



Coffeehouse Shall Return

Students Sans Borders

By **Monorina Mukhopadhyay**

STAFF WRITER

Late Night Eatery Shall Return Second Term

By **Casey Jao**

STAFF WRITER

Until this term, students hungry for a late-night snack could visit Coffeehouse, a cafe run by students all week long from 10pm to 2am at the Red Door. But Coffeehouse never opened its doors this term. Dining Services director Peter Daily decided this past summer to reinstate a longstanding policy that requires a CDS employee to oversee the student workers. Thanks to a protracted hiring process, plans for opening this term fell through.

Coffeehouse is set to re-open Sunday, January 10th, according to senior Max Jones, the student manager. "People should talk to Nadia Iqbal or me if they have any new menu ideas," he said.

"Three years ago there was always a dining services employee working with the students at the coffee house. We are returning to that procedure this year," wrote Daily in an email. Historical reasons aside, Daily decided to reinstate oversight of Coffeehouse because of the liability associated with non-employees using

Caltech-owned equipment to sell food. Complaints about the food quality also motivated the decision, said Jones.

Daily remarked that dining services staff float between the houses to observe student grill masters on Thursday steak/hamburger nights. "They are observing what is being cooked, how it is being cooked, food handling and answering any questions the [grill masters] might have," he wrote.

Hiring a new employee to work during the Coffeehouse hours from 10pm to 2am "has taken us a bit longer" than expected, said Daily. According to Jones "They're in the process of hiring," with some potential candidates lined up. "The fact that they are taking so long is costing students [who want to work] money," said Jones. The presence of the CDS employee also means that fewer space will be available for student employees. As a further consequence, Coffeehouse will only open five days a week compared to the seven previously.

Caltech celebrated the universality of science and the benefit of exchange, both of students and of thought, across borders by marking the November 16-20, 2009 as International Education Week.

A joint initiative of the U.S. Department of State and the Department of Education, International Education Week is an annual five day program that involves colleges, universities, schools, business associations, embassies and community organizations to promote and celebrate international exchange and education. Caltech's IEW was hosted and promoted by the International Student Programs Office.

The event was kicked off on Monday with a noon-time seminar on 'SURF-ing Abroad' where undergraduates Veronica Anderson, Thomas Kwok and Anton Karrman spoke of the experience of spending a summer in another country working at a research lab, either through direct exchange or with an independent mentor. Hosted concurrently with the SURF Office, the event also had SURF Director Candace Rypisi in attendance. Currently, Caltech has summer exchange programs with the National University of Singapore, the University of Iceland, the Indian

Institute of Technology, Kanpur and several universities in Hong Kong, including the Hong Kong University of Science and Technology. The exchange program with University of Iceland began in 2008, and Veronica Anderson was the first Caltech exchange student under this program.

Tuesday's event, titled 'The Fulbright Experience' had graduate students Daniel Hurtado Sepulveda (Mechanical Engineering, Chile), Arnar Bjornsson (Civil Engineering, Iceland), and Mattias Rydenfelt (Physics, Sweden) sharing their experiences as Fulbright scholars at Caltech. The Fulbright Program is one of the most prestigious exchange grants for US students, operating in 144 countries and with 51 commissions.

On Wednesday, grad student and Himalayaholic Pratyush Tiwari, held forth once again on his escapades in the Indian Himalayas, mainly in Ladakh where he, accompanied by Techers Garrett Drayna and Hamik Mukelyan, spent 40 days climbing mountains and making friends. Steeped in beauty and history, Ladakh, known as 'Little Tibet', is the highest plateau of Indian Kashmir. This is the second time in as many years that the International Education Week has featured Mr. Tiwari's travails in the Himalayas. 'Footloose in the Himalaya: Peaks, Passes and Pilgrimage' was held in the Caltech Y Lounge at noon

No event involving international education at a scientific institution could go without the mention of Galileo Galilei, specially in this year. The Keck Institute of Space Science Symposium Series Lecture 'The Human and Scientific Tale of Galileo' by astronomer Alberto Righini of the Università degli Studi di Firenze (University of Florence), Italy was also promoted as part of the IEW. Through actors' readings of his work and testimonials, Galileo's life, his scientific work and his personal life, his greatest assets and biggest flaws were brought to life. Professor Righini, a lifelong Galileo-phile, is the author of the book 'Galileo: Among science, faith and politics' from which he has developed this lecture, initially in Italian, and in English for this event.

Friday was spent in the memory of Caltech alum and former Robert H. Goddard Professor of Jet Propulsion at Caltech Tsien Hsue Shen who passed away on the 31st of October, 2009. Hsue-Shen was co-founder of the Jet Propulsion Laboratory, and ultimately returned to China, where he was a pioneer of the Chinese Missile Defense Program and was popularly known as the "King of Rocketry". This event was hosted by the Caltech C, with a special presentation by Professor Emeritus Theodore Wu.

New Student Taught Courses go to Faculty Board

Investing, American Libertarianism, and Conversational Thai Courses Proposed

By **Joel Nikolaus**

STAFF WRITER

After a lull this fall, student taught courses are poised to make a return to campus.

There are currently three courses in the pipeline: a course on the history of modern Libertarianism, an introductory course on finance and investing, and a course on conversational Thai. All three have already received the approval of the Curriculum Committee and, pending approval by the Faculty Board, will all be offered to students next term.

While the courses are in theory offered every term, there is a lengthy approval process beforehand that involves developing a syllabus, finding a faculty mentor, and gaining the approval of both the Curriculum Committee and the Faculty Board. As such, there were no student

taught courses this fall.

"For a course to be offered in a term we really need to start talking about it at the end of the first month of the term before... There is a process," said Dean John Hall. "It is hard to do over the summer."

Assuming all courses are approved, the number of student taught courses offered during winter term this academic year is already equal to the total number of student taught courses offered last year.

"Small numbers but not insignificant," said Hall, the main administrator in charge of the student taught courses. He hopes that the program will continue to grow. "I expect something like this will take time... We have to think ahead of time, get into the mindset."

"I expect something like this will take time... We have to think ahead of time, get into the mindset."

Dean John Hall

This year, the Academic and Research Committee advertised student-taught courses by email in the second half of this fall term. After the email announcement, senior Ben Flora and junior Tyler Hannasch asked to teach a course on investing; the Curriculum Committee accommodated the request. The other two course

proposals had already been submitted to the Curriculum Committee.

"I plan to encourage submissions for third term by offering help, [and] advertising more," said Academic and Research Committee (ARC) Chair Andrey Poletayev.

The finance course showcases some of defining qualities of student taught-courses. "A lot of people go into finance," said Hannasch, a double major in economics and mechanical engineering. "[This course does] a great job of blending the academic nature with a fun applied look."

The class will involve hands-on homework where student use online software, students to build a virtual portfolio. "You actually get to go out and buy the stocks," said Hannasch.

The course on Libertarianism takes a more traditional approach. Organized by senior Joseph Antognini, he plans to give lectures on the different subgroups of the Libertarian movement. Students would be required to complete outside reading much like other history courses.

All the courses students receive three Performance and Activity credits and are taken pass-fail and typically meet once a week. Student instructors receive a stipend like all TA's. All the courses have advisors and homework.

The opportunity to offer student taught courses will be reviewed by the Faculty Board at the end of this academic year, according to Academic and Research Committee (ARC) Chair Andrey Poletayev.

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Not for Profit?

By Evans Boney

CONTRIBUTOR

I'll begin by mentioning that a copy of this opinion piece has been sent to the regional IRS office, with a letter including the pertinent information about the institute tax code. Caltech is supposedly a non-profit, but I see little difference in how we've handled the crisis and how for-profit corporations handled it. Our commitment to the growth of our endowment appears little different from the profit-motive of so many corporations.

Corporations cut their low-end work force while defending the bonuses and high wages of their executive workers. Only one executive position was cut (Tim Chang), out of around 100 total job losses. The highest paid person at the institute in 2008 was our VP for Business and Finance. No pay cut necessary, the performance of our endowment has been outstanding under his leadership. And, if that is indeed the most important part of the institute, then our compensation does indeed match our priorities. No need to even discuss it when the stock market crashes.

At that point, only the job security of the underlings can

be in play. No need to discuss the import of a bookstore to an college (or to include any student or faculty input). No need to discuss the importance of an ombudsperson to student mental health. Only one thing matters: cutting costs.

Why does it work like this? Well, let me give you a brief rundown of how we draw on our endowment. We pull a percentage, set by trustees, off the three-year rolling average of the endowment principle. This percentage was recently lowered (years before the crash) so that our endowment could grow handsomely year over year. Last year, when the stock market dropped, we were working with a percentage of a 3-year average that was higher than the current year value... meaning it was time to cut some fat. I would, again, like to mention that we did perform well financially in the downturn. Like any good corporation, we had our priorities straight: protect the money! Our endowment is still \$1.4 billion as of July 2009. A job well done. Oh, and since the point when the endowment was last reported, the stock market is up 15%. The endowment has likely risen on the order of hundreds of millions of dollars in the last 3 months,

back towards pre-crash values (and meaning that a 5% draw on the increase alone is over \$5M). And we also got a nice chunk of stimulus money.

But for some reason I've missed the recent check-ins from our leadership, keeping us apprised of the Institute financial situation. For some reason, when we're going back into the black, it's not as important that we add some jobs back as it was when we really, really needed to cut them and have all kinds of public forums about it last winter. At least we don't have any problems with liquidity anymore... let's celebrate our company's great success!

Here are some not-for-profit principles that our institute purports to care about: Student Mental Health and Underrepresented Student Recruitment and Retention. But when it comes time for the rubber to hit the road, what concrete steps have been taken? As a disclaimer, during my time at the GSC, I was personally involved with both issues.

I do not take lightly the events of the past year, but suggest that we not shy away from calling a spade a spade. This year, in the pall of last year's events, student

health plan coverage for mental health benefits has been slashed dramatically (and that there is now a copay where there used to be none). Companies everywhere are doing it to cut costs, how could we possibly hold administrators here accountable to be any different? Aside from the point that our healthcare costs were only rising because of a unilateral decision by administrators to allow undergrads to opt out... I was a bit taken aback at the reference point of administrators. Are we really a company? Do we really want to slash mental health benefits at one of the most stressful institutes in the world just to save a few bucks?

Another thing that it sounds nice to talk about is minority recruitment. We were all told about plans to have a new undergraduate admissions officer dedicated to the issue, as well as a new LGBTQ reading room. I truly am thrilled, the problem is admittedly larger for the undergraduate population and LGBTQ community could certainly use more campus support. But the roll-out misrepresented our overall commitment to underrepresented students recruitment on campus. We slashed funding for MSE and

had cut many resources from the graduate dean's office to the point where they are overburdened and could no longer handle URS recruitment and retention. On the whole, we were misdirected by the flashy things, and had cut URS recruitment and retention disproportionately in net terms. The reason we still are a less diverse community than other colleges is because we STILL are not putting our money where our mouth is. I encourage the Diversity Council to step up to the plate with some new funding for graduate student recruitment and retention of underrepresented students as soon as possible.

Administrators, I encourage you to seriously reconsider the jobs you cut out of hand a year ago. You have lots more money now, and surely can afford to splurge on a few items of interest to student wellbeing. Maybe you could commit to not cutting student mental health benefits for a decade? Maybe commit to bring back an Ombudsperson? Maybe commit to sending a fully staffed booth to every professional URS conference?

Or just stay committed to the bottom line.

The California Tech

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Intellectual Creativity 6: Teaching Assistants

By Brian Merlob

UNDERGRADUATE

This week, the Academics and Research Committee (ARC) and the APC (Academic Policies Committee) discussed how to improve the quality of teaching assistants through primarily structural changes (who is picked as a TA, how many are picked, how they're paid).

Why do these differences in TA quality exist and what structural changes can we make to improve the average TA quality?

First, I would like to note the difference between undergraduate TAs (UTAs) and graduate TAs (GTAs). UTAs have class-specific knowledge, have struggled with the same questions before and thus have some insight into how to help you through the analytical processes, care to some degree about the class and the students (who may literally be living next door) and are often available for more than their official Office Hours dictate, and even those Office Hours are often set at the most important times (I am the night the problem set is due). UTAs also have an in-depth understanding of the undergraduate culture, and are aware of the extension and collaboration policies. GTAs have broader knowledge of the subject, which allows them to bring insights from outside the class and perhaps Caltech to make the subject more engaging. GTAs are also more mature and more qualified for higher-level classes.

Given that, in classes that have UTAs, UTAs are often rated better than their GTA counterparts. GTAs are generally less willing to have later office hours, are not as available as UTAs outside of recitations, and don't have the same in-depth understanding of

undergraduate culture. Graduates sometime feel that undergraduates come to Office Hours and aren't happy until the graduate writes the answer on the board. This is true to some extent - when stressed undergraduates have to choose between their grades and understanding a small part of the whole, they'll choose their grades. With UTAs, this is less of a concern, because it's a common belief that UTA Office Hours end when the students attending understand everything, not necessarily when the Office Hours are officially over. There are definitely good UTAs and bad UTAs, but overall, there is less variability in UTA quality than GTA quality. Great GTAs generally need to stay after recitations to answer questions, extend their Office Hours, send out clarifications, make helpful comments when grading, do the problem sets themselves, prepare for recitations with sample problems, make hand-outs, ask extra questions and show that they care. Bad GTAs show up when required, have not looked at the problem set, and don't seem to care.

One underlying issue is that some GTAs are forced to teach, either because their faculty member needs a TA or wants them to get teaching experience. These GTAs often have to choose between their research and the quality of their recitations, and in almost all cases, their research is more important to their futures. I believe that UTAs could fill these spots and do a much better job, quickly raising the average quality of TAs, and the graduates who previously filled these spots would be much better off. If they wanted to attain teaching experience, a much more conducive way would be to offer 1-unit or 2-unit classes on their research or a topic they

enjoy. Interested undergraduates already take pizza-courses and if more personalized and specific courses (with free food of course) were offered, I think it would be a win-win for undergraduates, graduates, and faculty who want knowledgeable SURF applicants.

Another underlying issue is that some GTAs work to support themselves, especially in divisions that don't get many grants and fellowships. Though I personally despise monetary incentives, I think monetary incentives based on student understanding would quickly result in better student understanding, as staying an extra twenty minutes after Office Hours or preparing for recitations/encouraging attendance becomes an opportunity to make more money.

Currently, there are about 100 UTAs (about a sixth of applicable pool of undergraduates, and about a fifth of the total number of TAs), and anecdotally, I believe more undergraduates want to become TAs, and would work for less money than their graduate counterparts. That's not to say that I suggest replacing GTAs with UTAs, but rather that I would suggest hiring two UTAs at half the salary than one UTA at full salary, resulting in smaller class sizes (more personal attention) and less stress for the UTAs. A side effect of being a TA of a class is that you get to learn the material again, and often better than when you went through the class the first time.

One possible concern is that the TA budget isn't big enough to accommodate more UTAs or to provide incentives for GTAs, especially due to recent financial losses. However, after the recent APC (Academic Policies Committee) meeting, budgetary concerns don't seem to be the limiting factor, especially since

there was an excess of TA funds last year. Professors and faculty who don't know they can request money for more TAs should contact the Executive Officer who should contact the Division Chair. GTAs who feel they are being overworked (they're routinely putting in more hours or more work than the time they've allotted to being a TA) should talk to their faculty or option representatives.

These would be my following suggestions:

- Graduate students who become TAs to get teaching experience should instead teach classes related to their research such that it benefits undergraduates, graduates and faculty looking for knowledgeable SURF applicants.
- More undergraduates should be hired as TAs to shrink class sizes and replace graduate TAs who no longer want to be TAs. They also derive the benefit of learning the material again and better.
- Teaching Assistants should be surveyed to see how much time and effort they have to put in, whether they feel overworked, what policies (extension/collaboration) they want to be more clearly defined, what input they want from undergraduates as to make their recitations/office hours more useful.

If I've made any errors, or misrepresented any group of people, please contact me, because I plan to act on the ideas in this article. As always, my ideas are far from perfect, but I've thought about them for a long time, so I'd love any commentary you'd be willing to give - email me anytime! (Merlob@caltech.edu)

Grad School Advice We Wanted as Frosh

By Nathan Crook and Muzhou Wang

CLASS OF 2009

It might be hard to start thinking about your post-Caltech future at the moment. Maybe you're a freshman and laughing at all your high school buddies who don't know where to apply for college. Maybe you're a junior and you're living problem set to problem set with no time to think about anything else. Regardless, after some finite time you will finish Caltech and will need to figure out your life in the real world, and you will be most successful if you start thinking about it early. Our experiences may be relevant to you since they happened so recently; we both graduated from Caltech in 2009 with chemical engineering degrees. Nathan is now a grad student at UT Austin and Mitchell is a grad student at MIT. We would both like to encourage you to start thinking about your post-Caltech future, and we will give some useful advice especially to those who are considering the grad school option.

Those of you who are not considering grad school might be tempted to stop reading. Before you do that, keep in mind that many more people decide to apply to grad school after pursuing other ventures than the other way around. Some of our friends even took a year off after Caltech and are applying for grad school this year. Students naturally go to grad school because Caltech is as much a research institution as it is an undergrad college. After all, we have 300 active professors and 1200 grad students compared to only 900 undergrads. Our professors are top leaders in their fields who have collected 32 Nobel prizes, and anyone in the academic scientific community has heard of someone at Caltech. On the other hand, few companies will spend serious effort recruiting from our senior class of 200, and our Career Development

Center has just suffered major cutbacks. In short, Caltech is an excellent place for moving on to grad school, but less so for other options. Many who don't initially want to go to grad school find that it actually is the best option for them.

Regardless of your career plans, you should take full advantage of the resources around you by getting involved in research, even as a freshman. Caltech is a great place to get top-notch research experience that will teach useful skills no matter where you go. Extended, successful relationships with professors are useful for advice, extracurriculars, and important letters of recommendation. Undergraduate research is essential for a competitive grad school application, and solid research experience can even make up for a lackluster GPA. We highly suggest spending at least one summer in the SURF program. Remember that over 90% of Caltech applicants get SURFs, which is incredible job security compared to summer internships with companies. Did you know that Caltech pays more to SURF students than to its grad students? SURF is one of the strongest programs that Caltech offers its undergrads, so a SURF should be at least a strong backup summer activity. Most importantly, a positive research experience can actually help you decide your post-Caltech plans. Mitchell actually decided to apply to grad school after his junior year SURF. Through pizza classes (such as Ch 10, ChE 10, Ph 10, Bi 2, and E 2), browsing faculty web sites, etc., figure out what you're interested in and get started!

Another great resource at Caltech is advising. This might be very surprising especially for students who have never seen their faculty advisors. When we were in high school, we received almost weekly advice on college admissions; at Caltech we just

have to be a bit more proactive. Seniors and alumni should be more than willing to lend advice to underclassmen especially about research groups at Caltech and the graduate admissions process. Your research and academic advisors are also great resources on where to apply for grad school especially because they are familiar with your academic record and your interests. You can also contact the graduate admissions officer in your department at Caltech; this person knows what top programs are looking for in applicants. Grad students that you met at Caltech (during a SURF, for example) can also give advice about their experience at other universities. It might sound scary even thinking about the entire application process again, but getting good advice will help you make smart decisions and give peace of mind.

For those of you who are applying to grad school in the near future, here is a brief explanation of the application components in decreasing order of importance:

Research Experience – Stellar research experience will trump a deficiency in any of the below fields. If recommendations from your research advisor indicate that you are ready for graduate-level work, and your advisor is well-known (like everyone at Caltech), then you are almost sure to get in.

Academic record – Do well in your classes. Seriously. It's important.

Recommendations – This is about equally as important as your transcript, and luckily you will need to spend almost no time on it. It should not be difficult finding at least a couple professors who have seen your great work in the lab, on committees, or in classes. Ask them at least 3 weeks before the due date, and some of them might want a CV or personal statement to help them write.

Personal statement – The importance of this essay varies widely. Since whole books have

been written about how to write it, what follows are suggestions that we found helpful. This essay is less an exercise in creative writing than it is an argument for why a given institution is a good fit for you. It can be a way for you to sound mature while communicating who you are and what you are interested in. In this essay, you should describe your previous research experiences in the context of interest in a few professors at that institution. You can also mention long term career goals, especially why you want to go to grad school at all. As engineers, we didn't feel that this essay would make or break our application. However, we do recommend seeking advice from professors, grad students, or friends. Professors are generally excellent writers.

GRE subject test – As engineering students we did not have to take this exam. Friends in the pure sciences have told us that a good score won't help you that much, but a bad score will definitely hurt you. If you're up against a person with similar qualifications, the admissions committee will most likely accept the person with better numbers.

GRE general test – We recommend taking a few weeks to study word lists and practice essays/tests. You should not stress about getting an 800 in verbal, but as scientists and engineers you should get an 800 on math. Some even suggest taking the GRE very early, while you still remember stuff from the SAT. The general test is computer-administered, so during low-traffic months you can schedule and take it within days.

Contacting other faculty – It is debatable whether this really matters at all. Some say it shows interest and planning. Others say the professors don't even have time to read your emails.

If you end up with some extra time first term senior year, you might also think about applying for a fellowship (NSF, NDSEG, DOE, Hertz,...). In general,

these programs pay for all of your grad school expenses and provide a living stipend. Since fellowships give you everything that a professor would normally cover, they give you considerable freedom in choosing an advisor and a project once you are in grad school. Some schools also give you a bonus stipend for receiving a fellowship. Fellowships carry a lot of prestige, and they are especially worth seeking if you are thinking about an academic career. Note that some fellowships have significant nonacademic review criteria. In particular, NSF requires "broader impacts" which includes extracurriculars such as leadership activities and educational outreach. The fellowship advising office at Caltech can offer lots of help on these applications and can even put you in contact with current fellows. They also publish a fellowship handbook which contains lots of useful information: <http://fasa.caltech.edu/Fellowships.shtml>. Even if you don't end up with a fellowship, grad school admissions decisions are made before fellowship decisions, and grad schools tend to look favorably upon fellowship applicants because they show initiative and ambition.

Grad school applications can be a stressful time. We definitely suggest taking care of many of these items early so you don't need to worry about them later. Keep in mind that the worst possible action is to not consult anyone throughout the process. Utilize the resources around you! Also keep in mind that you are the best and the brightest, and every graduate school knows that you come from an academic powerhouse. If you play your cards right, graduate schools will be tripping over themselves trying to get you to accept them; it just takes a bit of foresight and initiative on your part.

ASCIT BoD MINUTES - NOVEMBER 23, 2009

Officers Present: Anthony Chong, Andrey Poletayev, Pallavi Gunalan, Nadia Iqbal, Michael Maseda, Maral Mazrooei, Laura Conwill
Guests: Chris Hallacy, Tim Black, Heidi Sheng

Call to order: 12:14 PM

Funding requests:

- Multi-house funding: Tim Black requests multi-house funding for Blacker and Dabney to see the Rocky

Horror Picture Show. Tim will email Maral, and she will handle this.

- **Drawing Club:** Heidi Sheng would like to request money for the new, eight-member Caltech Drawing Club to use to buy replacement supplies for the Art House. They are asking for \$80 for museum visits and buying supplies. They have been publicizing around campus. The BoD decided \$80 is reasonable, and Maral requested an email with info.

President's Report:

- **Survey progress:** Anthony proposed a BoD email thread for brainstorming question ideas a student career and counseling survey.
- **Norcal trip:** Anthony met up with several of alums in Norcal this weekend. He is hopeful these connections will be helpful in establishing house endowments. Anthony also adds that it's really cold in Norcal.

Officer Reports:

- **V.P. of Academic Affairs (ARC Chair):** The ARC met with the deans to discuss core. Core is doing well; the number of hours for Chem 3a lab was reduced, and the experiments were revised. The ARC also got a microphone for the Ma2a prof. A few proposals for student-taught courses have been approved for next term. The ARC is still discussing ways to improve the TA training program; they're

considering making a set of online videos or increasing incentives for TAs.

- **V.P. of Nonacademic Affairs (IHC Chair):** The IHC discussed stealing and non-RF house possessions. The list on the IHC website wasn't complete, so they added Page's non-RF there. The IHC will send out an email soon about non-RF stuff and stealing. They are going to try to revive the distribution of a pranking primer to undergrads. Finally, the IHC is trying to submit this term's list of house members for house dues.
- **Operations Director:** We need to figure out how much we're charging for the yearbook—everyone is charged every term for the yearbook. We need to see how much money we need for the old ones so we know how much we have for the current yearbook.
- **Secretary:** Many people who attended midnight

donuts did not receive a donut. We will purchase more donuts next time, and will work on enforcing a one-donut-per-person policy.

- **Treasurer:** Checks are ready for clubs! They will be distributed via MSC mailboxes soon. Maral's going to meet with Lorri to review the concert budget. More houses should make use of multi-house funding! Nadia will publicize this more.

Scheduling: Andrey will be running the meeting next Monday.

Other: Andrey talked to frosh and found out they don't remember what they learned during orientation. We need to make sure this information sticks. All of this information is important, so it shouldn't be looked over.

Meeting adjourned: 12:42 PM

Submitted by Laura Conwill
ASCIT Secretary

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 (including any errors) and without further abridgment. For unabridged versions of the minutes, consult Laura Conwill, ASCIT Secretary.

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

TEA SPOTS: ASIAN STARBUCKS

by Andrew Freddo and Dannah Almasco



Grade:
B

Walking Time:
15 minutes

Price Range:
\$

Go here to...
study and enjoy some boba
and snacks.



On the corner of Hill and Colorado, right next to Jack in the Box, a new boba place recently opened up – Tea Spots. Since we're always up for some bubble tea, we decided to drop by and see what snack food they had in addition to drinks. When you walk in, the atmosphere is almost that of a coffee shop. They have couches and tables you can sit at to enjoy your meal and maybe get some work done on their free Wi-Fi! We snacked on potstickers (\$2.73), shrimp wonton soup (\$4.99), fish ball noodle soup (\$5.99), and fried pork steak (\$6.25). We also enjoyed almond milk tea and peppermint milk tea (\$2.25).

The bite-sized potstickers come 7 to an order, and are a great to eat if you are not too hungry or as a starter for the rest of your meal. We asked for medium spice, and the red spice that was on them definitely gave a pretty big kick! Beware if you're sensitive to hot foods. Fortunately, they were not too oily or greasy.

The shrimp wonton soup had a lot of noodles, maybe a bit too much. The wontons had whole shrimps inside, not chopped up processed shrimp. They were pretty fresh and not too rubbery, and there were enough of them for the big bowl of soup. The fish ball noodle soup had the same base as the shrimp wonton soup, and again there was too much liquid and noodles, which diluted the fish flavor. The white fish balls were good, but the taste was overall a bit too simple and bland.

Lastly, we had the fried pork steak, which came with rice, vegetables, and a boiled egg. The pork itself was way too fatty; when we bit in, we often got a chunk of fat, which was very unappetizing. The crust had the same red spice as was on the potstickers, and that part of the dish was good. As for the portion size, there was enough for a dinner if you are hungry. They have a lot of other such combination platters there.

There were a lot of boba choices at Tea Spots, and the variety was good to select from. The quality of the boba was comparable to other places where we have enjoyed it (though definitely much better than Beard Papa's). Overall, if you want to take a break to go and study off-campus, head over to Tea Spots. Ask the cashier for the code for the free Wi-Fi and you can be hooked up! Tea Spots is definitely the kind of place you should go to for a quick snack or late-night boba (they're open until 12 or 1 AM!). So next time you need a spot of tea...head to Tea Spots!

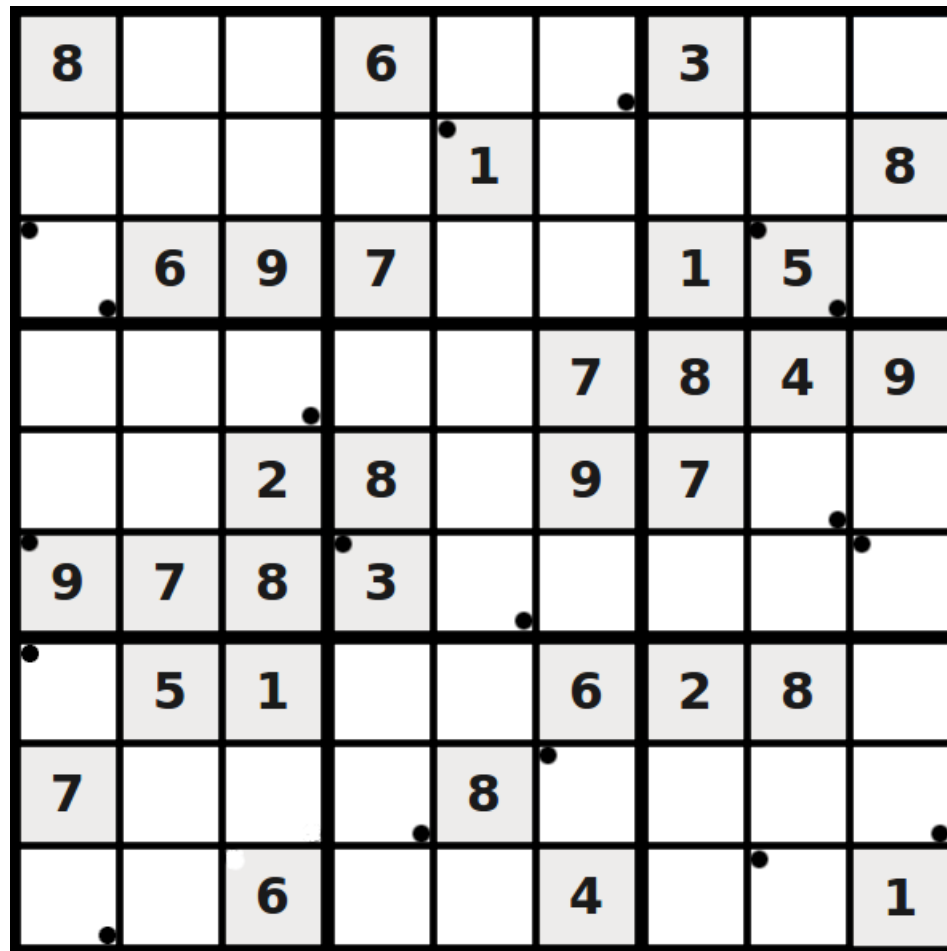




Just Can't Resist

Difficulty: **Easy**

“Okay, you are putting down those resistors and going outside for a while” (227.) Take a break from work and do a puzzle – have less number and more color in life!

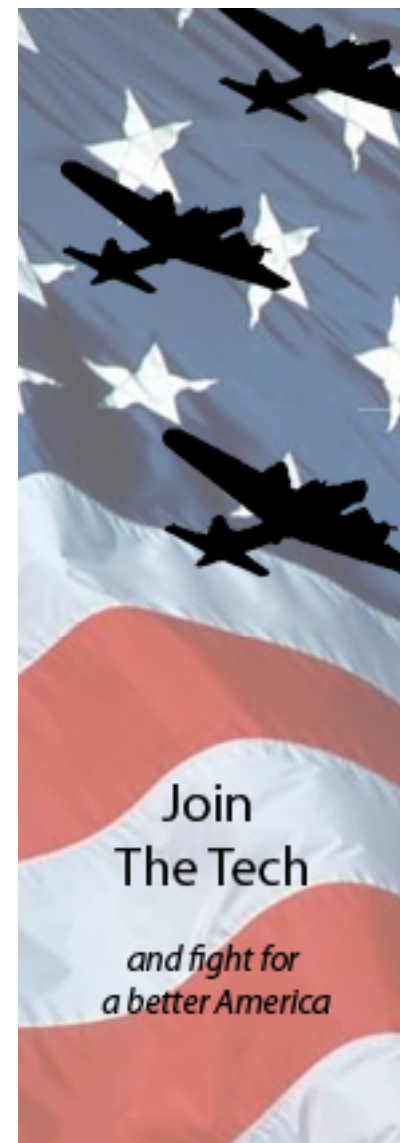


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Top Submissions to WolframAlpha from Caltech

Data provided by WolframAlpha Academic Outreach Team

Query	Count
$x^2 = -9$	18
$x+4y)y'=2x+3y-5$	13
$(1+2i)^i$	12
“IF3”	11
$y''+4y=\cot(2x)$	10
“salmon”	10
“HCP”	10
$\cos(x)$	10
planck's constant	8
“CO”	8
$(x^2-4)/(x^2-9)$	7
“CIO”	7
2 slices of swiss cheese	7
$x^2 \sin(x)$	7
$\sqrt{(2 \cdot 10^{-8} \text{ m}^{-3}) \cdot (1.6 \cdot 10^{-19} \text{ C})^2 / ((9.11 \cdot 10^{-31} \text{ kg}) \cdot (8.85 \cdot 10^{-12} \text{ F/m}))}$	6
“lettuce + 30g mushroom + 30g green pepper + 30g tomato + 4 olives + 2 eggs + tofu”	6
is the cake a lie?	6
$\int (1/x^{5/3}) \cdot \exp(-1 \cdot \log((y/x)^{(2/3)})^2/z)$	6
$e^{(\int 4x/(11x-2x^2+12))}$	6
$(2x+3y-5)/(x+4y)$	6
$xy''+2y'-xy=0$	5
$x/(1+x^2)$	5
tofu	5
speed of sound	5



Chess

By Michael Kaye

CHESS CLUB PRESIDENT



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At the recent Tal Memorial Tournament in Moscow, Vladimir Kramnik (rating 2786) placed first in a field of 10 of the 13 highest rated players in the world. Kramnik was the classical world chess champion from when he defeated Garry Kasparov in 2000 until 2007. He is known for his excellent defensive play, which is showcased in the game of the week, a draw with Vassily Ivanchuk (rating 2757) from the last round of that tournament. Had Ivanchuk won this game, he would have taken first instead of Kramnik. Playing white, Ivanchuk generated a very dangerous attack against the black king and seemed likely to break through, but Kramnik defended excellently and accepted a draw to win the tournament after reaching a superior endgame position.

1. Nf3 d5 2. d4 Nf6 3. c4 e6 4. Nc3 dxc4 5. e4 Bb4 6. Bg5 h6 7. Bxf6 Qxf6 8. e5

This is the Queen's Gambit Declined, one of the most popular openings. Though black could capture white's c4 pawn on move 3, he chooses not to as this gives up some control of the center and allows white to play e4 uncontested, setting up a nice duo of pawns in the center. Ivanchuk's 8. e5 is the first move of the game relatively unexplored move at high levels, giving Ivanchuk a bit of a preparation advantage as he presumably would not have played this move without having studied its consequences before the game.

Qd8 9. Qa4+ Nc6 10. Bxc4 Bd7 11. Qc2 Na5 12. Bd3 c5

Playing ...c5 is an important goal of black in games beginning with this opening, as it disrupts white's pawn control of the center by threatening to exchange pawns on d4.

13. dxc5 Rc8 14. a3 Bxc5

The knight's position on c3 means that the pawn fork on b4 does not win a piece. (15. b4 Bb6 16. bxa5 Bxa5) and the pin on the c3 knight means that it will be lost.

15. O-O O-O 16. Rad1 Be7 17. Qe2 Qc7 18. Qe4 g6

White has forced black to weaken the position of his king with ...g6, justifying an attack on the kingside. In general, moving the pawns in front of the king is undesirable if the opponent intends an attack as there will be unprotected squares behind them. Since pawn moves are irreversible, these weaknesses are permanent and allow the opponent to make plans of attack based on them.

19. Qg4 Kg7 20. Ne2 Bc6 21. Nf4 Rg8

A nice defensive move, giving the king the option of running to f8 and allowing the bishop to come to f8 in some variations if h6 requires defense.

22. Nd4 Kh7 23. h4 Qxe5 24. h5 Kh8 25. Nxc6 Nxc6 26. hxg6 f5 27. g7+ Rxc7 28. Ng6+ Kg8

After a complicated sequence of moves black has survived the attack and holds an advantage going into the endgame. Kramnik

accepts a draw as it wins him the tournament.

29. Nxe5 1/2-1/2

Though it was Kramnik who took home first prize at the tournament, it was Magnus Carlsen who while tying for second with Ivanchuk set a new record by moving into first place on chess.livestats.org, a website that keeps track of players' ratings between releases of the official FIDE ratings list. At 18, he is the youngest ever to achieve this.

The Caltech chess club meets on Friday nights at 8pm in Page dining hall. Players of all levels are welcome; we are happy to teach. If you want to play out the game of the week but are unfamiliar with the notation look at http://en.wikipedia.org/wiki/Algebraic_chess_notation for an explanation of how it works.

Problem of the Week
 Contributed by Rob Rosenberg



White to move and mate in 4

Solution to previous problem:
 1. Rxg7+ Bxg7 2. Rc8+ Kf7 3. Qh5+ Ke7 4. Qe8+ Kd6 5. Qd8#

Write or take pictures
 when you can. We pay
 up to \$30 for news
 articles.

We're flexible.

Join us Monday or Friday at
 noon for free pizza on the Olive
 Walk, or send tech@caltech.edu
 an email if you're interested in
 being a part of the Tech.



Upcoming Games

December 2, 2009
Women's Basketball
 vs. La Sierra
 5:30 PM

December 2, 2009
Men's Basketball
 vs. La Sierra
 7:30 PM

December 4, 2009
Swimming & Diving
 vs. Claremont
 3:30pm

December 5, 2009
Swimming & Diving
 vs. Whittier
 10:30am

December 5, 2009
Women's Basketball
 vs. Johnson & Wales (CO)
 5:00 PM

December 14, 2009
Women's Basketball
 at Hope Int'l
 5:30 PM

December 16, 2009
Men's Basketball
 vs. North Park
 7:30 PM

December 19, 2009
Men's Basketball
 vs. Pacific (Ore.) @ Cal Lutheran
 1:00 PM Cal Lutheran Classic

December 19, 2009
Women's Basketball
 vs. Knox @ Claremont M-S
 4:00 PM Caltech Claremont Holiday Classic

December 20, 2009
Women's Basketball
 vs. Buena Vista @ Claremont M-S
 2:00 PM Caltech Claremont Holiday Classic

Men's Basketball Opener

By Evans Boney

CONTRIBUTOR

The men's basketball team lost their home opener to West Coast Baptist this Saturday 66-50. Caltech was led by Freshman Mike Edwards with 19 points, 6 rebounds, 2 assists and 2 steals as well as Junior Ryan Elmquist, who tacked on 11 points and 5 caroms. Danny Galdamez led the travelling Eagles with 19 points, including several crucial first half three pointers that helped initially widen the deficit.

Caltech (0-2) fought back to narrow the gap to one, but the shooting of the Eagles overwhelmed the defense of the Beavers and West Coast Baptist seemed poised to coast to victory with a halftime lead of 36-23. In the second half, turnovers marred an impressive effort from the Beavers on the glass. Caltech

outrebounded the Eagles 36-30, including 14-9 on the offensive glass, a strong performance led by Freshman Alex Runkel who pulled down 9 boards and Freshman Ethan Boroson, who pulled down 7 boards, as well as pouring in 5 points, 3 blocks and 2 steals. In the end, West Coast Baptist pulled away as the Beavers uncharacteristically missed free throws down the stretch. Caltech had nine more free throw attempts than their opponents, but only hit three more.

"I expect us to hit free throws, though, and we didn't do that. Otherwise, it would have been a different outcome." Caltech Coach Oliver Eslinger said. "We came out with great focus on the defensive end and forced them to call a TO. And I was certainly pleased with the rebounding effort, something we emphasized after being beaten on the boards in the first game."

Also on the positive side, Coach Eslinger noted the community support for the team: "A positive is the chemistry. We have a great bond, and we are all working towards developing this program into a great one. And the fans and community have a part in that, too. When I glanced in the stands, I saw students, faculty, alumni, friends, family, and random folks from Pasadena. That is simply awesome."

On the future of the team this season, Coach Eslinger commented on the upcoming game against Whitman, this Tuesday at 7:30 PM at home:

"Whitman has a good program. They have a great recruiting class, so lots of new players, just as we do. Plus, they have very good returners, so I think they will be well prepared and talented. If we take care of the ball and make shots we are supposed to, we will be fine."



The Weekly Scoreboard

November 5, 2009

Men's Soccer v. SOKA University of America L (2-1)

November 13, 2009

Men's Water Polo v. Whittier L (11-5)

November 15, 2009

Men's Water Polo v. La Verne L (16-6)

Interested in Seeing More Sports Coverage?

Come Write for The Tech.

Ask The Frosh

Dear Frosh,

My roommate acts like he is high all the time even though he is not. He stares at spots on the ground and mumbles nonsense. What should I do?

Hmmm, this is a toughie, but fortunately we've heard of this problem before. Presumably, your distress over the matter is due to the incongruence between your roommate's current state and the way he's acting, so the obvious way to resolve the issue would be to make your roommate

high. However, drugs are bad, and the easy choice isn't always the right one, so we've done a bit more research.

Not having been high ourselves, we looked up cannabis on Wikipedia and discovered that people who are high most often experience "feeling happy, feeling relaxed, feeling silly, feeling scared, or not being able to think clearly...and getting hungry." The description basically matches how we feel on a typical Sunday when we haven't started our math homework yet, so maybe your roommate's a frosh? If that's the

case, there's not much you can do, except maybe help with Problem Set 7, problem 1c.

If it's specifically the staring that bothers you, you could insist that your roommate wear sunglasses all the time. That way, you'll never know what he's looking at! As for the mumbling, whenever he says something nonsensical, dress up like a lemur and prance around singing "Turkey in the Straw." It will put things in perspective; we promise!

Hi Frosh,

Recently I have developed a large fear of opening doors and going through doorways. I also have a sneaking suspicion that all my friends are trying to kill me. What should I do?

Signed,
Paranoid

Hi Paranoid,

We know you've heard it before, but the old adage still rings true: if your friends are trying to kill you, they're probably not your real friends.

If doors scare you, you can always go through windows

instead! Then you can keep everyone guessing, and they can't kill you if they don't know where you are! Plus, windows are smaller, so they'll make you feel more secure. Windows also tend to lead to the more scenic routes out of your room, which will expand your horizons and let you see the beauty in life once more.

"Ask the Frosh" is a weekly advice column for all members of the Caltech community. Email all your problems to askthefrosh@gmail.com.

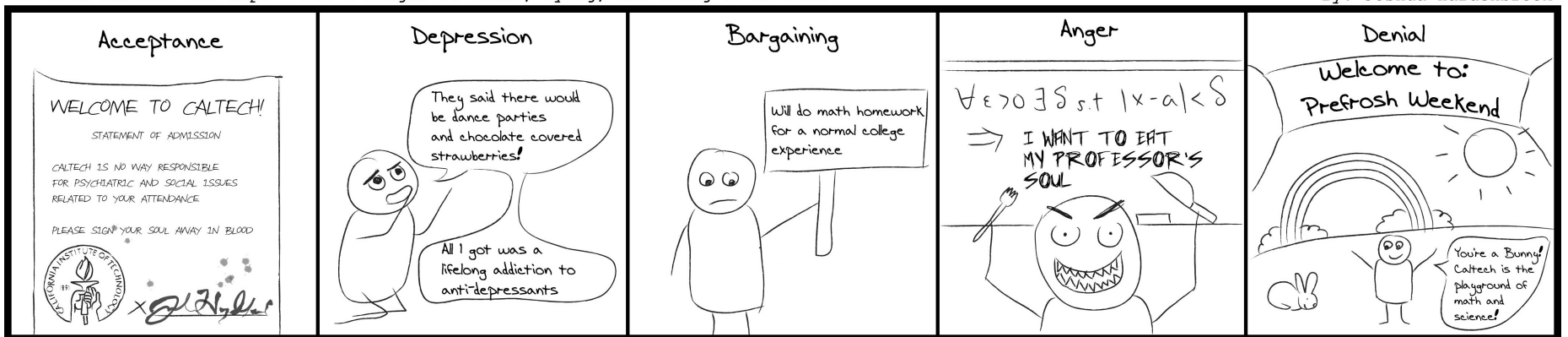
APPLES AND ORANGES

BY REBECCA LAWLER



Caltech: Abandon All Hope - The 5 Stages of Death, Dying, and Going to Caltech

By: Joshua Hardenbrook

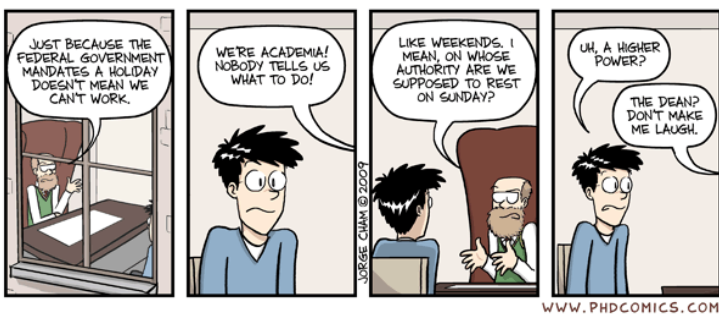


List of Professor-Approved Holidays
When it's ok to not work:

- Christmas (morning)
- The Apocalypse (but you're still going to check e-mail, right?)
- Your Professor's Birthday

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