



VOLUME CXVIII NUMBER 6

PASADENA, CALIFORNIA

TECH.CALTECH.EDU

NOVEMBER 10, 2014

AACIT holds annual Fabulous Fall Flying Fair

NANCY WEN
Contributing Writer

"Are you ready to help me take-off?" I was sitting in the co-pilot seat with the control yoke in my hands. The next thing I knew, we were taxiing down the runway, and David was telling me to pull on the yoke. Suddenly, we were off of the ground, and climbing in altitude. My focus was entirely on following David's instructions exactly that I had no time to be afraid. It is a most extraordinary feeling, the way a plane reacts to your touch. It is like driving a car, but there are so many more dimensions of control.

Last Sunday, at the annual Fabulous Fall Flying Fair hosted by the Aero Association of Caltech (AACIT), I got a taste of what it is like to pilot a plane. It was my first time on such a small airplane, a four-seat Cessna 172. I was not planning on flying that day, let alone helping copilot the plane, but the unique opportunity presented seemed too good to pass up.

I am a nervous flyer. I have always been a nervous flyer. Even after years of flying experience, I still have not gotten used to the sensation of changing altitude. Perhaps, you've seen someone like me, who holds on the armrest in a death grip during the takeoff and landing. I attended the Flying Fair with every intention of backing out at the last minute, and simply reporting the event from the ground.

President Dr. Thomas Rosenbaum receives "Prefrosh treatment"

MONICA ENLOW
Editor-in-Chief

With the hustle and bustle of convocation and his inauguration out of the way, *The Tech* staff decided it was time that the student body learned more about the new institute president, Dr. Thomas Rosenbaum. In thinking of what to ask, we drew our inspiration from the questions that prefrosh were asked very frequently during rotation. Thus, it was decided to give President Rosenbaum the



There were many different small planes that people could tour and take a ride in at AACIT's flying fair.

Photo Courtesy of Tim Welch

AACIT had provided a free shuttle from Caltech to El Monte Airport, and along with the ride came an energetic and friendly driver, Joe O'Rourke, Ruddock RA and graduate student in GPS. During the half-hour ride, he enthused about being a pilot. When I asked the trite question "Why did you want to become a pilot?", he grinned and replied "Why not?" Indeed, why not?

However, my heart started thumping as I heard my name called out by the dispatcher who just had me sign a standard release form less than twenty minutes earlier. AACIT provided a wonderful barbecue spread, but I was too nervous to eat. I secretly wished that they were less efficient,

so my flight could be delayed as long as possible.

I met my pilot, David G. Werntz, who also happened to be president of AACIT and a 1986 graduate of Caltech. I was greatly relieved to discover that Werntz was an FAA Certified Flight Instructor with his own flying school. He had over 4000 hours of flying experience in his 12+ years of flying.

We were flying on a Cessna 172, which, according to Werntz, has been built more than any other plane in history. No space was wasted in the body of the plane. Like a sports car, the backseat passengers had to get in first, and then the front seats pulled back, before the pilot and copilot could get in. By some strange stroke of luck,

was taking the precaution of going through the checklist. It helped my fears to have something to focus on. As soon as the engine turned on, we had to put on aviation headsets, and we talked through the radio.

The memory of the takeoff is a flurry of excitement and adrenaline. Even now, writing about it, I feel a tingle in my fingertips. Werntz told me afterwards that I had been handling the pitch (the position of the nose of the airplane above or below the horizon) and the bank (the angle of the wings relative to the horizon) during takeoff using the control yoke. It is a combination of pitch and power that makes an airplane climb or takeoff. He was controlling the power and the yaw by controlling the pedals with only his foot. He kept his hands off of the yoke until we were nearly 2000 feet up in the air.

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Fair attendees had the opportunity to take a scenic flight over Caltech and JPL.

Photos Courtesy of Tim Welch

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Caltech Y Column

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. The Y seeks to broaden students' worldviews, raise social, ethical, and cultural awareness through teamwork, community engagement, activism, and leadership. 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.

Ongoing/past programs hosted by the Y:

- Alternative Spring Breaks: Costa Rica, New York, Yosemite, San Diego, San Francisco

- Make-A-Difference Day: Hillsides Home for Children, LA County Arboretum and Botanic Garden, Children's Hospital Los Angeles (Coachart), Eaton Canyon, Lifeline for Pets

- Explore LA: Lakers game, Next to Normal musical, Norton Simon Museum trip

- RISE Tutoring program (an afterschool math and science-focused tutoring program that serves public school students between grades 8 and 12)

Upcoming Events:

1a. Hathaway Sycamores

Thursdays | 5:30-8:30pm | Highland Park

Volunteer at Hathaway-Sycamores, a group that supports local underprivileged but motivated high school students. There are a variety of ages and subjects being tutored. The service trip includes about an hour of travel time and 2 hours of tutoring. Transportation is included. For more info and to RSVP email Sherwood Richers at srichers@tapir.caltech.edu.

1b. Pasadena LEARNS

Fridays | 3:00-5:00pm | Madison and Jackson Elementary School | Pasadena

Come volunteer at Madison and Jackson Elementary School! We are partnered with the Pasadena LEARNS program and work with their Science Olympiad team or do regular tutoring along with occasional hands-on science experiments. Transportation is provided. For more information and to RSVP, contact vkkumar@caltech.edu

Ongoing Volunteer Opportunities:

1. Pasadena Unified School District Tutors Needed

Pasadena High Schools have started after-school tutoring programs coordinated by teachers. Tutors are needed at each school to help out with the tutoring. This is a great way to work directly with teachers and students. Tutors may volunteer on any days for which they are available. High School tutoring/homework help hours are as follows:

– Blair High School M-F 3:20-4:30 (Math) contact Ronaldo Hunter at (626) 720-2578

– Marshall High School M-F 3:05-4:30 (All Subjects) contact Cati Acevedo at (626) 720-2587

– Muir High School M-Th 3:20-6:00 (All Subjects) contact Nicole Stephens (626) 720-2567

– Pasadena High School 3:20-6:00 (All Subjects) contact Arman Ter-Grigoryan at (626) 720-2589

If you have questions, feel free to contact the Caltech Y at caltechy@caltech.edu.

WEN MIN CHEN
Contributing Writer

Long rows of tables filled San Pasqual walk on Friday, Nov. 7. The reason? The Caltech Y's Community Service and Advocacy Fair was being held! Twenty-seven organizations convened to help raise awareness of the different volunteering opportunities and causes on campus and around the community. Several student-run clubs, like Interaxon and Science Olympiad Club, were at the fair to highlight the variety of interests of the Caltech student body, while off-campus organizations, such as KidSpace Children's Museum, wanted to raise greater awareness of the work they do and future volunteer activities and events.

Although the sun was beating down on the midday fair, thankfully there was shade under the numerous umbrellas scattered around the area. As an added incentive,

there was free boba offered to passersby who stopped to chat with the organizations. The lightly sweetened, ice-cold milk tea beverage with chewy tapioca balls at the bottom helped refresh over a hundred participants at the fair. Some people were unfamiliar with the beverage and decided to try it, becoming instant fans of the drink.

Many participants were more enlightened after visiting the fair. "I feel like almost always there are research-related opportunities made available to us. They're also often widely advertised, either because people talk about them a lot or we get Caltech directory emails about them (e.g., SURF, JPL talks, study abroad, fellowships, etc.). But we don't often get to hear about community-service opportunities," said Grace Tang, a senior studying chemistry. Tang makes a good point; the Caltech Y does have a mailing list for upcoming Caltech Y events and volunteering opportunities, but not everyone is signed

up to receive them. Additionally, emails can only do so much, so the fair provided a unique learning opportunity as Tang details: "It's definitely not the same as being able to talk to someone in person and ask them about their community service program or their experiences. So I'd say that I enjoyed the community service and advocacy fair quite a bit because I got to talk with a number of people who I otherwise would never have known about, or would've only known by name and not actually understand what they do."

As Techers are quite busy, the primary objective of the fair was to raise awareness of the variety of causes in the community. In Tang's case, she found two organizations that she was interested in, and wants to be involved with them in the future. The fair was a success, and the campus was more educated about the volunteer organizations around them.



Members of the Caltech community learn about volunteer opportunities in the area at the Caltech Y Community Service and Advocacy Fair.

Photos Courtesy of Greg Fletcher

News briefs from around the globe

Need to know ~ 100 words about the world this week

Detainees released from North Korea

2 U.S. citizens came back to U.S. after detainment in N. Korea [TIME]

Crisis fund set up to fight Ebola outbreak

\$28.5M emergency fund set up by African business leaders to fund healthcare efforts [BBC]

World celebrates 25th anniversary of fall of Berlin Wall

8 balloons released in Berlin as thousands gathered to celebrate freedom [BBC]

Obama authorizes troop deployment to Iraq

1500 troops authorized for Iraq deployment, almost doubling number of ground troops [TIME]

Drug gang violence claims lives in Mexico

43 students killed, 72 arrested in one of the largest drug crimes in Mexican history [TIME]

Tensions build between Ukraine and Russia

32 tanks among Russian military vehicles suspected to have crossed into Ukraine [CNN]

Violence returns to Afghanistan

3 explosions in Kabul, at least one confirmed dead, serve as reminder of still-present tensions [NYT]

Citizenfour film proves to be moving, unsettling

CASEY HANDMER
Contributing Writer

Films frequently aim to evoke an emotional response. Some of the best thriller or horror films provoke a shocking visceral reaction that stays with the viewer for hours or days. Even in the depths of fear, disgust, or anxiety, it is possible to undermine suspension of disbelief by reminding oneself that the film is, after all, fiction.

Recently, I saw the documentary thriller *Citizenfour*. At nearly two hours, the twisted, compact plot unwinds like tightly coiled clockwork. Telling the story of NSA leaker Edward Snowden, suspense builds organically, an inexorable tide of paranoia and suspicion that cannot be wished away. Fiction this is not.

The film was produced and shot by the award winning American journalist Laura Poitras, who, present from the very first, has thoroughly documented the entire saga. Some months after '*Citizenfour*' first made contact, a still-anonymous Snowden gave Poitras and another journalist, Glenn Greenwald, directions to meet in Hong Kong. Meeting in a hotel lobby, Greenwald and Poitras were shocked at their source's young age. As soon as Snowden's door closed, Poitras' camera began to roll.

For the next hour, the audience is confined with the principal protagonists in the tiny, claustrophobic hotel room. Scarcely larger than the bed it contains, overlooking a park in the central business district, we first meet Snowden explaining what he is doing and why. Eerily calm, his almost painfully skinny physique curled up on the bed while fielding endless questions from Greenwald and Guardian journalist Ewen MacAskill, the film is a masterclass in closed-room mystery and paranoia.

Much has been written of and about Snowden, and this is not the place to rehash those discussions. Earning universal critical acclaim, the film has also offered Snowden critics an authentic and first-hand view of the vilified American, delivering deep insight into his knowledge and

persona. Despite near certainty that his hours of freedom are likely in double digits, Snowden appears calm and patient, all the more impressive considering Greenwald



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

and MacAskill's astounding level of ignorance when it came to technical matters.

As we now know, Snowden managed to escape Hong Kong only to become trapped in Russia.

Nevertheless, with help from WikiLeaks he has, unlike Chelsea Manning, retained his liberty and his ability to participate in the ongoing discussion that is tending ever so slightly away from his worst fears of technologically-enabled totalitarianism.

For the vast majority of Poitras' audience, my fellow theatergoers, the film is about politics, about trust in government, about oversight, and about the process of modern journalism. For the technically literate, however, I took away a different message. Communications technology does not just appear. It is created by engineers. Caltech students become leaders, innovators, inventors. Today, if there is any capability for ordinary people to avoid dragnet surveillance, it's because today's technical innovators, hobbyists, and developers have created some privacy enabling methods ex nihilo. Today, if we have any idea about illegal classified government activities, it's because technical people with access and conscience have leaked the information to relevant journalists. Scientists are usually trained to think of knowledge and technology as apolitical, but this is only ever the case under the most relaxed assumptions.

Competing in the Physics Olympiad way back in 2005,

the then head of the program told the assembled competitors that knowledge, and physics in particular, can be used for evil and it can be used for good. The subtext was obvious. Half the people in the room were the best and brightest from China, Russia, Iran, Israel, the USA, and other warlike nations, and physicists build the best bombs. While explosives are an essential component of a peaceful deterrent force, he insisted we must use physics for good. Science contains the tools of both technological emancipation and technological slavery. When we create new knowledge, it must never be without a consideration for its possible uses.

I know few people who could calmly throw away their entire life for the sake of telling ordinary people about morally questionable actions done in their name and with their tax revenue, but Snowden was clearly one such person. For him, and for anyone else in a similar position, this is by far the most difficult decision that a person will ever face in their entire professional or personal life. It may come tomorrow or decades in the future but, once encountered, cannot be avoided or ignored. *Citizenfour* is a terrific primer for thinking about that ultimate decision and the sort of created world in which you want to live.

Special Free On Campus Student Screening of Interstellar December 1

On the evening of **December 1**, Caltech students will be treated to an amazing Caltech-only experience featuring a screening of the movie *Interstellar* with a special talk on the science in the film by Professor (and Alumnus) **Dr. Kip Thorne**. Dr. Thorne has been an Executive Producer and the science advisor for the film and was involved in it from its inception, ensuring that real science is built into its fabric. He has also written the book "*The Science of Interstellar*," which should NOT be read before viewing the film; it is full of spoilers.

Please save the date and plan on joining your fellow students for what will most definitely be a thrilling, unique inside look into the movie *Interstellar* and the science behind it. More details will be sent to all students in the near future. Save the date!!!!

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FEATURE

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THE CALIFORNIA TECH

Rosenbaum shares vision for Caltech and hobbies

Continued from page 1

TR: How can a place with only 300 faculty members, 950 undergraduates, and 1250 graduate students dominate so many fields of science and engineering?

ME: What do you like to do for fun?

TR: Escape to my low temperature physics laboratory.

ME: You've just received an official notice from JPL that the world is ending in six hours because an Earth-sized asteroid is about to collide with the Earth. How do you spend your last six hours?

TR: Tapping the brilliant minds of Caltech people to lasso, divert, or blow up the asteroid.

ME: If you could only listen to one song for the rest of your life, what is that song?

TR: Dave Brubeck's Take Five.

ME: When you go to Subway, what do you put on your sandwich?

TR: Growing up in New York City, I learned that subways are for riding, not eating.

ME: (If you feel inclined to share) What was one of your craziest college memories?

TR: Driving 30 hours straight from Boston to New Orleans for Mardi Gras with two college friends, and then turning around and driving back north.

ME: If someone handed you a canvas and paint at this exact moment, what would you paint a picture of?

TR: Schrödinger's Cat

ME: Tell us something about you that not many people know about you.

TR: I broke my wrist playing football, my ankle playing basketball, and my arm playing softball, and still fancy myself an athlete...

ME: What is one thing you hope you accomplish during your time at Caltech?

TR: Ensuring that Caltech is the destination for the most innovative and original people in the world, whatever their background or experience.



Caltech's new president Rosenbaum proves to be approachable by answering The Tech's questions.

-caltech.edu

ME: What is your opinion of the current state of affairs at Caltech? What do you see that works well? What areas do you think could use more attention?

TR: Caltech is a wonderful place and in fundamentally good shape. Our culture of ambition, focus, intimacy, and intensity are unparalleled in higher education.

That, of course, does not mean that we can't be better. The student experience, translational research, and generating resources for what is in essence an intellectual venture fund are three areas that I believe present opportunities.

ME: Do you see Caltech primarily as a research institution, or an institute for higher education?

TR: This is a false dichotomy. Being at the forefront of discovery provides the opportunity to infuse the classroom with the excitement of research and the perspective of what it takes to push the boundaries.

ME: What do you think is the biggest problem facing Caltech today and in the near future?

TR: The present funding environment rewards conservative approaches to science, while the genius of Caltech is that we are unafraid to try big new ideas, even if they may fail.

ME: How many coats do you have to hide away in storage now that you live in SoCal?

TR: When I arrived in Chicago, I bought the thickest down jacket I could find. It is still in Chicago.

ME: Lastly, if you hadn't become a scientist, what profession do you think you would be doing right now?

TR: Philosopher. Of course, being president affords me opportunities to be both scientific and philosophical.

Fearful Flyer at the Fabulous Fall Flying Fair

Continued from page 1

When Werntz had his hands on back on the controls, I finally looked down from the side window at the sprawl of Los Angeles. David directed my attention to the high rises of downtown LA, Dodger Stadium, and cluster of buildings that turned out to be USC. Los Angeles looks dense and gargantuan, stretching out beyond our line of vision. The view was much clearer than could ever be achieved by a commercial airplane, since we were able to fly much lower.

The ride in the smaller airplane was just as smooth as any commercial airplane I had ever been on. I admit to gripping my armrest a few times during turbulence. However, the landing was so smooth that my hands lay unclenched in my lap during descent. I never once felt the sensation of rising out of my seat, which is often the scariest part of landing for me. When I stepped out of the plane, I felt a sense of relief, but then also a peculiar feeling of regret that this adventure was over.

At the end of the day, the club flew 114 people on 38 flights. Werntz personally logged 3.1 hours

and flew 21 people on 7 flights. There were 6 airplanes in use: 3 were Cessna 172s (the plane I had gone up in), 1 Cessna 182RG, 1 Piper Archer, and 1 Piper Arrow.

The 2014 Fabulous Fall Flying Fair is annual event organized by the Aero Association of Caltech. If you are interested in next year's flying fair, keep an eye out next year for their Fall Fair. If you are interested in training to be a pilot and/or joining the AACIT, please visit their website at aacit.caltech.edu or contact David G. Wentz, at dgwentz@yahoo.com.



Children and adults alike enjoyed the activities (which included free flights and free food) at AACIT's Fabulous Fall Flying Fair. The event was held on Nov. 2 at El Monte Airport.

Photos Courtesy of Tim Welch



Do you know of an awesome restaurant?

Do you have a recipe you want to share?

Do you want to get paid to eat food and write about it?

Then write for The Tech!

The Tech is looking for anyone and everyone who is interested in writing articles. You can submit restaurant reviews and recipes or you can ask The Tech editors for suggestions at tech@caltech.edu

SPORTS

THE CALIFORNIA TECH

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You can find Connie Hsueh at <http://www.dabomb.com/>

GOCALTECH.COM

Actual Sports Content Editor

PASADENA, Calif. (Nov. 4, 2014) – An incredible team effort lifted the Caltech volleyball team to a thrilling five-set victory over West Coast Baptist College to cap the season and send off senior Connie Hsueh (Pacifica, Calif. / Henry M. Gunn) on Tuesday night.

An epic first set that lasted 60 points set the tone for the rest of the match. The teams traded the lead early until the Eagles rattled off five straight points to go up by three at 10-7. Caltech pulled back within one at 12-11, but WCB responded with a 8-2 run to surge ahead to a 20-13 lead.

The Beavers were not about to give in, however, and came up with a 7-2 run of their own to cut the deficit to two. After an Eagles kill made the score 23-20, Caltech notched three straight points to knot things up at 23-23. A service error handed nearly condemned the Beavers, but the Eagles returned the favor to bring the score

back to a tie at 24-24. The Eagles earned a total of four more set points, but each time the Beavers came up in the clutch, with Hsueh and sophomore Suzannah Osekowsky (Saratoga, Calif. / Saratoga) combining on a block and junior Catherine Jamshidi (Burke, Va. / Lake Braddock Secondary School) recording a solo block.

Two service errors later, the Beavers held serve with the score tied 29-29. Junior Meghana Pagadala (Rock Island, Ill. / Rivermont Collegiate) tipped a perfectly placed kill to put Caltech within set point, and junior Amy Hu (Rockville, Md. /



Look at Connie rocking the foot-pop.

Montgomery Blair) iced it with an ace for the 31-29 win.

Caltech rode the momentum into the second set, leading all the way through to 19-17 before a WCB rally saw the Eagles score eight of the final nine points to take the set, 25-20. The Beavers got out to another early lead in the third set, but the Eagles rallied late again to just eek out the 25-23 win and take a 2-1 lead in the match.

With their backs against the wall, the Beavers stepped up their play to yet another level as they notched the first five points of the fourth set, forcing a WCB timeout. Caltech extended the lead to 12-6 and later to 20-12, cruising to the 25-18 victory.

In the deciding fifth set, Caltech once more began with the lead and quickly extended it to 6-2, holding the margin through to 12-8 and looking well on their way to the win. It would not come easy, however, as the Eagles silenced the gym with a 5-1 run to tie the match at 13-13. Fortune was on Caltech's side, though, as a pair of attack errors handed the Beavers



the match to close a storybook ending on the season.

Jamshidi led the Beavers with her first double-double of the year, smacking 18 kills on a .362 hitting percentage while notching season highs in digs (14) and blocks (five) to go along with an assist and an ace. Hu posted her second double-double of the season, tying her

season high of 21 assists and setting a new mark with 12 digs, while junior Juliet Su (Alberta, Canada / Western Canada Sr.) led the team with a 15 digs – just one shy of her career high. Pagadala reached double digits in kills (10) for the first time in her career and added five digs and two blocks as Junior Amarise Little (Orlando, Fla. / Freedom) chipped in with five kills, five digs and a whopping seven blocks (two solo). Junior Harinee Maiyuran (Irvine, Calif. / Arnold O. Beckman) made 11 assists and added six digs while Hsueh closed out her career with three blocks.

Check out these super rad fencing pics



These pics are super legit and so are you guys.
Photos Courtesy of Michael Wong



This picture was too good not to include it.
-gocaltech.com

Bradley “shatters”, pool still intact



-gocaltech.com

GOCALTECH.COM
Actual Sports Content Editor

Caltech with his first goal of the day. The Poets locked down on defense and rattled off four straight goals to go up 5-1 over the next four minutes, but Bradley notched his second strike on a perfectly placed shot from nearly mid-pool before the period ended to cut the deficit to three.

The Poets came out of the first break firing as they racked up three unanswered goals to extend the lead to 8-2 just three minutes into the second quarter. Bradley promptly tied the program record to pull the deficit back to five, and three minutes later set the mark as he finished a three-on-one breakaway, with junior Jim Blackwood (Rancho Palos Verdes, Calif. / Palos Verdes Peninsula) recording the historic assist.

After scoring a last-second goal heading into halftime, Whittier tacked on three more to open up a match-high eight-goal margin at 13-5 just a minute into the third quarter and seemingly put away the Beavers. Caltech was far from finished, however, as Blackwood and Bradley netted a goal apiece to quietly cut the deficit back to seven by the end of the quarter.

Caltech put Whittier on notice to start the fourth quarter, exploding for another three unanswered goals to pull back within four to open the period. The Poets recovered in time to put the match out of reach, though, scoring three of the final four goals to seal the 17-11 victory.

The Beavers also celebrated Senior Day, recognizing Ben Grabowski, C.J. Culpepper, Matthew Lappin and Austin Mayron for their contributions over their careers.

Scoreboard

Women's Volleyball

Fri. Oct. 31 vs. Pomona Pitzer - L, 3-0

Sat. Nov. 1 vs. Occidental - L, 3-0

Tues. Nov. 4 vs. West Coast Baptist - W, 3-2

Men's Soccer

Sat. Nov. 1 vs. CMS - L, 4-1

Men's Water Polo

Wed. Oct. 29 vs. Cal Lutheran - L, 23-9

Sat. Nov. 1 vs. CMS - L, 14-6

Wed. Nov. 5 vs. Pomona Pitzer - L, 19-5

Sat. Nov. 8 vs. Whittier - L, 17-11

ASCIT Minutes

ASCIT Board of Directors Meeting

Minutes for 6 November 2014. Taken by Sean McKenna

Officers Present: Catherine Jamshidi, Connor Rosen, Connie Hsueh, Patrick Nikong, Annie Chen, Sean McKenna

Guests: Margaret Lee, Elliot Simon

Call to Order: 11:25 pm

President's Report (Cat):

- Reaching out to several groups (GSC, Alumni Association, etc.) on campus to get more funding for Big I
- There have been some student concerns related to Athletics. We are working on getting more information about this.
- The Dean's Advisory Council has taken on two projects: revamping the Independent Studies Program and improving the role of peer-advisors

Officer's Reports:

- **V.P. of Academic Affairs (ARC Chair: Nima):**
 - Absent
- **V.P. of Non-Academic Affairs (IHC Chair: Connor):**
 - Meeting with the President to discuss the future of housing at Caltech (i.e. Bechtel Housing). Anyone with an opinion should talk to their House President.
- **Director of Operations (Connie):**
 - Connie will assign lockers to clubs soon.
 - Connie is working on a proposal to open the Phys 8 lab space in the SAC to be usable by the undergrads for an electrical shop.
- **Treasurer (Patrick):**
 - ASCIT budget for 2014-2015 has been determined. No substantial changes from 2012-2013, the last year which had both Big I and ASCIT Formal.
- **Social Director (Annie):**
 - Big I is happening on Saturday 22 November.
 - Be a Kid Again and ASCIT Formal are being planned.
- **Secretary (Sean):**
 - Nothing to report

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. The next BoD meeting will take place on November 13th, 2014 at 11pm in SAC 15.

Meeting Adjourned: 11:52 pm

CALTECH THEATER offers several chances to branch out and take chances, have fun and expand your social network this fall!

1. Wednesday Nights 730-930 in Ramo Auditorium. Director of Theater Arts Caltech, Brian Brophy (*Star Trek TNG, Shawshank Redemption*) helps guide you through the fundamentals of **Directing/ Acting/Writing** for the stage (life), to a final production of several ten-minute plays by students December 3, 2014. We still have room for about six more students! Last chance 2014!

2. **Playgoing Friday Nights** (Next play *What the Butler Saw*, a crazy fun farce at Mark Taper Forum, downtown Los Angeles November 14, 8:00 PM). First twenty-five receive subsidized tickets at five dollars each! The first outing was the musical *Kiss Me Kate* at the Pasadena Playhouse last Friday night (October 10) with nearly twenty students and we ate cupcakes from Dots!

3. **WANTED: Actors, singers, musicians, technical personnel, and designers for new, original Caltech musical *Alice Through the Wormhole!*** This musical is currently in the development phase with a world premiere run February 20-March 1 2015! If you are interested in any facet of production, including script development, contact Brian directly! Next meeting Saturday, October 11th at the Theater Lab 10:30, located behind the Theater Arts House 275 South Hill.

Bagels, coffee and snacks will be served!

CALTECH-OCCIDENTAL CONCERT BAND



Do you know what Caltech group has performed at the Great Wall, Carnegie Hall, and Disney Hall, all in the last ten years? Or what ensemble boasts among its members or alumni the Project Scientist of the Spitzer Telescope, the chief engineer of the Mars Pathfinder flight system, the Deputy Director of the Interplanetary Network Directorate, and Niles Pierce. And, did you know that almost every concert features a guest conductor who is a esteemed Professor of Geology and Geochemistry.

If you guessed it's the Caltech - Occidental Concert Band, you guessed right. Last June, this amazing ensemble, operating under the rather large and impressive umbrella that is part of Caltech's Student Affairs, performed as the feature ensemble at an international music festival at Disney Hall.

You can hear this exciting group on Friday, November 21st, at 8:00 in Ramo Auditorium. This is a free concert!

Our guest conductor that evening will be Sharon Lavery. Sharon is the co-conductor of the USC Thornton School of Music Wind Ensemble. Also appearing that evening will be the Blair High School Band.

There will be music by Charles Ives, George Gershwin, Paul Hindemith, and Auturo Márquez.

Please come out and support your fellow students and faculty as they prove once again that life at Caltech is a fertile ground for many things, including the creative arts.

The Caltech-Occidental Concert Band will present their annual fall concert in Ramo Auditorium on Friday night, November 21, at 8:00 PM. This is a free concert.

REMINDER FROM THE COUNSELING CENTER:

Meditation Mob (drop-in mindfulness meditation group)
meets every Tuesday

Bottom floor of Winnett from 12:00-12:50 pm

The Caltech Guitar Department and Matthew Elgart will present a concert of music in Dabney Lounge on November 15, 2014 at 7:00 pm.

Special Guest Artist will be Nicholas Barrett. Featured music will include compositions by Bach, Satie, Villa-Lobos, Klein and others. Admission is free with a suggested donation of \$10 to the guitar department.

Dr. Elgart is currently Lecturer in Music at Caltech and California State University of Los Angeles where he heads the classical guitar department. Matthew received his Masters of Fine Arts in Guitar Performance from UCLA and his Doctorate in Composition from Claremont Graduate School. His work with the Elgart-Yates Guitar Duo, formed in 1975, includes recordings, duo-compositions, and frequent solo and duo performances in the U.S. And Europe. He has received numerous awards and grants including the NEA, California Arts Council and the Swiss Helvetica Fund. His publications and recordings are available on Bridge Records, TR Records, and California Guitar Archives.

For further information on this concert and/or the upcoming January 18th Caltech Chamber Guitar performance, please call the Caltech Performing and Visual Arts Office at 626-395-3295.

The California Tech

Editors-in-Chief
Monica Enlow
Liz Lawler
Neera Shah
Nehaly Shah

Advisor
Richard Kipling

Contributing Writers
Brad Chattergoon
Wen Min Chen
Casey Handmer
Nancy Wen

Contributing Photographers
Michael Wong

Circulation manager
Kit Chinetti

Caltech 40-58, Pasadena, CA 91125
Contact tech@caltech.edu

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

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

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

Get Fit with Brad/Chad: Nutrition Part 2

BRAD CHATTERGOON
Contributing Writer

Wow, it's already week 7. Drop day is coming up soon and if you're like me you already know which pesky math class you're dropping. Ma108a I'm looking at you. Just kidding. It's a requirement and I want to graduate this year *sad face*. If you've been a loyal reader then you know I always start my articles with a small anecdote from my life. Over this weekend I was at Page's Interhouse and I introduced myself to one of the freshmen. The response was "Wait do you also go by Brad/Chad?" to which I responded yes and was then met with an overwhelming "You're Brad/Chad??" It's always a little bit dubious when someone doubts your identity. But moral of the story: if you see me around and think that I might be that one guy who writes the fitness column for The Tech, feel free to say hi and maybe I'll sign your bicep or something. Anyways onto nutrition!

If you read the last article then you should know a bit more about calories, what they are and how your body interacts with them. In this article I'll talk more about proportions of carbs, proteins, and fats one should be aiming for, as well as a bit about how to determine what you're eating.

You might have heard the term "essential" paired with "fatty acids." In this context essential means that our bodies cannot synthesize them from other materials so we are required to obtain it by means of our diets. There are two types of essential fatty acids and nine types of essential amino acids (protein components). There are however, no essential carbs.

Carbohydrates are our bodies' preferred working fuel, but we

can synthesize them from other materials in our body. For this reason I'll start by examining how many proteins and fats we need in our diet. The conventional "bro-science" approach to protein is to consume 1g of protein per pound of bodyweight. By FDA standards this is likely to be more protein than is required but there is some benefit to this claim. More protein won't hurt you assuming that the protein sources are lean and not too heavy in cholesterol, etc., but that is another discussion. By eating protein at the bro-science recommended level, there is a better chance to get the required essential amino acids and it contributes to the net caloric intake for the day. By consuming more proteins it means that there is less need to consume as many fats and carbs which can be high in sugar or trans fats.

During the fitness journey it is a good idea to adapt one's macro nutrient split accordingly to the goal whether that is weight gain, maintenance, or fat loss. A reasonable expectation for maintenance goals are to consume calories in the ratio protein:carbs:fats, 0.35:0.35:0.30.

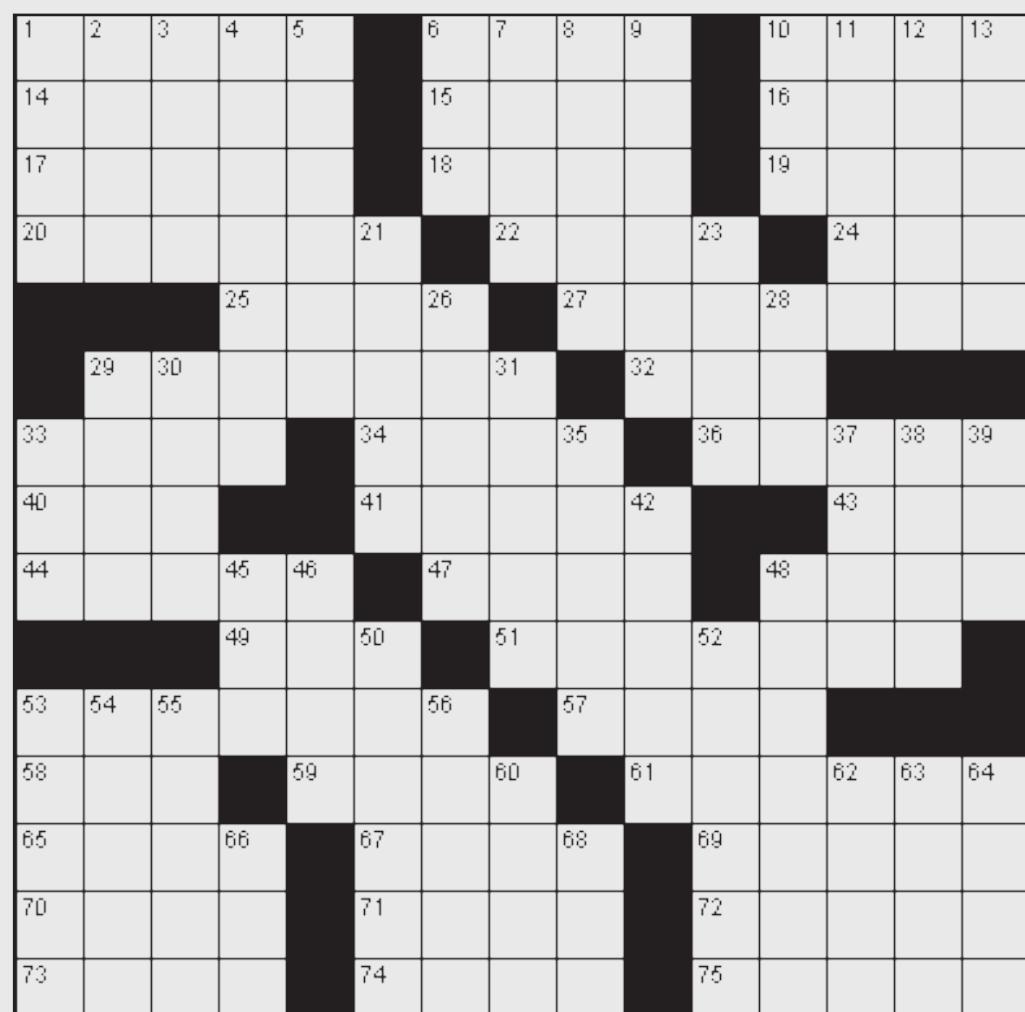
Now a word on how to track your calories and macros. If you've never tracked your calories before then it is important that you do so at least for a little while. It's extremely easy to misjudge what the actual calorie split is for a particular food and even harder to determine calorie total. I recommend buying a kitchen scale and using the app "MyFitnessPal," which is available on both iOS and Android. Alternatively you can manually record your food intake and then look everything up later but then you also should probably go back to dial-up internet.

Brad/Chad



Examples of foods high in protein.

Crossword



Across

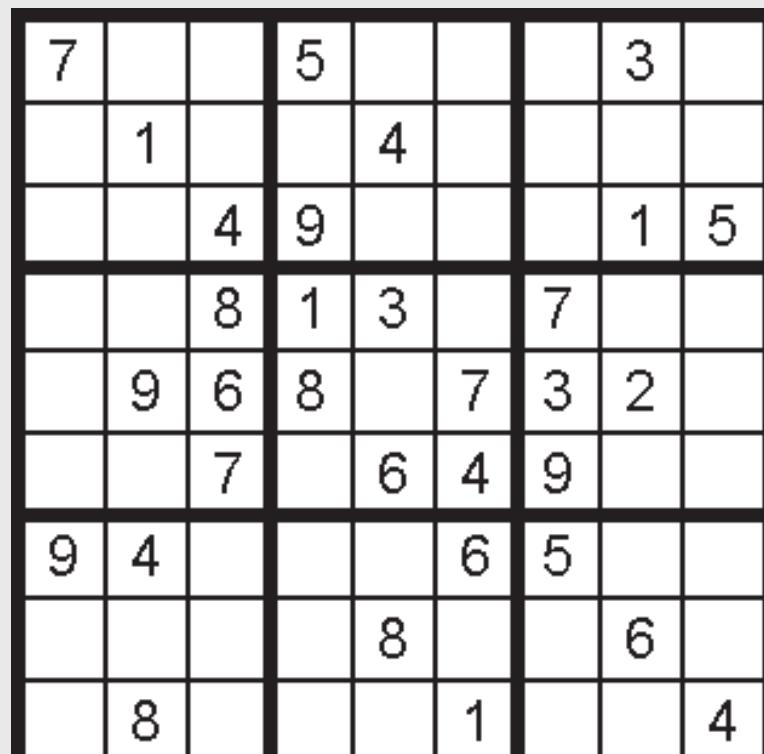
1. Temporary inactivity
6. Highly excited
10. Ready money
14. Keyboard instrument
15. Decorative woven fabric
16. Woodwind
17. Something that has survived the past
18. Security interest
19. Deep wide chasm
20. Sartor
22. Naive or inexperienced person
24. Was seated
25. Notion
27. Greenhouse
29. Below
32. Understand
33. Become less intense
34. Marine mollusk
36. One of the senses

40. Belonging to us
41. Sheltered port
43. Church bench
44. General kind of something
47. Unaccompanied
48. Melody
49. Litigate
51. Harmony
53. Slightly odd
57. Close
58. Epoch
59. Percussion instrument
61. Nape
65. Fan blade
67. Object of worship
69. Singing voice
70. Sharpness
71. Certain
72. Unjustified
73. Scottish dance
74. Encounter
75. Took without permission

Down

1. Computer interface
2. Region
3. Large sweet juicy fruit
4. Seafaring
5. Encrypt
6. Entire
7. Profit
8. Large body of water
9. Unusual mental ability
10. Part of a gear wheel
11. Maltreatment
12. Relating to the sun
13. Brawny
21. Scope
23. Metal bar across a fingerboard
26. Book of maps
28. Division of 8 Down
29. Color between green and violet
30. Acquire or deserve by efforts or actions
31. Mayhem
33. Murkiness
35. Kind of gourd
37. Acantha
38. Look after
39. Female sheep
42. Canonical hour
45. Country, initially
46. Vocalized
48. Deluge
50. Self-interest
52. Desert plant
53. Cut off
54. Barter
55. Series of hills or mountains
56. Empower
60. Bloodshed
62. Change by reversal
63. Violation of the rules in sport
64. Liberate
66. Fish
68. Allow

Sudoku

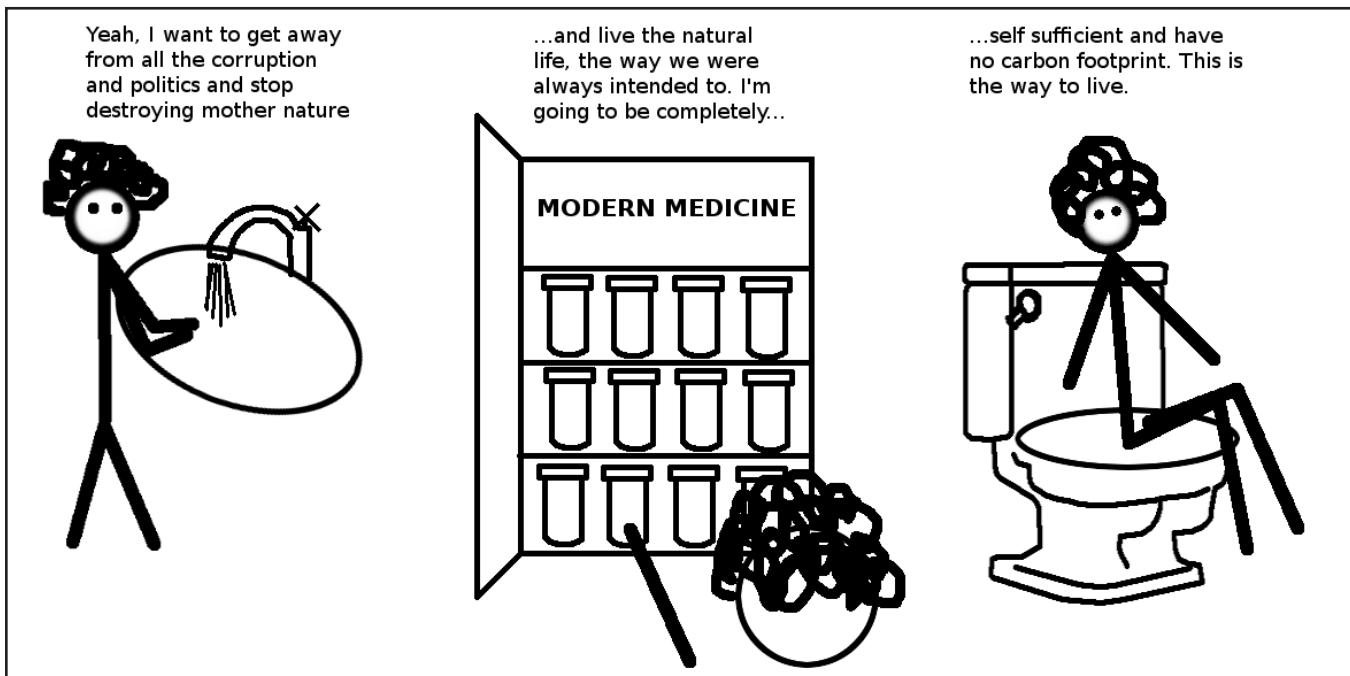


HUMOR

THE CALIFORNIA TECH

NOVEMBER 10, 2014 8

Into The Wild

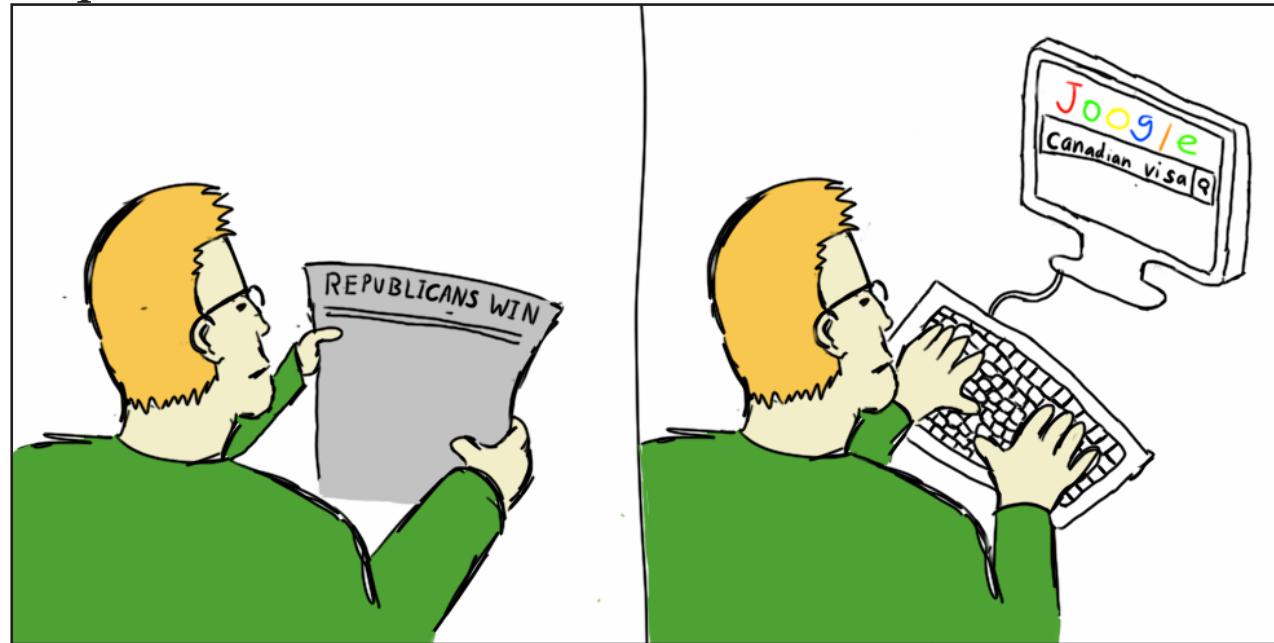


Georgio Kraggman

Answers to previous Sudoku

1	5	2	3	8	7	4	9	6
4	6	3	2	1	9	8	7	5
7	8	9	5	6	4	3	2	1
9	7	1	4	3	6	5	8	2
2	4	8	7	5	1	9	6	3
5	3	6	9	2	8	7	1	4
3	9	7	1	4	2	6	5	8
6	1	5	8	7	3	2	4	9
8	2	4	6	9	5	1	3	7

Acquired Taste



Dr. Z

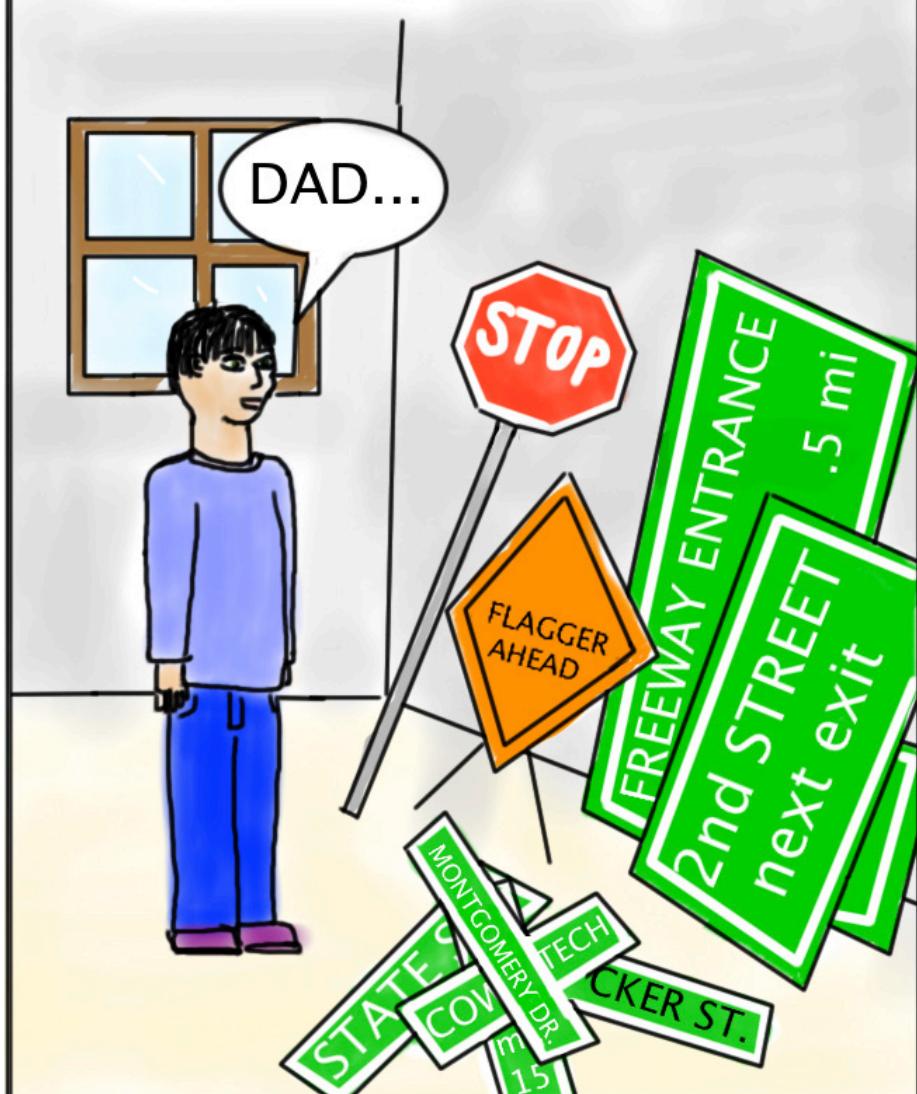
Answers to previous crossword

C	R	A	B		T	A	P	S	A	P	R	O	N
H	U	L	A		A	B	L	E	W	E	A	V	E
O	R	A	L		B	R	A	N	E	A	V	E	S
K	A	R	M	A		U	N	D	O	R	E	N	T
E	L	M		N	A	P	E	A	L	L			
					M	O	S	T	A	T	E	A	L
S	H	R	I	N	K		A	C	H	E		T	O
C	O	A	X		L	I	E			P	O	S	E
A	P	T		E	V	I	L		P	R	O	P	E
N	E	E		R	A	T		S	A	I	D		
					A	R	M		A	L	T	O	O
W	E	L	L		P	A	R	E	T	I	B	I	A
A	V	O	I	D		C	R	E	W	R	E	S	T
S	E	R	V	E		N	O	V	A	I	S	L	E
P	R	E	E	N		E	W	E	R	S	E	E	D

-puzzlechoice.com

Gigi Anotello

I never wanted to believe my dad was stealing from his job as a road worker. But when I got home, all the signs were there.



The California Tech
Caltech 40-58
Pasadena, CA 91125