

Frosh Advising Sees a Makeover

By June Zhang
STAFF WRITER

The Faculty Board Committee approved a new Frosh Adviser system this last week. The new system, proposed by the Dean of Students Office and the Office of the Vice Provost, is aimed at increasing student and faculty interactions and will take effect next September.

Under the new system students will see changes in the way frosh advisers are assigned to students. Rather than assigning individual students, thirty-six faculty members have volunteered to take groups of seven to eight freshmen as advisees. The groups will meet and interact several times each term and the frosh advisers will have a budget they are expected to spend on their students to get to know them better. Additional individual meeting will still be provided if necessary.

Next year's frosh advisers are expected to help freshmen with academic issues as well as social and emotional issues dealing with the adjustment from high school to college. Said Barbara Green, Associate Dean of Students, "It'll be a good opportunity for freshmen to get to know at least one faculty member really well... we're really happy to see so many

volunteers." The volunteer faculty members will mainly advise freshmen and may have one or two upperclassmen advisees.

Currently, freshmen are assigned advisers based on their intended majors. The administration lets each department know how many students intend to major in that field, and the department decides how to assign the students to advisers. Instead of assigning freshmen to advisers by their intended majors, there will be lunches and other activities to for each option. The Deans expressed that since freshmen are taking core, this change should not be a problem.

Students have expressed mixed feelings about the current Frosh Adviser system. Sylvia Puglisi, a sophomore, said, "I never met my frosh adviser. At the beginning of the year, the school had one or two get-togethers, and my adviser never attended. For the breakfast I believe she had asked another adviser to stand in for her, but he never showed up either." Others expressed different sentiments. Freshman, Stephanie Tsuei, said, "My adviser answered questions I needed answered. She helped me when I needed help. That's probably what an adviser should do."

Other changes include required training for frosh advisers that



Photo by Tina Ding

Brian Walter, presumably a Caltech alumni, ponders his Caltech experience. Alumni from all classes converged on Caltech for Alumni Weekend and Seminar Day.

will focus on things freshmen should know. In addition, all frosh advisers will attend the Breakfast with Faculty Advisers during orientation. Whether the new Frosh Adviser system encourages student and faculty interactions will be up to the next year's freshmen to decide.

Student Affairs Appoints New MOSH

By Casey Jao
STAFF WRITER

Starting July 1st, Professor Geoffrey Blake will assume the role of Master of Student Houses (MOSH). He got news of his appointment last Tuesday night, shortly before the Caltech Directory email announced the decision. Blake will replace current MOSH Cathy Jurca. "My wife Karen and I are very excited," said Blake.

"I think he'll be good," said IHC Chair Pallavi Gunalan. "He really knew exactly how he wanted to approach the job.... He has a lot of history with Caltech...very optimistic." IHC members interviewed the final few candidates and submitted their recommendations to Vice President of Student Affairs Annelia Sargent, who made the final appointment.

"He's a nice guy...seems pretty interested in how students are doing," said sophomore Tristan Brown, who has Blake as his advisor.

Blake received his PhD in Chemistry in 1986 from Caltech, and, with his wife, was among the first Avery faculty-in-residence. His research group studies problems in cosmochemistry, which he described as "using telescopes and chemistry" to examine young planetary systems. He has been teaching the undergraduate



Prof. Geoffrey Blake

physical chemistry course Ch 21b for nearly a decade.

But not next winter. Instead, he will be devoting that time to MOSH duties. In the short term, Blake plans to "learn from you folks," listening to student concerns and checking out how things are going in the Houses. Planning this fall's frosh camp will also be a big task, especially since it will occur on campus. In the long run, he wants to "start a dialogue about what kind place Caltech can be long term."

Discussions about a more accessible MOSH office are also under way, though no final plans have been cut yet. "The House on Catalina is fairly far removed," he said. "My hope is to have an office close to the Olive Walk," where students can drop by in the evenings.

Caltech Students Part of New Social Experiment

By Joel Nikolaus
STAFF WRITER

In a somewhat uncharacteristic reversal, Caltech students may soon be the subjects of an experiment rather than just curious onlookers. Next year Professor Jean Ensminger, along with students who enroll in An 150, will begin what she hopes will be a long-term study examining the undergraduate social network.

By gathering information on Caltech's social network, Ensminger said she hopes to answer such questions as how information and ideas flow between students and as the study progresses how an individual's position in the Caltech social network predicts that individual's success after graduation. "We are doing something very exciting, from a social sciences perspective," said Ensminger.

Answers from a survey will be used to establish directional relationships between all the members of the community. The experiment is limited to undergraduates partly out of

practical considerations. It is important to have a closed population. While there will be some connections to the outside, Ensminger hopes that the undergraduate community will be relatively self-contained. She acknowledged that it is "never going to be perfect," but she thought that Caltech's

"We are attempting to do something very exciting, from a social sciences perspective."

-- Professor Jean Ensminger

undergraduates would be good for such a study.

Students enrolled in next year's course will help gather data and analyze the information, and students are already helping formulate the experiments as part of a preparatory class. Ensminger

said that before meeting with the students "I did not have it all fleshed out... did not have the background knowledge." Since then the students have helped to refine the project before its debut next winter.

According to Ensminger, most of these students are excited about the project. Sierra Petersen, a senior in the class, said of a diagram from Ensminger's similar work on a tribe in Kenya. "Once you see that [the diagram] everyone here is like I wonder what Caltech would be like... It draws you in."

The houses are the first consideration that come to many students' minds, but Petersen said she is interested to see how the other parts play out. Ensminger said, "Houses will be one element in the social network analysis that will be influential," but that the results may challenge or reaffirm some of those assumptions, and that "there may be some interesting things we discover." Such points

Please see SOCIAL EXPERIMENT, Page 3

In This Issue

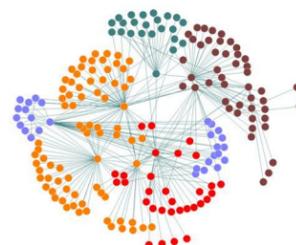


IHC Minutes
page 3

Future of TQFR
Cheney Goes to Jail
ASCIT BoD Minutes
Comics

page 2
page 2
page 3
page 4

Social
Experiment
page 3



The Future of TQFR and CLUE

By **Andrey Poletayev**

VP FOR ACADEMIC AFFAIRS

I would like to take a moment and discuss the reasons why our course feedback systems are in their present state, and what will happen to them in the near future. As of Fall 2008, all campus courses were using the 'faculty' TQFR, with the same set of questions serving for feedback geared towards students, professors and TAs alike. To make way for the now campus-wide TQFR, CLUE was not publicized this year.

The changes to the questions and survey format that the Council on Undergrad Education and Melany Hunt implemented during second term made the surveys more valuable for lecturers and TA's, but made the comments invisible to students. As Casey Jao pointed out in last week's issue, this change all but eliminated the student-to-student functionality of TQFR. This was done partly since a staff member was no longer available to put in the approximately 100 hours of work per term necessary to screen the comments, and partly under pressure from members of the

faculty. This pressure was caused by campus-wide publication of negative feedback that disheartens some faculty and TAs, who receive it despite hard work on their material and presentation. Another argument, according to Melany Hunt, is that almost no surveys publish their comments other than in a "synthesized and depersonalized" form. According to Prof. Hunt, the publication does not encourage constructive feedback and improvements to teaching.

Objectively, students and faculty have different expectations for course feedback content; what is useful for faculty is not necessarily useful for students and vice versa. The term 'constructive feedback' to the faculty is essentially something that will help them improve, but the range of feedback that is useful to students is much wider, as most people look to TQFR for factual information and opinions. The students view the TQFR not as a survey, but more as an informational resource. Therefore,

using the same survey for both audiences has had a detrimental effect on at least one, in this case the faculty.

I have since then communicated with five division chairs about the possibility of releasing the comments through CLUE after screening by a group of students, such as the ARC, or option-specific leadership groups such as AICHE and BUSAC. Because of the above concerns, the PMA and Biology divisions have not allowed me to use this data, HSS has agreed to let us try a pilot program, while GPS and CCE are willing to release information in full to be screened by students. Although this will allow us to recover some of the information from the Winter 2009 term, this approach will not be able to cover all of campus in the future. A proposal to adopt a system similar to one used at MIT, where representative comments are compiled into a public document at the end of the year, has met considerable opposition as well.

We have also explored several

alternatives that would allow publication of student-to-student feedback, such as appending a publishable student-oriented question to TQFR. However, for such a question to yield useful results, it must contain rather explicit directions that would be mimicking the rest of the survey. Splitting all the comment boxes in the current TQFR into student-oriented and faculty-oriented pairs will unnecessarily increase the length of the survey, already a subject of some complaints.

Another solution thus involves permanently separating student-oriented and faculty-oriented feedback between CLUE and TQFR, respectively, and this is the one I am currently looking to pursue. The drawback of this solution is that people will have to fill out two surveys per course, although right now I can hardly envision CLUE surveys to grow to the present TQFR length. Ironically, according to Ted Jou's 2002 report on student governance, the Teaching Quality Feedback Reports (TQFR) were

started and first published in 1974 as a student feedback venue by the ASCIT Educational Policies Committee, which later became the ARC. Some time between now and then TQFR became CLUE, and another incentive from the faculty adopted its name. Since then, the Provost and Registrar offices have taken up running these surveys.

We will upgrade the CLUE surveys to make them more comprehensive, and will advertise them separately. At this point in time, the more precise specifications still have to be ironed out with more student input, and Donut development team needs to be given appropriate resources to make this project possible. The TQFR is progressing towards mid-term evaluations that would be useful in effecting change during the course of one term without a yearlong delay.

I would love to hear what you think about this, so talk to me in person or email me at apolet@caltech.edu.

Torture vs. Beheading?

By **Daniel Alvarez**

UNDERGRADUATE

The extreme left loons that believe Bush and Cheney are war criminals and should go to jail are few, but they are a loud few.

Personally, I am in favor of limited harsh interrogation methods of terrorists, so long as it is only used on people that we have significant certainty are terrorists and the intent is to save American lives. The argument that truly makes my blood boil is when it is said that torturing makes us just as bad as the Taliban and Al Qaeda. I would like someone to tell the family of WSJ reporter Daniel Pearl that we are just as bad as Khalid Sheik Mohammed, the man that admitted to beheading Pearl, for waterboarding him with a doctor present at all times. It is sad that the only way to enrage the far left is by accusing Americans who kept us safe for 8 years. Where was the rage when the video of Nick Berg being beheaded was released on the internet? Where was the rage when terrorists would strap bombs to children and the mentally ill and blow them up in public areas via remote control? Where was the rage earlier this month when Taliban soldiers murdered innocent Afghan civilians and blamed the deaths on a US airstrike? As the far left stands back and watches hundreds of prisoners be freed from the closing of Guantanamo Prison, they rally behind the cause of putting Bush administrators in jail.

As with all things, there are mixed opinions about the effectiveness of harsh methods of interrogation. The far left is outraged because the very few memos released seem to imply that the interrogation techniques were ineffective in extracting useful information. On the other hand, former CIA director George Tenet and the former Vice President have said the methods were effective, possibly saving "thousands of lives". I cannot understand how the advocates of far left ideology, while admitting

that the released memos were hand-picked by the Obama administration and represent but a tiny sliver of the full picture, seem already staunchly convinced that the harsh interrogation methods were useless. I fully acknowledge the possibility that torture is not effective and, if that is the case, it should be stopped immediately. How would the far left respond, however, if it is discovered that the torturing of terrorists prevented another attack on US soil and saved American lives?

The question of course illustrates the fundamental flaw in the far left argument, which is how can you claim to be morally against torture on the basis that it did not work? Obviously such information can only be obtained after the torture has been performed. Furthermore, from a pragmatist standpoint, why would we have continued the harsh interrogation methods for years if absolutely no useful information had been obtained from them? Do you honestly think that Pelosi would have lied to the American people if the released memos were more favorable to the information obtained from torturing? At least Bush officials were honest in what they know about the harsh interrogation techniques.

The Geneva Conventions, which state that "Members of other militias and members of other volunteer corps... fulfil the following conditions: ...That of carrying arms openly; That of conducting their operations in accordance with the laws and customs of war", do not apply to terrorists, just like they do not apply to pirates or other renegades. This is a new kind of war; one that cannot be won by conquering a city. The enemy fights by hiding and attempting to harm the innocent.

After 9/11, the fear of another terrorist attack was high. Virtually everyone predicted that it was a matter of when and not if. George W. Bush and Dick Cheney kept us safe for 8 years. We can debate all day whether or not the ends justify the means, but putting Cheney in jail?... Please.

Cheney Goes to Jail

By **Evans Boney**

GRADUATE STUDENT

I can't believe we're having this conversation. Whether or not self-professed war criminals in our borders should even be prosecuted? If we violate international treaties, those accountable must be punished. Who are we to condemn the Taliban for torture if it's "legal" for us to do the same?

I can't stomach the argument from the right that waterboarding (or walling for that matter) are not torture as defined by the Geneva Conventions. Why? Well, aside from that the US has prosecuted people internationally for the war crime of waterboarding, aside from the fact that we've convicted domestic law enforcers for waterboarding in the past 30 years, aside from the fact that the Enhanced Idiotic Techniques were taken from a program designed to train US soldiers for torture, aside from the clear violation of human rights and return to barbarism in the form of unproven techniques... Well, aside from all of those things, it's torture because of this line in the treaty: "No exceptional circumstances whatsoever, whether a state of war or a threat of war, internal political instability or any other public emergency, may be invoked as a justification of torture." So we either punish war criminals, or we are in clear violation of the treaty.

My main problem with the GOP counterpoint is that it relies, explicitly, on an argument against the Geneva Conventions. This argument, which I'll call the Jack Bauer argument, claims that, if circumstances are sufficiently dire, damn the torpedos, full torture ahead. After all, it worked on TV, so why not in real life? The TV crowd think the two secret documents in Cheney's secret file exonerate him. Except that, in real life, torture is proven not to work. The only thing you know for sure when you torture somebody is they are going to tell you something to get it to stop. It's ambiguous at best, counterproductive at worst. But

even if it did work... are you really suggesting we scrap the Geneva Conventions?

And what's all this crap about Nancy Pelosi? Who cares if she knew? She was unable to do anything in 2002, whether or not somebody came and told her the Bush people were torturing. It's called confidentiality, and to breach it is generally frowned upon... especially on issues of national defense. So, the Bush WH, by informing Pelosi, left her screwed regardless of her response.

What's the discussion about Yoo and Bybee? It's clear their legal opinions were tripe. Heck, Bush administration DoJ officials overturned much of their "logic." They rationalized war crimes after the fact rather than giving the Pres and Vice Pres the bad news. The final decision is the President's, and he had already made his mind up to find a connection between Al Qaeda and Iraq. So he tortured people for countless consecutive days, multiple times a day, against the advice of the lead CIA interrogator, until they told him what he wanted to hear.

One thing that has yet to be discussed is whether or not we tortured anyone to death. If it was a common practice for us to let untrained interrogators beat and drown men within an inch of their life... Well, you don't really have to guess, as there are allegations that more than a dozen men were tortured to death. At Abu Ghirab, a female private gave the thumbs up in a famous picture with a dead body. Now that we know there was legally sanctioned torture going on there... where is the outrage that our country has tortured innocent men to death?

Allowing torture at the whim of the president gives the power of both the executive and legal branch to the executive branch, and oversteps the bounds of our Constitution. If innocent men can be killed legally... what does the US stand for after all?

For a nation with more people in jail than anywhere else in the world, I thought we stood for the rule of law.

The California Tech

Caltech 40-58, Pasadena, CA 91125
advertising e-mail: business@caltech.edu
editorial e-mail: tech@caltech.edu

Editor-in-Chief
Chris Kennelly

Layout Editor
Hanna Liu

Staff
Dannah Almasco
Marissa Cevallos
ZeNan Chang
Tina Ding
Andrea Dubin
Mark Eichenlaub
Andrew Freddo
Anna Hiszpanski
Michelle Jiang
Casey Jao
Natalya Kostandova
Vibha Laljani
Joel Nikolaus
Gloria Tran
Hillary Walker
Wesley Yu

Business Managers
Gabriel Mendoza
Chris Kennelly

Circulation
Aryan Safaie

Adviser
Dr. Gary Libman

The Tech is published weekly except during vacation and examination periods by the Associated Students of the California Institute of Technology, Inc. The opinions expressed herein are strictly those of the authors and advertisers.

Letters and submissions are welcome; e-mail submissions to tech@caltech.edu as plain-text attachments, including the author's name, by Friday of the week before publication. The Tech does accept anonymous contributions. The editors reserve the right to edit and abridge all submissions for any reason. All written work remains property of its author.

The advertising deadline is 5 PM Friday; all advertising should be submitted electronically or as camera-ready art, but The Tech can also do simple typesetting and arrangement. All advertising inquiries should be directed to the business manager at business@caltech.edu. For subscription information, please send mail to "Subscriptions."

Social Experiment

From SOCIAL EXPERIMENT
Page 1

of interest include just how the various houses, and the individuals in them, interact with one another.

While Ensminger is optimistic about the project, she also said, "it could fail." Her biggest concern is that in order for the results to be meaningful the response rate from students has to be "something very close to 100 percent...one of the main determinants of whether this succeeds is the response rate of the survey." Some of the students currently involved with the project, and aware of Techers' attitudes towards surveys, shared those concerns. Most still seemed optimistic. "I think it should go well. Most Techers should appreciate we are doing this for science, not the administration," said Joe Salamon, another student in the course.

The students are working with Ensminger to make the survey as brief as possible, "honing down to the very minimum of questions." There will also likely be some sort of incentive for students filling out the survey. If the experiment goes well, Ensminger said that not only will they have data on the interactions of Caltech in any given year, but will be able to see how the social network changes over time. There will also be four years of data on single individuals.

Combined with other data that can possibly be obtained from the registrar, it will provide a

"Once you see that [the diagram] everyone here is like I wonder what Caltech would be like... It draws you in."

-- Sierra Petersen

broad set of information with which to compare students after they leave Tech.

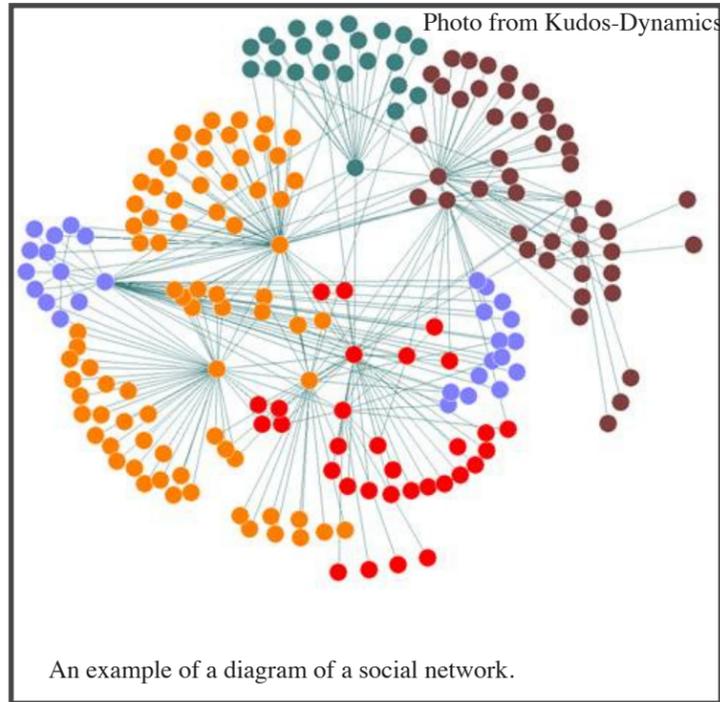
One fact that she was clear to point out was that the project is "not attempting to change Caltech culture." Salamon said she made this fact very clear at the beginning of the class.

Any additional information gathered from the registrar or other sources would only be with student permission. Additionally, Ensminger said there would be "very strict protocols regarding the confidentiality of the data... absolute anonymity," said Ensminger.

The idea is in line with Ensminger's other work involving tribes and groups in Africa. The idea to do a similar study on the Caltech student body came to her seven years

ago. She went so far as to speak to all the house presidents about it, but the project was postponed when she became the Division Chair of H.S.S. and then again by a sabbatical.

In describing the plans behind the project, Ensminger rolled out a large chart with a multitude of colored, interconnected dots. The chart is meant to show the connection between individuals of a Kenyan tribe in response to the question "Who do you go to for advice?" Caltech would produce a similar diagram.



An example of a diagram of a social network.

IHC Minutes May 12, 2009

Weekly Meeting - Page - May 12, 2009

Present: Pallavi, Tim, Sly, Max, Daryl, Nick, Benji, Robbie, Brian, David

Absent: None

Guest: Daniel and Kirit, Paul and Anthony

Paul and Anthony show up at the beginning of the meeting covered only by single-serving cereal boxes. Paul - Cheerios; Anthony - Frosted Flakes.

- IHC met with director of Alumni Fund, Rod Kiewiet, learned about making calls. Pallavi feels it didn't interfere with house endowment stuff.
- Daryl is going to be a UCC at Frosh camp.
- IHC should get their combo to SAC 15 from Mike Raven.

- Presidents should make a list of faculty that have come to dinner and who are going to be invited to dinner and send it to Tom Mannion.
- Women's meetings going on in

houses. If you want one in your house, Helena Kopecky has been organizing them, or you can have someone in your house organize them.

Presidents should hype in their houses:

- Houses can now receive up to \$200 per term for multihouse events. Houses can receive \$100 per house per event.
- Mashup Massive - OH Yeah! is a party with DJ Earworm on May 30.

Upcoming meetings:

- Pallavi, Tim, Will, Mike meeting with Rod Kiewiet to discuss their student lounge proposal on Thursday at 4:15
- Alumni weekend - Blacker and Fleming events in pamphlet; IHC invited Friday 6-7 to alumni event, business casual.
- IHC Meeting Thursday at 5 at Dabney grill to discuss summer housing
- Rollover Dinner Monday, May 25, 6 or 7 pm (Memorial Day)
- Meeting to discuss Prefrosh weekend upcoming

ASCIT Board of Directors Meeting - Minutes May 15, 2009

Officers Present: Anthony Chong, Pallavi Gunalan, Michael Maseda, Maral Mazrooei, Nadia Iqbal, Laura Conwill

Officers Absent: Andrey Poletayev

Guests: Tim Black, Perrin Considine, Sarah Marzen

Call to order: 12:15 PM

Funding requests:

- Harvey Mudd Party: We will have to pay for three total buses for the Harvey Mudd party, at an extra cost of up to \$300. An official vote will occur next week, once the exact amount is known.
- Boba Party: Perrin got MHF funding for the boba party! It will likely occur on Friday, May 29. She requests additional money from ASCIT. Again, an official vote will occur next week, once the exact amount is known.

President's Report:

- New MOSH: We have a new MOSH! His name is Geoff Blake, and he is a professor of cosmochemistry and planetary science and a professor of chemistry.

He's really awesome, and everyone should introduce themselves to him.

- Alumni Weekend: Alumni Weekend is this weekend. Be respectful of the alums, and have fun at house alumni events this weekend.

Officer Reports:

- **V.P. of Academic Affairs (ARC Chair):** The ARC finished guides for freshmen about pizza classes and frosh labs, and discussed the procedure for choosing a Math 1a prof. The ARC also examined course complaints for Bi 157, CS 138 and Ec 11. They held a student-faculty lunch at the Ath, and met with option leadership groups about active leadership.

- **V.P. of Nonacademic Affairs (IHC Chair):** The IHC is finishing up RA and committee appointments. Once they are finished, Pallavi will email the full committee list to the BoD. Pallavi is having issues with nudity at IHC meetings. She will work more strongly to enforce the clothing policy. The IHC was introduced to the alumni fund director and learned about phone bank calls.

- **Operations Director:** Tom Mannion will meet this

weekend or early next week with Mike to discuss the Big T. ASCIT Staff Awards recipients have been chosen and will be announced soon.

- **Treasurer:** Maral will talk with Chris Hallacy, and they will jointly work on club funding.
- **Social Director:** Nadia has made posters and sent out an email about ASCIT Formal. Anthony announced something amazing to the BoD: everyone on the BoD will be going to ASCIT Formal!

Scheduling:

- Rotating dinner schedules will begin next fall.
- Appointments: Sign-upsheets for convocations, MHF, Big T editors and business managers, Totem editors, little t editors and business managers, and DevTeam will be posted soon.

Other:

- Nadia will compile a master calendar of all house social events to minimize overlap between school-wide and house events.

Meeting adjourned: 12:46 PM

Submitted by Laura Conwill
ASCIT Secretary

The Academics and Research Committee is pleased to announce:

2009 ASCIT Teaching and Staff Awards

- **Kerry Vahala** - Professor, Applied Physics and Information Science and Technology
- **Sandra Troian** - Professor, Applied Physics, Aeronautics and Mechanical Engineering
- **Tim Raub** - Lecturer, Geology
- **Chris Umans** - Professor, Computer Science
- **Steve Frautschi** - Professor Emeritus, Physics
- **Lilian Wong** - Teaching Assistant, Mathematics
- **Deepak Mishra** - Teaching Assistant, Biochemistry
- **Chris Wegg** - Teaching Assistant, Physics
- **Charlotte Whited** - Teaching Assistant, Chemistry
- **Peter Daily** - Director of Dining
- **Gilbert Rodriguez** - Dining Staff

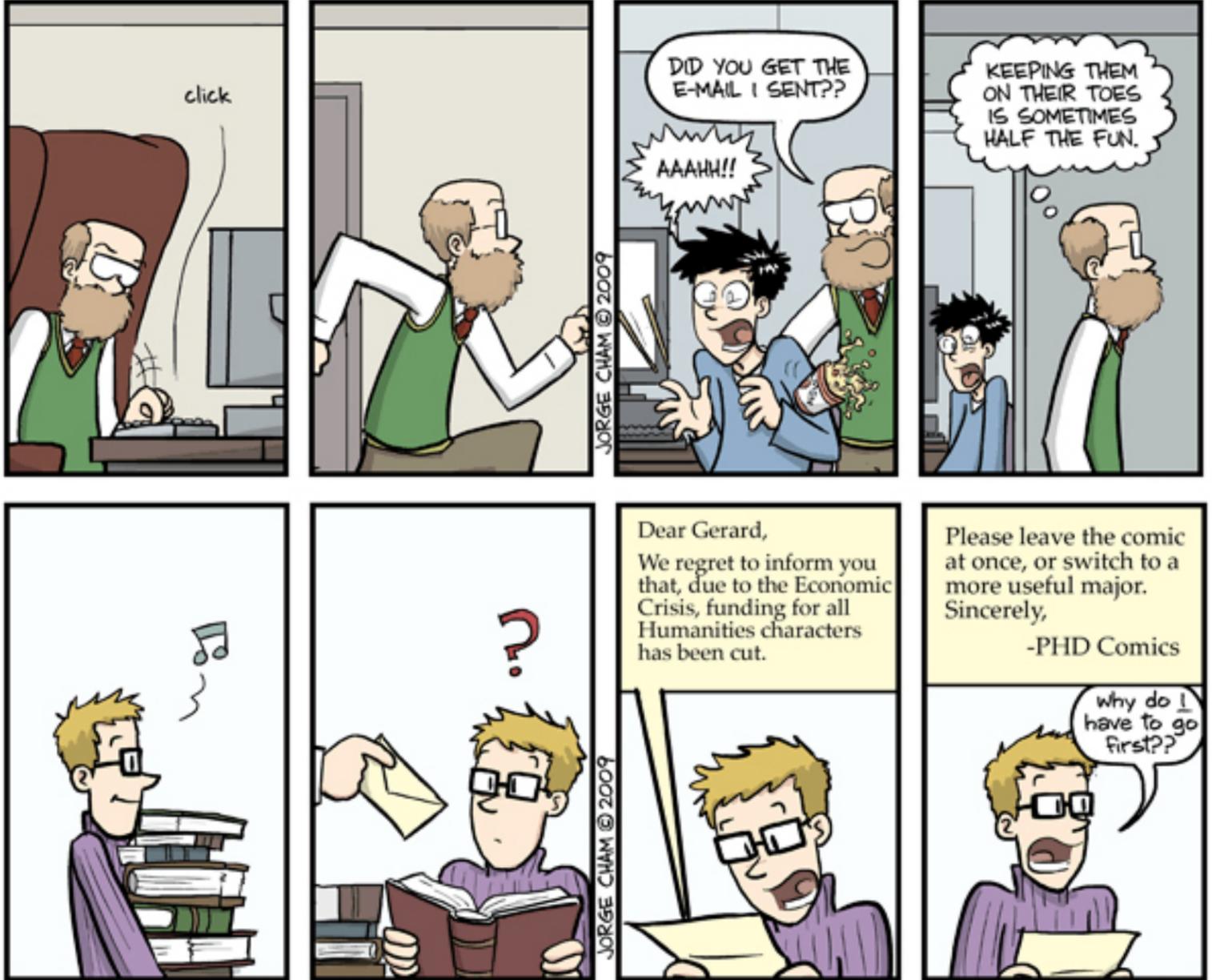
Thank you for your outstanding contribution to this school and us!
Awards Ceremony Date TBA, week of June 1st.

We have received a total of 126 nominations.

The California Tech is obligated, under the ASCIT Bylaws, to publish the minutes of the Board of Directors. The BoD minutes are published as-received and without further abridgment. For unabridged versions of the minutes, consult Laura Conwill, ASCIT Secretary.

The Editors include minutes from IHC meetings and excerpts from the ARC's meetings voluntarily as a service to the community.

PhD Comics



WWW.PHDCOMICS.COM

OF THE POTENTIAL RESPONSES TO MY BRAKES' FAILURE, I DID NOT CHOOSE THE BEST.



XKCD by Randall Munroe

Antarang ... discover the soul of the subcontinent

The OASIS Annual Culture Show

6:15 pm Friday, May 22, 2009
Ramo Auditorium

**MUSIC
DANCE
DRAMA
DINNER**

Out of Context
A capella

Thief! Police!
A Viraj Tendulkar play

Love at
1200 E. California Bollyward

Brought to you by the **Organization of the Associated Students of the Indian Subcontinent** (<http://oasis.caltech.edu>)
All members of the Caltech community are welcome to attend. Entry is free. Dinner will cost \$4.
Sponsored by GSC | ASCIT | ISP | Graduate Office | Student Affairs | Caltech Y

The California Tech
 Caltech 40-58
 Pasadena, CA 91125