

## Joanna Newsom intensely imaginative on first album release after five-year hiatus

**CRYSTAL LIANG**  
Contributing Writer

After a five-year hiatus, singer-songwriter, composer and harpist Joanna Newsom released her fourth album, *Divers*, on Oct. 23. It is her most cohesive and conceptually ambitious project to date, dealing with the human experience of time in a series of interconnected vignettes and allegories. Due to the depth and complexity of the lyrics, it's tempting to spend the entire review just analyzing the concepts of the album as one would a work of literature. But the music on *Divers* is as evocative and virtuosic as one would expect from Newsom. In fact, her compositions here are more concerted than ever, for each sound feels as essential as a character in a story. The instruments are not only eclectically chosen, including a bağlama, Rhodes piano and musical saw, but also used to bring out a variety of styles from psychedelic folk to baroque, as

if they are actors performing as different characters in a play.

One of the best examples of this integrated, shapeshifting instrumentation lies in the opener, "Anecdotes." As Newsom enters with the lines "Sending the first scouts over / Back from the place beyond the dawn," it certainly feels like twilight, for her voice is lark-like, the piano and harp clear as the first light, the melody like a gentle awakening. But the scene shifts to a playful communion with a nightjar, its quizzical nature embodied by an English horn à la *Peer Gynt*; then to a grand expanse of minefields and sky and swooping strings. Throughout the track, the arrangement transfigures as the temporally restless narrator flits from past to present to some timeless place.

Out of the ending instrumental of "Anecdotes" emerges a piano whose rambling character takes us to the next track, "Sapokanikan." The lyrics concern themselves with

the geographic location of New York City, once the titular Native American village, and tracks how different events have occurred on that same plot of land over time. The piano arrangement is particularly fluid here, beginning as a jaunty rag in 2/4, then playing dainty arpeggios in a whimsical compound meter, then marcato chords at the mention of parades and finally landing in a melancholy waltz which lends a wistful air to the noble gravity of the climax. The "I" of the first movement of the song transforms into a collective "we," driven out to colonize the West by a desire to leave a legacy — and, as suggested earlier in the more vulnerable first person, the fear of being forgotten. As they set out, mobilized by the military snare drum, we hear the haunting, wooden timbre of a recorder which remains as the song fades out, a reminder of the Ozymandian fate

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## Free EV charging stations to be installed in California parking structure

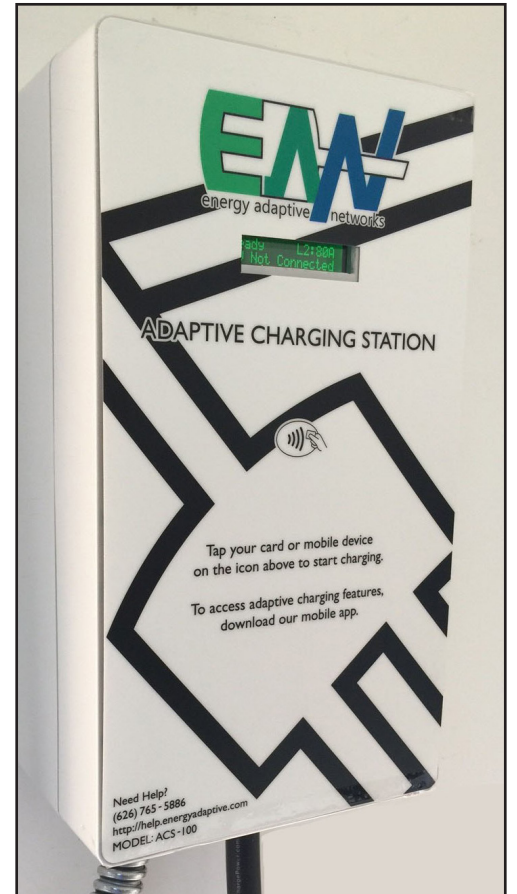
**CHING-YUN (CHLOE) HSU**  
Page Editor

Steven Low, professor of computer science and electrical engineering, was awarded a Caltech Innovation Initiative (CI<sup>2</sup>) grant to fund an electric vehicle charging system on campus. Fifty charging stations and another four handicapped-accessible stations will be open to all Caltech/JPL personnel and visitors starting in January 2016. During the opening phase, charging will be free at the stations, tentatively for the first six months. After the first six months, subsidization and discount of electricity power may be extended.

As electric vehicles become increasingly common, more EV chargers for the public are in strong demand. Traditionally, EV drivers only have the option of charging at home, but the charging speed is significantly restricted due to limited household power supply. The amount of electricity required to fully charge an EV can be more than three times the electricity an average household uses, so EV drivers may have to incur costly upgrades for charging infrastructure at home. EV drivers in apartments and condos have to get HOA approval for stations, which is difficult.

The power supply at each of the new charging stations at Caltech will be seven to 10 times the electricity power consumed by an average household. More technically, the 80-amp level II stations can charge EVs at the rate of 40 mph (which means every hour a car can gain enough electricity to travel 40 miles), doubling the speed of the usual 32-amp charging stations. The current strategy of other EV stations requires users to move their cars once the charging is

complete. However, with more than 50 stations per garage, drivers would no longer need to move their cars after a few hours.



Energy Adaptive Networks electric vehicle charging stations like the one here will be placed in the California parking structure in 2016.

Photo Courtesy of Christine Ortega

The charging stations will be located at the California parking structure near Cahill Center and Brown Gym. In the future, more stations might become available in the Holliston, North Wilson and South Wilson parking structures. The construction will take full advantage of the existing power infrastructure at Caltech to avoid the additional cost of large infrastructure upgrades. The power network could also use EVs as a valuable resource to help balance electricity demand, and to stabilize frequency and voltage in the Caltech microgrid.

The free charging stations at Caltech will be one of the numerous benefits for EV drivers. A \$2,500 California rebate and a \$7,500 federal tax credit are applicable for purchase of EVs. EVs also reduce the cost per mile by 50%, and California law allows single-occupant EVs in carpool lanes. Further information about this project and Caltech-

*Continued on page 2*

## News briefs from around the globe

*A brief list of events from the past week, compiled by the editors*

### NASA unveils wildfire fighting technology

15 minutes after blaze begins, NASA satellites can detect and alert responders to wildfires [TIME]

### Canadian couple cancels wedding to aid Syrian refugees

\$17k raised in lieu of wedding gifts to be put toward sponsoring a family of four [BBC]

### Occidental students occupy admin. building over racial inequality

14 demands issued by students, including President Veitch's resignation [LA Times]

### France bombs ISIS strongholds in Syria

20 bombs dropped on Raqqa region, destroying all targets; no civilian casualties [CNN]

### Chipotle *E. coli* epidemic spreads to six states

45 reported infections with 16 hospitalizations, including two in California [TIME]

### House passes bill to block Syrian refugees from entering U.S.

67% voted for the bill, including 47 Democrats and 242 Republicans [CNN]

### Hotel in Mali placed under siege by terrorists

21 killed, over 170 kept hostage when two assailants entered building at 7 a.m. [CNN]

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# Caltech Innovation Initiative grant to fund EV charging system

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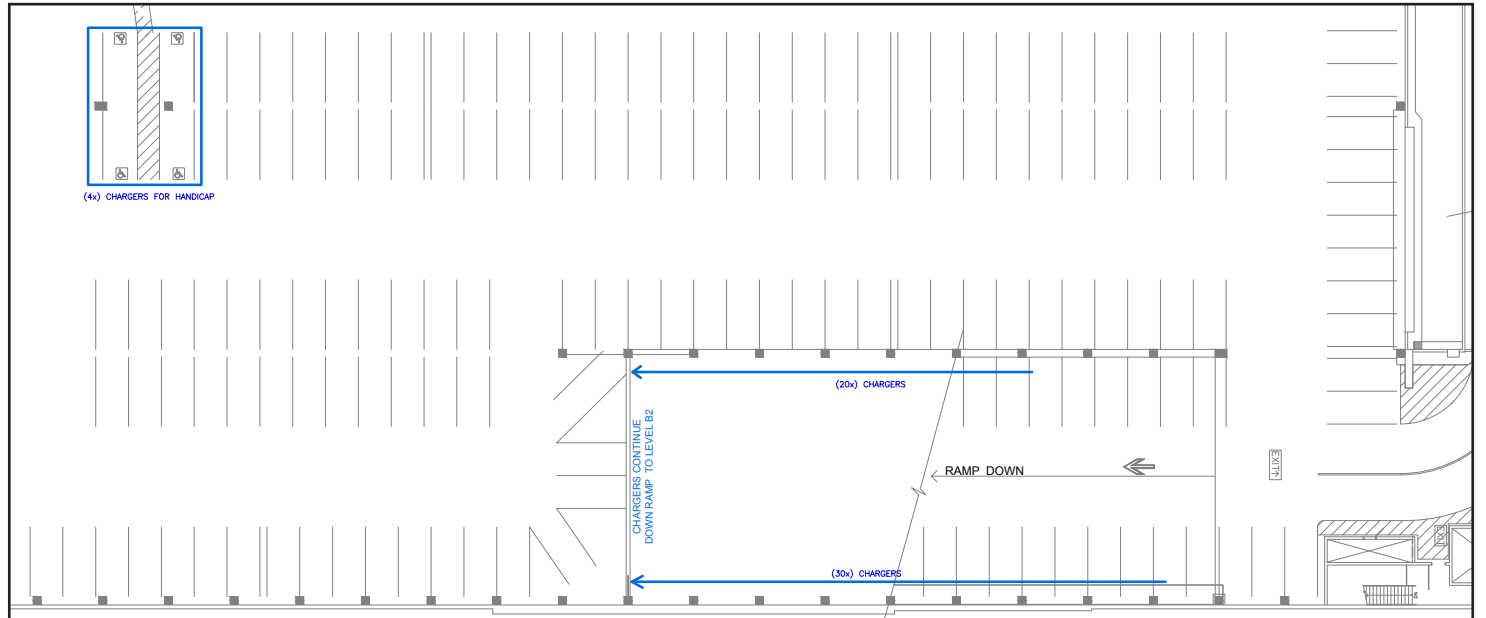
affiliated discount of leasing and purchasing of EVs may be found at <http://ev.caltech.edu/>.

The CI<sup>2</sup> (Caltech Innovation Initiative) program is an internal grant program sent out by the vice provost for research every year, supporting high-risk but high-reward projects that address significant technological challenges in the world. Professor Low's smart grid research group at the Caltech Computing + Mathematical Sciences Department focuses on both physical infrastructures and algorithms behind power networks. Caltech is one of the pioneers in smart grid research, and has filed seven related provisional patent applications. While being a practical application of new research advancements, this project will also gather useful data for further theoretical research. A first-time user needs to input the specifications of the vehicle through a smartphone app, but after that the user only needs to input estimated travel time and distance on a

daily basis, and the system automatically predicts the amount of energy needed. These data will prove valuable insights to research on the scheduling algorithm

behind the smart grid system. In addition to academic values, the EV charging system is also in great market demand, and has the potential to be

commercialized in the near future. The active use of the 54 new chargers on campus will thus create a win-win situation for both researchers and users.



The group has drawn a floor plan of where the charging stations will be placed in the parking structure on California Blvd. Photo Courtesy of Christine Ortega

## Caltech Y Column: Upcoming events and volunteer opportunities

### CALTECH Y

The Caltech Y Column serves to inform students of upcoming events and volunteer opportunities. The list is compiled by Neera Shah from information given by the Caltech Y and its student leaders.

Founded by students in 1916, the Y was organized to provide extracurricular activities planned and implemented by students as an opportunity to learn leadership skills and discover themselves. The mission of today's Y remains the same—to provide opportunities that will prepare students to become engaged, responsible citizens of the world. More information about the Caltech Y and its programs can be found at <https://caltechy.org>. The office is located at 505 S. Wilson Avenue.

#### Upcoming Events

##### 1. Caltech Y Centennial T-shirts

Pick your T-shirts up at the Caltech Y | 505 S. Wilson

It's the Caltech Y's Centennial Year and we are celebrating with Caltech Y Centennial T-Shirts! The pillars of the Caltech Y are Service (purple), Adventure (green), Civic Engagement (red), Perspective (blue), and Leadership (grey). When you participate in any of our programs you earn that pillar's colored shirt (limit one color per person). Get one or collect all five colors while supplies last.

Here is how you can earn a shirt:

Service: Make-A-Difference Day, Pasadena LEARNS, Hathaway Sycamores, Union Station, Rise Tutoring, and MLK Service Day.

Adventure: Y-Hike Backpacking, Yosemite Camping, Joshua Tree Camping, Day Hikes, Kayaking, Adventure 101 lunches, Wilderness First Aid, and Alternative Spring Break Trips.

Civic Engagement: Washington DC Science Policy Trip, Science Policy Lunches, MLK Week Activities, Social Activism Speaker Series Lectures.

Perspective: World Fest, Explore LA Outings, Life Skills Lunches, Home Cooking Lunches, Community Service and Advocacy Fair, and the India Ki Khoj Trip

Leadership: attend a leadership program or join one of our leadership groups ExComm, Y-Outdoors, the Social Activism

Speaker Series Committee, or be a Service Project Leader.

##### 2. Lunch and a Cooking Lesson from Canton, China

Wednesday, November 25th | 12:00 - 1:30 PM | At the Caltech Y (505 S. Wilson)

Sign Up Required at: <https://goo.gl/tbHAz3> | Priority will be given to students

Join us for lunch and a chance to try your hand at some traditional Chinese dishes. Our menu will feature a simple, light, dumpling classic Wonton Soup, with other sides. At this lunch we will learn about the ingredients, local markets, and techniques, as well as a little of the culture of course, as we prepare and enjoy this light lunch brought to us via Canton China, Hong Kong, and now the San Gabriel Valley.

The Caltech Y Home Cooking Series brings a taste of the world to Caltech. When we think of home where ever that may be - we often think of food. From the ingredients, to the preparation, food is central to our culture and our experience. Join us as members of our community (students, staff, family, and friends) share their culture with us through hands on cooking lessons or demonstrations. While for the most part our guest chefs are not professionals in the food industry, and the meals not gourmet restaurant dishes, these recipes and techniques have been learned in their homes - some passed down from generation to generation - and are now shared with us. Watch for future lessons or demonstrations from other regions in the months to come.

Sign up at: <https://goo.gl/tbHAz3>.

##### 3. Caltech Y Leadership Opportunities Info Session

Monday | November 30th | 12:00-1:00pm

Ever wanted to organize a hiking trip or community service event but didn't know where to start? Come learn about leadership opportunities you can pursue through the Caltech Y! Leaders from the Y Excomm, Y-Outdoors, and SASS (Social Activism Speaker Series) will share their experiences and tell you how you can get involved. To sign up, please visit <http://goo.gl/forms/CfLLogFc4N>

##### 4. Peter Pan and Tinker Bell

Pasadena Playhouse | December 9th-January 3rd | Tickets 20% Off

Tickets can be purchased using your unique 20% discount code, CTY20, from now through 1/3/2016 and 10% will go back to the

Caltech Y. For more info visit: <http://www.pasadenaplayhouse.org/box-office/mainstage/peter-pan-and-tinkerbell-a-pirates-christmas.html>

Peter Pan and Tinker Bell - A Pirates Christmas is the latest Holiday Spectacular presented by Lythgoe Family Productions in the style of the traditional British Panto. Tinkerbell, Wendy and Peter Pan embark

on a wild quest to foil the pirates plot to kidnap Peter for Captain Hook's Christmas present in this flying, singing, swashbuckling adventure. Featuring comedy, magic, dancers from So You Think You Can Dance, and contemporary music from Taylor Swift to the Bee Gees, a Panto is interactive holiday fun for all ages.

## Caltech live!

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Professor of Physics

The ATLAS and Compact Muon Solenoid experiments at the Large Hadron Collider are some of the most complex experimental physics instruments currently in existence. In this lecture, Spiropulu will discuss why the discovery of the Higgs boson is a major milestone in our understanding of the universe. She will also share the profound implications of its properties and elaborate on how the Higgs boson and new emerging puzzles associated with it connect to future discovery.

Free Admission

Caltech's Beckman Auditorium  
[www.events.caltech.edu](http://www.events.caltech.edu)



Call campus x 4652 for information

## From the President's Desk: Personal freedom in an age of comfort

NIMA BADIZADEGAN  
ASCIT President

I have hesitated to publish this article because of the current attitudes of students at other schools, but the issue of individual rights is particularly topical right now, and it is an issue that will not be going away, so I thought I would voice my opinion. This is a huge and controversial issue, so please feel free to respond (to me or to *The Tech*) and continue the conversation.

This past season of *South Park* has been strangely prophetic. Many colleges throughout the U.S. have established their campuses as safe spaces for all types of marginalized groups, so that everyone in these

groups is comfortable on campus. There is one big loser in the quest for universal comfort: free speech. When it is mandatory that everyone is intellectually and personally comfortable, it is impossible for a debate to occur. To quote the president of Wesleyan University, who recently faced a free speech crisis over an editorial critical of the tactics of the Black Lives Matter movement, "Debates can raise intense emotions, but that doesn't mean that we should demand ideological conformity because people are made uncomfortable."

Everyone should have a safe space. Your safe space is a place to go to when you feel vulnerable and need comfort. However, campus-wide safe spaces are usually set up to conform to the ideas of the majority, and achieve this end by silencing those who disagree. This does not foster inclusion or change anyone's views. Instead, it turns the campus into an echo chamber, where the "correct" opinions are repeated, and no dissenting voices are heard, so the majority of students go through college without their views ever being challenged. Even President Obama has expressed his concerns that college students are being "coddled and protected from different points of view." Most people who are trying to make the campus a safe space for everyone want to create a feeling of inclusion and friendliness, but they actually achieve a place of self-righteous exclusion where only the dominant ideology is welcome.

I am not advocating that all limits on speech be removed, but I am advocating that students and administrators ought to carefully consider the consequences of censorship. Nobody would disagree that speech that incites violence and makes people feel physically threatened should be

banned. However, there is a very large middle ground between speech that incites violence and speech that is allowed in a safe space. This is the speech that I will classify as offensive (or potentially offensive) speech, and the right to be offensive must be protected because social change often comes from being offensive. For example, 100 years ago, the idea of gay sex was considered offensive; 200 years ago, atheism held the same status;

*"Cognitive dissonance is how you learn, and it should not be a university's goal to protect students from intellectual discomfort at the cost of personal and academic freedom."*

and 700 years ago, translating the Bible into English was considered unthinkable offensive. All of these examples came from the University of Oxford, where these ideas made the space "unsafe" and the community was protected from them.

The censors of today believe that they are different because they are ostensibly protecting individuals from discomfort, but they are only propagating their own form of orthodoxy. Cognitive dissonance is how you learn, and it should not be a university's goal to protect students from intellectual discomfort at the cost of personal and academic freedom. The marketplace of ideas and our ability to debate and discuss can solve many issues of offensive speech, and it is up to the school to step in only when someone's personal safety is threatened. Bigotry and exclusion should never be free of social consequences, but they cannot be solved by shutting down speech.

Finally, I have heard many different things about how much legal protection is guaranteed to offensive speech, and I wanted to clear up any misunderstandings about how the law applies to speech on campus. (Disclaimer: I am obviously not a lawyer.) California has a law on the books, the "Leonard Law," that requires all private universities to provide full First Amendment protections to students, protecting all

speech that does not directly threaten an individual's life, liberty or property. However, private schools in California are stuck between a rock and a hard place. In 2013, the U.S. Department of Education required all schools receiving federal funding to ban "any unwelcome conduct of a sexual nature," which includes "verbal conduct" and effectively bans unreciprocated flirting and discussions of subjects that are too racy for someone involved. Legally, Caltech effectively has to decide whether to comply with California law and risk losing federal funding, or to comply with the Department of Education and expose itself to civil liability over suppression of free speech.

Currently, Caltech has chosen the latter, but this practice may only serve to alienate certain students in favor of others. An open debate is the best way to address the major issues that surround us, and the best remedy to offensive speech is more speech, not the ever-expanding "comfort bureaucracy" that we see at other institutions. I want Caltech to be a safe space for everyone: a safe space to debate ideas and a safe space to hold unpopular opinions without fear of administrative reprisal.

## Feeling the Bern: Techers dive head first into the Bernie Sanders campaign

SEAN MCKENNA  
Contributing Writer

Caltech senior Laksh Bhasin can't technically vote in the United States, but that hasn't stopped him from jumping into action in support of the Bernie Sanders campaign. As an international student, he considers it a "public service" to advocate for a candidate who promises to improve the lot of the average American by increasing worker wages, reforming campaign finances and eliminating tuition at public colleges. Bhasin has just founded the group "Caltech Students for Bernie Sanders," whose goal is to "create a political revolution" and elect Sanders as president.

The group held its first event on Nov. 21. At the Pasadena High School Farmers' Market, Bhasin and three other

Caltech students (seniors Albert Yang and Sharon Yang and junior Lucy Chen) handed out fliers explaining Bernie to undecided voters and encouraged donations and volunteering sign-ups. They were able to interact with older supporters of Sanders with different experiences and opinions to share.

For many supporters of Sanders, including most of the members of Caltech Students for Bernie Sanders, this campaign is the first

time they've really organized for a political cause. Sanders' campaign prides itself on grassroots advocacy. Such campaigning proved to be the trick of Barack Obama's campaign eight years ago. Sanders supporters are hoping to emulate the success of the Obama 2008 campaign, believing that they can overcome Hillary Clinton's lead as the establishment candidate for the 2016 Democratic presidential nomination.

As the campaign season heats up, Bhasin and other group members plan to shift their focus off campus. In preparation for caucuses and primaries in other states, they plan to continue their



Caltech Students for Bernie Sanders and fellow Sanders supporter distribute information about Sanders' campaign at the Pasadena High School Farmers' Market.

Photo Courtesy of Laksh Bhasin

work on the phone banks, expand the reach of their fliers, and begin canvassing for the campaign. Caltech Students for Bernie Sanders would like to connect with other Sanders aficionados in Pasadena and on college campuses across California. But in order to have strength off of campus, the group still needs to build an on-campus base. The group is looking for fellow classmates who are willing to volunteer for Bernie and actively help him win this election.

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## Humans of Caltech: Meet President Thomas Rosenbaum

The California Tech brings you stories of Caltech community members

ALEXANDER HSU  
Contributing Writer

**What was your childhood like? As a follow-up, could you ever predict that you would become a professor of physics?**

Growing up in New York was a lot of fun, from stickball to jazz clubs in the Village. I always liked science — the moon landings were a tremendous inspiration — but I had lots of interests so it wasn't at all obvious that I would wind up as a physicist in academia.

**What are some exciting projects that you are working on at Caltech?**

Helping define areas where we can become the dominant player in the world, from seeing if there is life on planets orbiting other suns to using computation to discern the information encoded in the human genome. In my personal research, I am developing new methods to explore materials on the knife edge between different quantum states.

**Could you briefly describe your typical day at work?**

No one day is like any other — that is the beauty of the job!

**What directions do you see Caltech headed in the near or distant future?**

We need to be the place where people come to realize their intellectual

dreams, with the unfettered resources to make those dreams realities, from scholarships to seed funds for high risk-high impact projects.

**Lastly, is there anything you would like to say to the students here?**

Take full advantage of what makes Caltech special: become part of a research group, form friendships with incredibly talented and interesting people from around the world, explore the Huntington gardens and the Pasadena playhouse.



Photo Courtesy of President Rosenbaum

## El Metate cafe well-recommended

KATHERINE GUO  
Page Editor



done shoveling their excellent tortilla chips into my face hole. I knew their burritos were wet burritos, but I hadn't expected them to be the size of a premature infant, if premature infants could be works of art.

Every bite of the burrito tasted amazing. The tangy, melty pork shone amongst the equally beautiful backup singers of the other ingredients. The insides of the burrito were pleasantly mixed: not a weird homogenous purée, but not strikingly compartmentalized (like if you were eating a warm rice-y part of a burrito and then surprise, cold sour cream land). The tortilla was

“Enrique liked it, and he's actually from Mexico.” These were the words a friend imparted upon me as I left to review El Metate, self-described as “The Richest Mexican Food in Town!” As I stepped into the cozy hole-in-the-wall joint with dingy lighting, I had a sense I was about to eat spectacular food.

Endless tortilla chips are provided before the meal with a large collection of salsa varieties. Being negligent as a food reviewer, I did not write down what types of salsa exactly, but there were definitely more than three. The tortilla chips are perfectly warm and toasty, like a reassuring blanket, but also amazingly crunchy, so like a crusty blanket. They're not aggressively salted and limed (I'm looking at you, Chipotle), but just right. Be careful to not load up on too many chips before your meal comes, though.

I ordered a “Super Burrito,” which includes beans, lettuce, tomato, cheese, your choice of meat (I chose pork, which is supposedly very popular), ranchera sauce and guacamole. It arrived very quickly, so quickly that I wasn't even

easy to fork through but had the structural integrity to keep the burrito consumption neat. My leftover half of the burrito didn't even fall apart in my take-out box. All in all, a hearty mixture of flavors were in abundance.

At the end of my meal, I felt distended and ready to die of fullness, which is fine. I encourage everyone to try out El Metate and double fist tortilla chips and forkfuls of the best wet burrito around.



Photo Courtesy of Katherine Guo

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## Al-Rayes, Emezie star at #3 Whitworth

GOCALTECH.COM  
Actual Sports Content Editor

SPOKANE, Wash. (Nov. 20, 2015) – Junior Nasser Al-Rayes and senior Kc Emezie lit up the scoreboard for Caltech men's basketball at the program's highest-ranked foe in history, #3 Whitworth University, on Friday night.

Al-Rayes scored a game-high-tying 19 points (9-of-11 from the free throw line) to go with six rebounds and two blocks while Emezie poured in 16 on a typically efficient 7-of-11 shooting.

The final score of 80-58 did not do the game justice as the Beavers hung around a 10-point deficit for the majority of the game, but an early Whitworth surge and late flurries in both halves allowed the hosts to defend their home court.

Whitworth improves to 2-0 on the season while Caltech sits at 1-1.

"The major take away from this game is that, when we put in the right type of effort – mostly mental – we can play with anyone, anywhere in the nation," Head Coach Dr. Oliver Eslinger said. "Aside from a few patches of a couple minutes each, we played with them shot-for-shot."

Whitworth outshot Caltech both from the field (46 to 37 per-



"Dude, you're in my way. I'm trying to dance here." – Other Guy  
"Well maybe you shouldn't be trying to dance in the middle of a basketball game." – Nasser Al-Rayes

-http://gocaltech.com

cent) and free throw line (82 to 63 percent) while outrebounding (43-33) and edging the Beavers in assist-to-turnover ratio (12:8 vs. 4:9).

"Whitworth is a great and efficient team, so spotting them early points put us in a position that made us have to focus even more," Eslinger said. "We always expect to hit the boards better, but even though our assist-to-turnover ratio

doesn't look great, limiting ourselves to nine turnovers is right where we should be."

Junior Lawrence Lee knocked down a three-pointer for the game's opening bucket, but the Beavers would not score again for the next six minutes. Meanwhile, Whitworth built up a 17-3 lead through the 12:15 mark.

Emezie started to get involved with consecutive baskets on a nice layoff in the lane from Al-Rayes and an acrobatic driving layup to pull back within single digits at 21-12. The teams traded shots until a late flurry for Whitworth put the Pirates up by 19 at the half, 42-23.

The Beavers came out of the

break absolutely on fire, netting the first 10 points over two minutes and 20 seconds to immediately cut the deficit to nine. Caltech pulled even closer at the 16:00 mark at 45-37 before another big run had the hosts ahead by 17. Eslinger's squad refused to go away and made it a nine-point deficit at 60-51 with 8:17 remaining, but Whitworth put the game away at that point with a 17-5 run to end the game.

"We had a couple terrific spurts in the second half – I was really proud of how the guys came out of halftime," Eslinger said. "We were out of sync to begin the game and that hurt our movement and spacing. We came out and fought to start the second half and before anyone knew it, it was a single-digit game. Just plain effort and belief in our game plan."

Emezie rounded out his line in the box score with five rebounds, two assists and a block. Junior Ricky Galliani chipped in nine points, going 3-of-8 from beyond the arc, with six rebounds and Lee added eight points on 3-of-6 shooting from the field and 2-of-3 from long range before fouling out after just 19 minutes.

"Whitworth was ready for us, but we learned a lot about how to come out on the road in a tough environment," Eslinger said. "This trip is about gaining experience and improving our skills on the road. Our next opponent is another tough team that plays a different style, so we just need to get some rest and replenish our minds for tomorrow."

Eslinger and the Beavers will play their first home game against Linfield College on Wednesday, Nov. 25 at 7:00 p.m., following the women's game against Linfield at 5:00 p.m.

## Percin, Takahashi break three more records for women's swim and dive

GOCALTECH.COM  
Actual Sports Content Editor

PASADENA, Calif. (Nov. 7, 2015) – Freshmen Gemma Takahashi and Brittany Percin set

three records and racked up five wins in six individual events in the Caltech women's swimming and diving team's home opener against the University of Redlands on Saturday morning.

Percin lowered her own 200 Free record by exactly one second and later shattered the 500 Free mark by three seconds. After coming just .21 shy of the 100 Back record two weeks prior, Takahashi blew past the mark by 1.5 seconds.

Percin's 200 Free was the first Caltech swim of the day and the rookie put on a show with a strong back half, out-splitting her nearest competitor by three seconds en route to a 1:57.31 – one of the top 30 times in the country this season and the fastest in the SCIAAC. Takahashi hopped in next for the 100 Back and just out-touched Redlands' top swimmer in 1:02.15 for the Beavers' second consecutive event win.

Percin was soon at it again in the 200 Fly and blew the compe-

titution out of the water after a leisurely first 50 that quickly put her behind three Bulldogs in the heat. She split each of the final three 50s within a second of that first leg, however, to record a dominant

Takahashi took the baton for another victory in the 100 Fly, with the rookie just missing the one-minute barrier at 1:00.03.

In diving, junior Zofii Kaczmarek took second on both boards



I never understood why it was called "The Butterfly" if it's in the water. Butterflies don't swim. It should be called "The Manta Ray" instead.

-http://gocaltech.com

2:14.20 that was almost 10 seconds quicker than any Bulldog.

Freshman Xiaohan Xue shaved over a second from her 50 Free time and later in the meet trimmed another three off her 100 Free along with senior Grace Lee, who cut two seconds from her 100 time. Takahashi, meanwhile, came up just short to place second in the 100 Free. Percin got Caltech back on the winning track in the 500 Free with a 5:20.36 to break the second-oldest individual mark in the program record books and

and showed that she has taken impressive strides in her third year. She improved on her season-opening list two weeks ago by 12 points on the 3-meter (162.05) and 32 points on the 1-meter (167.15) – both significantly higher than her debut performance last year on Dec. 3 and second appearance of the season that January.

The Beavers will buckle down for a month of tough training leading up to a home meet against Cal Lutheran University on Saturday, Dec. 12 at 10:30 a.m.

## Eck and Blackwood enter record books on senior day

GOCALTECH.COM  
Actual Sports Content Editor

PASADENA, Calif. (Nov. 14, 2015) – Senior Patric Eck broke the program record for exclusions drawn in a season and senior James Blackwood recorded only the second 40-40 season in program history as the Caltech men's water polo team bade farewell to its senior quartet in the season's home finale against DIII No. 5 Chapman University on Saturday morning.

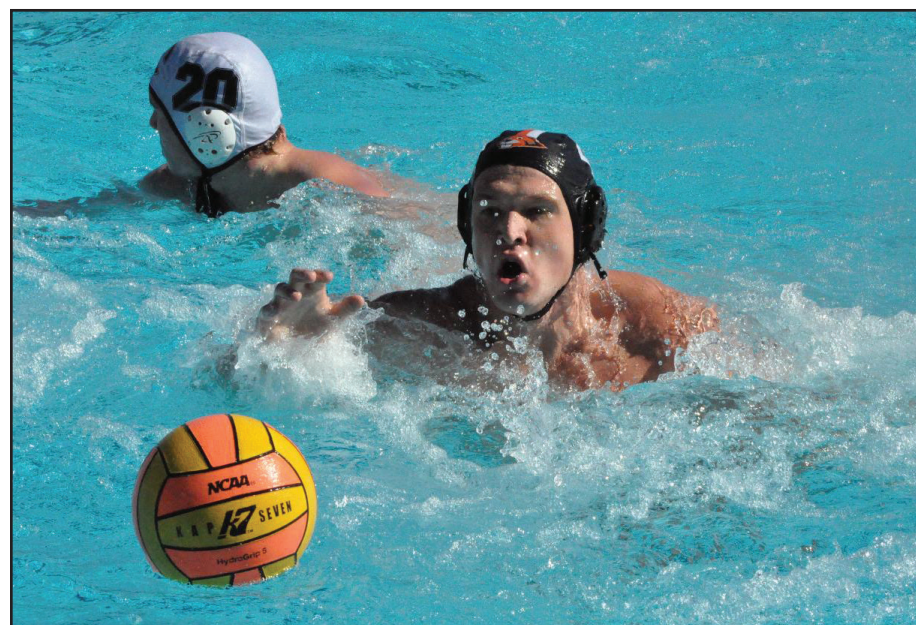
The Panthers jumped in front during the first quarter and never relinquished the lead en route to a 14-5 victory to improve to 14-10 overall and 6-2 in the SCIAAC while the Beavers are 7-17 (0-8).

Eck drew five exclusions to bring his season total to 81 – three more than the previous record of

78, set by Jack Blackwood in 2012. The younger Blackwood recorded his 40th goal to go with a new season-record 47 assists, joining Adam Khan (43-46 in 2011) as the only members of the 40-40 club.

The Beavers fell behind 5-1 in the first quarter, with junior Christopher Bradley netting Caltech's

lone score. Blackwood, Eck and freshman Eshan Govil each scored to lead the Beavers to a 3-2 edge in the second quarter for a halftime score of 7-4, but Chapman put the game away with a dominant 5-0 third quarter. Blackwood scored his momentous goal in the fourth quarter.



Wow, the product placement for the NCAA® Kap Seven™ HydroGrip 5 ball in this picture is not very subtle. The NCAA® should tone it down a bit.

-http://gocaltech.com

# ASCIT Minutes

## ASCIT Board of Directors Meeting

Minutes for 17 November 2015. Taken by Phillip.

**Officers Present:** Nima, Sean McKenna, Phillip An, Cat Jamshidi, Kalyn Chang

**Call to Order:** 12:04 pm

**Guests:** Chris Dosen

### President's Report (Nima):

- Midnight donuts are Wednesday night
- Registration on Thursday morning
- Dean's advisory council met yesterday
  - Mary Morley will be looking into advanced humanities fill up to look into alternate strategies
  - Nick is working with Math department to finalize the due times initiatives
- Movie is confirmed for Friday at 10:45pm

### Officer's Reports:

- **V.P. of Academic Affairs (ARC Chair: Jay):**
  - Absent
- **V.P. of Non-Academic Affairs (IHC Chair: Cat):**
  - The IHC will be meeting with Joe Shepard
- **Director of Operations (Sean):**
  - Nima and Sean went on the ARC retreat discussing various student issues and concerns
- **Treasurer (Kalyn):**
  - None
- **Social Director (Robin):**
  - Absent
- **Secretary (Phillip):**
  - Midnight donuts will be Wednesday

If anyone has any questions or concerns about a section of the minutes please email the appropriate officer. We are happy to answer any questions.

**Meeting Adjourned:** 12:31 pm

## REMINDER FROM COUNSELING CENTER:

### *Meditation Mob*

(drop-in mindfulness meditation group)

Meets every Tuesday, 12:00-12:50 p.m.

Bottom floor of Winnett

## VICE PROVOST'S OFFICE HOURS

Vice Provost, Chief Diversity Officer and Professor of English, Cindy Weinstein, offers weekly office hours beginning Thursday, Oct. 15, in Room 104 Parsons Gates. She views these hours as an opportunity for undergraduates, graduate students and postdocs to meet and discuss whatever you'd like to talk about. Professor Weinstein oversees the Council on Undergraduate Education, Caltech accreditation, the Staff and Faculty Consultation Center, Student-Faculty Programs, the Center for Teaching, Learning and Outreach, the Caltech Diversity Center and the libraries.

There are four appointments per hour, 15 min. each. Sign up the day of the meeting in 104 Parsons Gates, Vice Provosts' Offices (x6339).

### *Fall Term Hours:*

*Tuesday, Dec. 1, 12pm-1pm*

*Wednesday, Dec. 9, 12pm-1pm*

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## Joanna Newsom's latest release, *Divers*, proves to be poignant new album

Continued from page 1

of the city and the village that came before.

In the next few songs, Newsom takes up that quintessentially American motif of the frontier and further explores it in her singularly imaginative, poignant style. In the swinging sea shanty "The Waltz of the 101st Lightborne," for instance, she tells the story of a group of soldiers setting out to colonize the "unlimited simulacrage" of the past — that is, past iterations of the same place — and end up fighting their own ghosts in an eternal war. The song ends astonishingly with a spectral chorus of Newsom warbling, "Highlands away, my John!" This conjures a host of versions of the narrator throughout time, helplessly calling to her lost lover across temporal mountain ranges.

The narrator of the title track, a spooky New Age ballad, also occupies a position of helplessness to the force of time. But with the examining mind of a 17th-century metaphysical poet, she contemplates the value of time and divides people into the categories of "the divers and the sailors and the women on the pier," falling into the third herself. Like the narrator, the instrumentation, comprised mainly of piano and harp, is also stationary, anchored to a repeating melody while evolving to nowhere. The song features the ethereal chimes of the Hohner guitar,

emphasizing the narrator's stasis as she waits for her lover, the diver, in a single narrator in Newsom's past works. She addresses this



-<https://en.wikipedia.org/>

continually haunting the same place like a ghost.

The narrators of *Divers*, in fact, all seem to figuratively be "women on the pier," passive subjects of time. There's a loss of intimacy from this diffusion of the "I" across these different characters, concentrated

in the penultimate track, "A Pin-Light Bent," which recounts the experience of a woman plummeting to the Earth in a flight accident. As she falls to her death, she proclaims the wondrous sights rising to meet her ("But the sky, over the ocean! / And the ocean, skirting the city! /

And the city, bright as a garden!"), her voice trembling in an empyrean melody as a harp plays ascending chords in the background. After a brief intervening moment of stability, the song reverts back to that transcendent music as the narrator reflects in her last moments, evoking the idea of universal consciousness as God:

*From the Great Light that shines through a pinhole  
When the pin-light calls itself Selfhood,  
and the Selfhood inverts on a mirror  
in an Amora Obscura.*

But Newsom returns us to the realm of human experience in the last verse: "But it's

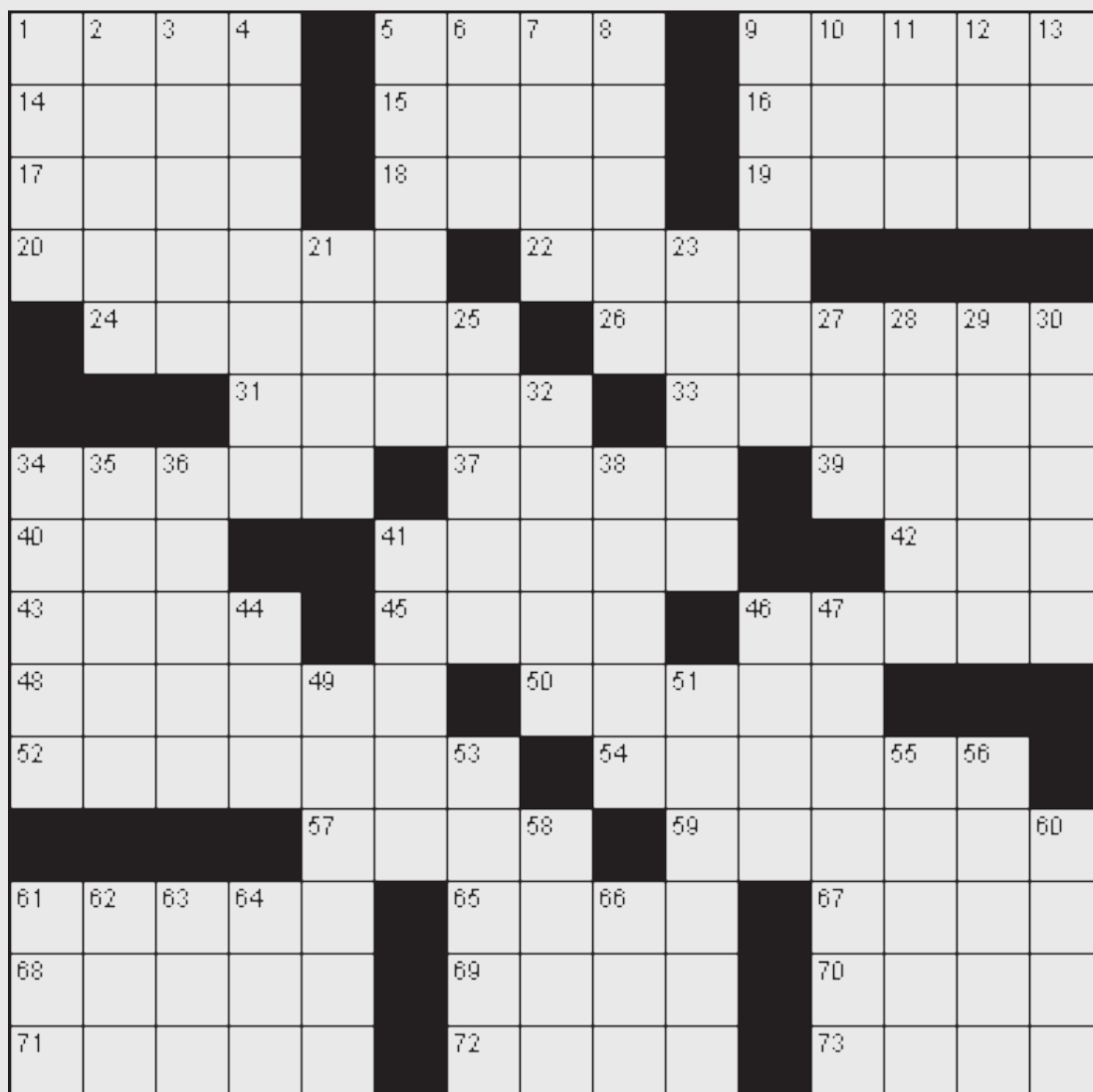
mine. Or, at least, it's lent. / And my life, until the time is spent, / is a pin-light, bent", providing a segue into the closer, "Time, As a Symptom." A cinematic power ballad, the song is overwhelmingly earnest, so much so that the potential irony of the refrain "the

nullifying, defeating, negating, repeating joy of life," sung in a sentimental, rising melody in the manner of Christian rock music, itself becomes negated and subsumed into a sort of post-ironic secular hymn. The arrangement becomes increasingly effusive as the song progresses, climaxing with an outburst of this ecstatic joy, nearing on sensory overload. The lyrics become intensely imagistic, at one point borrowing the last line of James Joyce's *Finnegans Wake* ("a way a lone a last a loved a long"). The orchestra roils like an ocean in a fierce tempest, rising and crashing with churning percussion.

Rather than letting the energy and ecstasy of the music die, however, Newsom transmits it in an ingenious non-ending that I won't spoil. However, I do question the "joy of life" as an emotional conclusion to the tensions of the album. To me, a more satisfying coda lies in the beginning, "Anecdotes." After all of the narrator's troubled meanderings through space and time, the song ends with a gentle, maternal voice calling a daughter down for tea with her family, who awaits her at the table. The mundanity of it is as reassuring as it is unexpected, and its musical similarity to the first verses suggests that this domestic scene is an anchor to present reality, a way out from endless ruminations — in short, a moment of temporal grace.

Overall rating: 9/10

## Crossword



-<http://puzzlechoice.com>

### Across

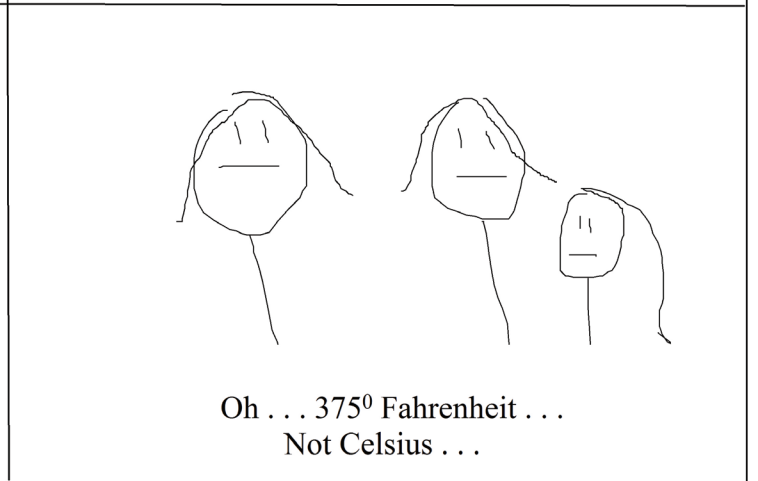
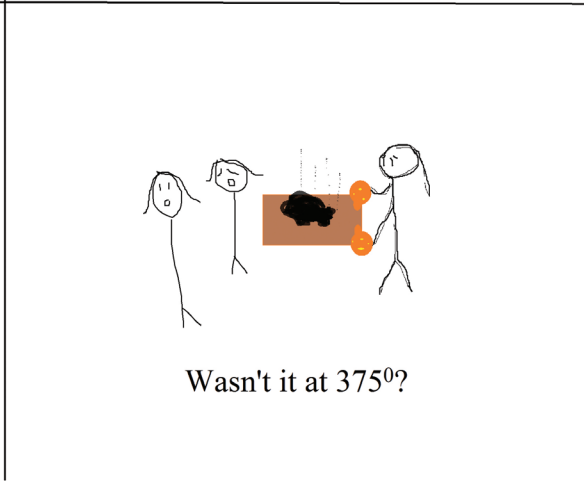
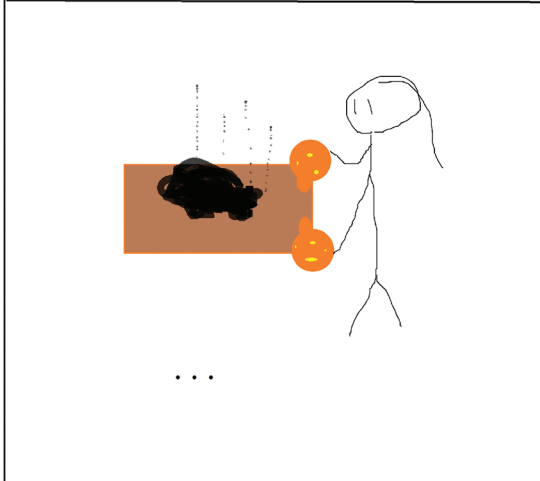
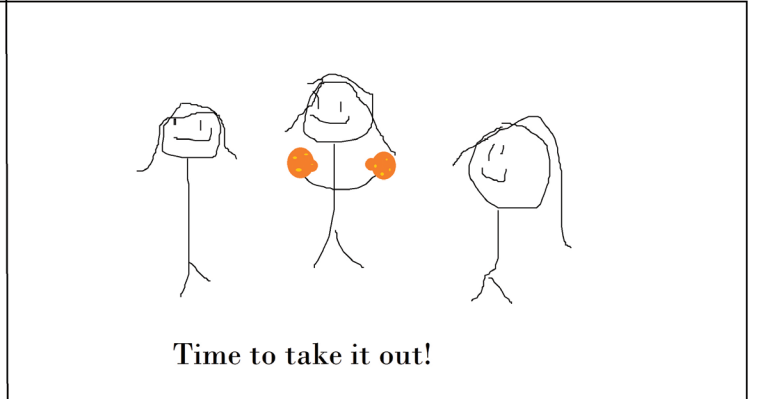
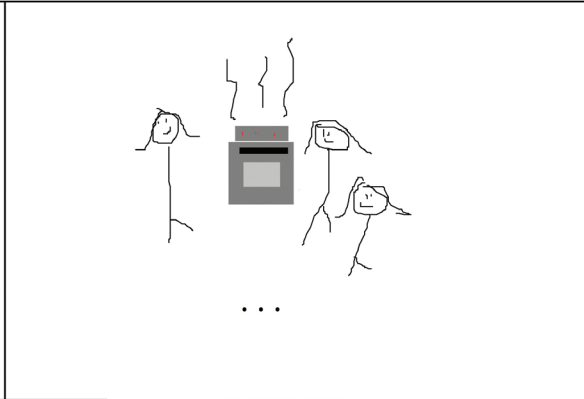
1. Den
5. A strong line
9. Established line of travel
14. Fiend
15. Pitcher
16. Tripod
17. Dried vegetable matter used as fuel
18. Swerve
19. A squeaking sound
20. Lure
22. Wander
24. Incumbency
26. Beam
31. Far beyond the norm
33. A small sphere
34. Extraterrestrial object
37. Singing voice
39. Stead
40. Primate
41. On the move
42. Conclusion
43. Annoy
45. Approach
46. Wash lightly without soap
48. Parka
50. Repeat broadcast
52. Well-founded
54. Ran very quickly
57. Faction
59. Swiss house
61. Take in water

65. Facial expression
67. Morsel
68. Large body of water
69. Chills and fever
70. Notion
71. Animal
72. Small open pie
73. Limited period of time

### Down

1. A slow pace of running
2. Broker
3. Very angry
4. Entourage
5. Regress
6. Be indebted to
7. Look searchingly
8. Mistake
9. Withdraw
10. Paddle
11. Employ
12. Beverage
13. Moose
21. Interest followed with exaggerated zeal
23. Cloudy diffused matter, suspended in the air
25. Wipe out
27. Inauspicious
28. Foreigner
29. 13 to 19 year olds
30. Musical composition
32. Part of a church
34. Unit of weight for precious stones
35. Speak up
36. Fruit of the gourd family
38. Fatigued
41. Leg bone
44. Epoch
46. Hurry
47. Live in
49. Not present
51. Fraudulent scheme
53. Acclaim
55. Leave or strike out
56. Dissuade
58. Garment worn in ancient Rome
60. Squad
61. Small float made of cork
62. Frozen water
63. Pasture
64. Fuel
66. Belonging to us

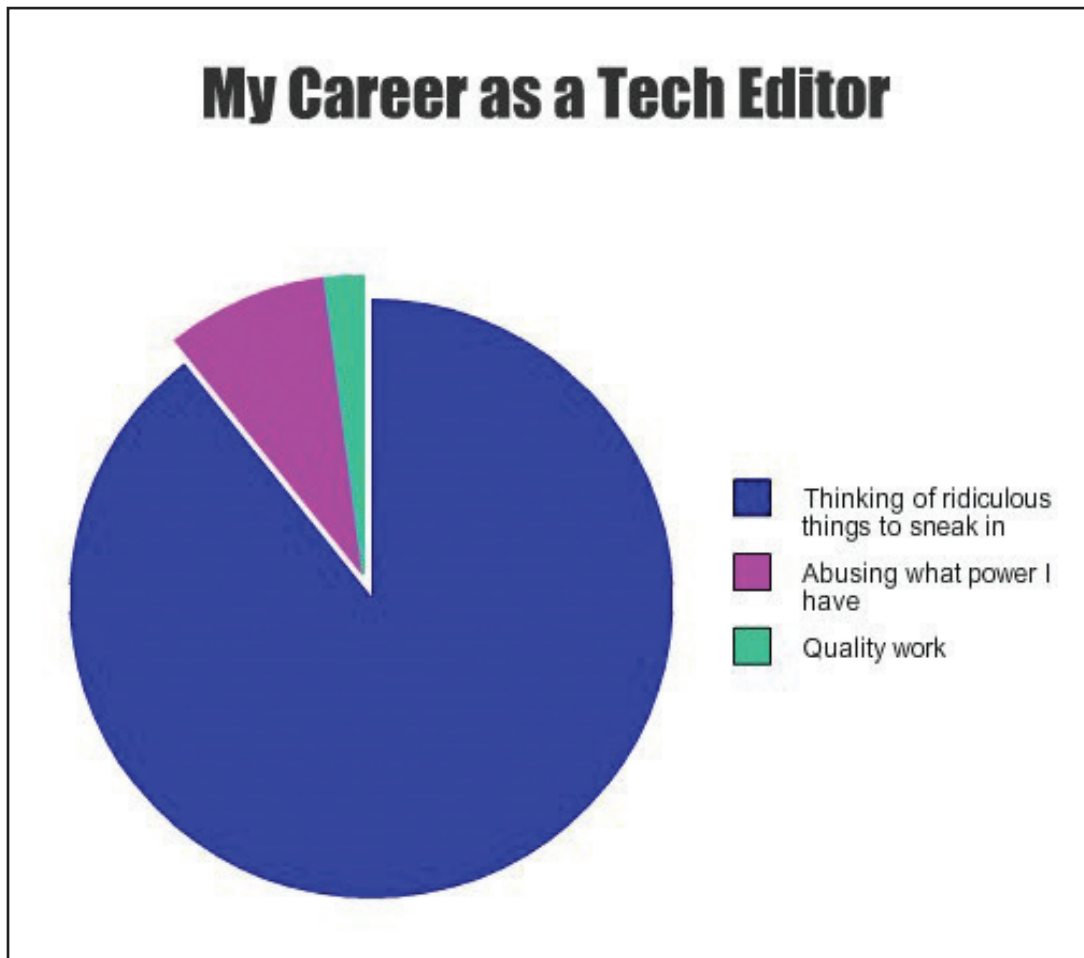
**Turkey, Turkey!**



**Νίνα, Slava, Lazarina.**

uehehehe

G. Kuo



### Answers to the current crossword (page 7)

B	E	A	S	T		T	A	R	T		T	E	R	M
O	C	E	A	N		A	G	U	E		I	D	E	A
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L	A	I	R		R	O	P	E		R	O	U	T	E

-http://puzzlechoice.com



harold, what are you thankful for this year?

same

The California Tech's excellent journalism and witty humor, of course



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