and Planetary Sciences Seminar**, Robert P. Sharp Lecture Hall, 155 Arms, Mon., Oct. 25, 4:00 p.m. -- "Dust and Iron: From Arid Lands to the Infertile Seas," Inez Fung, professor of geophysics, UC Berkeley.

## SCHOLARSHIP

**The Jewish Free Loan Association** is offering interest-free student loans to qualified individuals for tuition, books and supplies, and living expenses. Applicants must have completed a minimum of one year of undergraduate study and have a 2.5 GPA or above. For further information, please contact the Jewish Free Loan Association at (213) 761-8830 or (818) 464-3331.

**The John Gyles Education Fund** is offering scholarship awards up to \$3,000 for the 1999-2000 academic year. Applicants must be Canadian or U.S. Citizens, have a 2.7 GPA or above,

and demonstrate financial need. Criteria other than strictly academic ability and financial need are considered in the selection process. To obtain an application, send a self-addressed, stamped envelope to: The John Gyles Education Fund, Attention: The Secretary, P.O. Box 4808, 712 Riverside Drive, Fredericton, New Brunswick, Canada E3B 5G4. Filing dates for mailing documents in 1999 are April 1, June 1, and November 15.

**The Measurement Science Conference (MSC)** has established fund to grant scholarships to students in an Engineering or Science or Quality Assurance degree program. The scholarship program places emphasis on papers or projects that discuss the advancement of measurement science technology. Applicants must be U.S. citizens, have an overall grade point average of 3.2 or higher, completed at least 24 units of upper division courses in Engineering or Science degree or five courses in a Masters Degree Program in Quality Assurance. Current members of the MCS Committee are ineligible for this scholarship award. Also, applicants must be able to attend the Measurement Science Conference luncheon held on January 20, 1999, at the Disneyland Convention Center in Anaheim, California. Applications are available in the Financial Aid Office. For further information you may contact: Rick Careytte, MSC scholarships Chairperson, Teledyne Electronics Technologies, Marina del Rey Facility, 12964 Panama Street, Los Angeles, CA 90066-6534. Entries must be submitted by November 26, 1999.

Students and faculty are invited to submit proposals to the **National Collegiate Inventors and Innovators Alliance (NCIIA)** by December 15 to fund student projects and faculty courses and programs that enable students to pursue the development and steps leading to commercialization of their innovations. Two types of NCIIA grants are offered: Advanced grants of up to \$20,000 to student innovators provide support for the development of new products and technologies with commercial potential and Course and program development grants of up to \$50,000 to faculty to provide support for the creation and

operation of classes and programs. Please contact the NCIIA to obtain additional information at [www.nciiia.org](http://www.nciiia.org) or by phoning Phil Weilerstein, NCIIA Director, at 413-587-2172.

**The National Academy for Nuclear Training** is offering \$2,500 scholarships 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. citizen or U.S. national, considering a career in the nuclear power industry, minimum GPA of 3.0 as of Jan. 1, 2000, at least one but no more than three academic years of study remaining to graduation, and free of post-college obligations or active military service. Applications are available in the Financial Aid Office. For further information you may contact: National Academy for Nuclear Training Scholarship Program, 700 Galleria Parkway, Atlanta, GA 30339-5957 or via e-mail at [nanteap@inpo.org](mailto:nanteap@inpo.org). Entries must be submitted to the Financial Aid Office by Jan. 29, 2000

**Glamour Magazine's 2000 top ten college women** competition has begun. This competition recognizes the exceptional achievements and academic excellence of female college juniors from across the country. It's an ideal opportunity for talented students to be rewarded for their leadership roles on campus and in the greater community. Winners receive \$1000, coverage in the October issue, and the opportunity to meet with top professionals in their field, usually during a few-day stay in the New York City. The competition is open to all full-time juniors regardless of major or GPA. All entries must be postmarked by Jan 31, 2000. Contact the Dean of Student Office, 102 Parsons-Gates, for the application.

To submit an event for the Mints, contact [mints@tech.caltech.edu](mailto:mints@tech.caltech.edu) or mail your announcement to Caltech 40-58 Attn: Mints. Submissions should be brief and concise. The editors reserve the right to edit and abridge all material. Deadline is noon Wednesday. Unless specified, all mints will run for two weeks.