

HEAL hosts Caltech's first Beaver 5K Run/Walk

STEPHANIE HUARD

Contributing Writer

It was a warm and exciting morning on Saturday, May 30, when over 170 runners gathered on Beckman Lawn for Caltech's first Beaver 5K Run/Walk. The participants, including members of the faculty, staff, postdoc, graduate and undergraduate communities, lined up at 10:30 a.m. near Broad Center, and made their way twice through a twisty-turny loop on campus to reach 3.1 miles.

Over the course of the race, volunteers were stationed around the course to provide encouragement to participants, and to provide assistance in the event of injury or any other emergency. At the end of the race, the fastest woman and man in the undergraduate, graduate and faculty/staff/postdoc categories received a prize of a Jamba Juice gift card, and the fastest team and biggest team received trophies. Additionally, Ernie's food truck was stationed at the end to provide runners with tasty nourishment at the end of the race. Even the trusty Caltech Beaver came out to congratulate runners and pose for pictures at the photo booth.

The event was organized by the Health Education Advisory League (HEAL) and the Catalina Community Associates (CCA), to provide a healthy, fun event for the community. HEAL is an undergraduate and graduate student organization that works

with Caltech's health educator, Jenny Mahlum, to educate the community on matters pertaining to overall health and Caltech-specific resources for maintaining a healthy lifestyle. Within HEAL, there are five subcommittees: Nutrition and Fitness, Mental Health Awareness, Stress and Sleep, Sexual Health and Healthy Relationships, and Drugs and Alcohol. The CCA is group of community volunteers from the Catalina Apartments that plan events and act as representatives for the Catalina community. The CCA consists mostly of graduate students.

HEAL and the CCA thank everyone who participated in the event for making it a success.



Runners line up at the start by Broad Center.



Friends pose with the Caltech Beaver after their run.

Photos Courtesy of Stephanie Huard

John Nash dies in NJ car accident

CASEY HANDMER
Contributing Writer

On May 23, John Nash and his wife, Alicia Lopez-Harrison de Lardé, died in a traffic accident in New Jersey. Two other people were injured. Nash was returning from a trip to Norway, where he had been awarded the Abel Prize in recognition of his extraordinary career and contributions to the field of mathematics. Nash's life was memorialized by the 1998 book and 2001 film *A Beautiful Mind*.

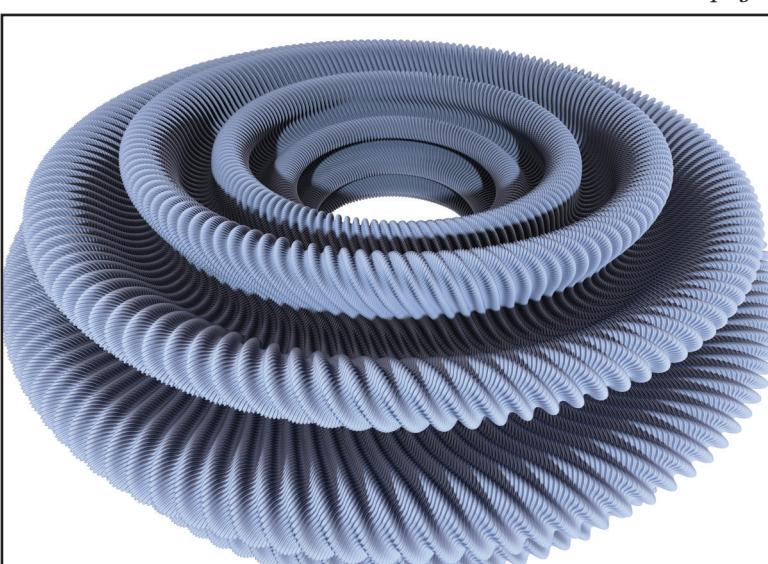
Nash was born in West Virginia in 1928, and attended the Carnegie Institute of Technology (now Carnegie Mellon University) where, his interests evolving, he switched majors from chemical engineering to chemistry, and finally to mathematics, graduating in 1948 with a B.S. and M.S. He followed this with graduate work at Princeton University,

earning his Ph.D. in 1950 at the age of 21. His 28-page doctoral thesis (<https://goo.gl/IJC4mB>) introduced non-cooperative games and the Nash equilibrium, for which he subsequently was awarded one-third of The Sveriges Riksbank

Prize in Economic Sciences in Memory of Alfred Nobel 1994.

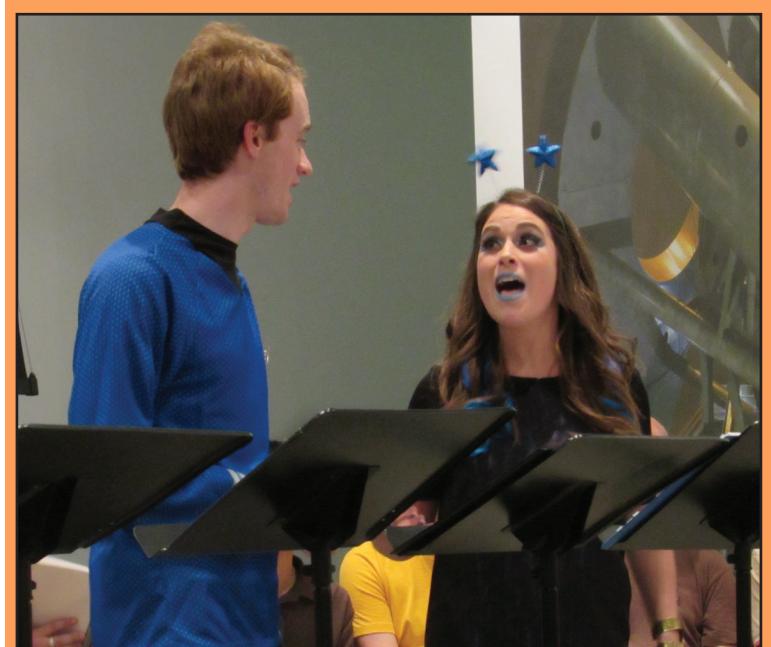
Nash was hired by MIT in 1951. In 1952 he fathered and subsequently abandoned his first son, John David Stier. His summer

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-<http://hevea.imag.fr/>

Cast holds screening of Star Trek musical parody



(From left) Spock (Casey Handmer) and Takya (Holly Bender) share an emotional connection during a song.

Photo Courtesy of Nehaly Shah

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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 and 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

1. Caltech Y - Decompression
Saturday | June 6th | 7:00 - 9:00 PM | Winnett

Stressed during finals week? Join us to decompress with free food - burgers, hot dogs, cookies, fruit and veggies, ice cream, chips and drinks; entertainment - movies; and just hanging out with your friends. It is a great way to relax a little before the last finals of the school year!

If you'd like to volunteer to help out, please fill out the form here: <http://goo.gl/forms/Q6yr7r5gf>.

The theme is to be decided and volunteers get a free gift card.



Volunteers help serve food at the Union Station Family Center.

Photos Courtesy of Caltech Y

materials are provided. The Family Center provides a home-like environment for up to 50 parents and children. It's one of the only shelters in LA County that accepts single fathers with children. For more info and to RSVP email Stephanie Hong (stephanie.hong95@gmail.com) or Ruohan Wang (rwwang@caltech.edu).

3a. Pasadena LEARNS
Friday | 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. Eligible for Federal Work Study.

3b. Hathaway Sycamores
Monday | 5:30-8:00pm | 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 1.5 hours of tutoring. Transportation is included. For more info and to RSVP email Sherwood Richers at srichers@tapir.caltech.edu. Eligible for Federal Work Study.



Students let loose at the quarterly Decompression event.

2. Union Station Family Center
Sunday | June 7th | 4:00 - 8:00pm | Pasadena

Prepare and serve dinner to the homeless at Union Station Family Center in Pasadena. Food and

John Nash and wife killed in crash

Continued from page 1

research work on games and the Cold War for RAND Corporation came to an end in 1954 when he was stripped of his clearance after being arrested in a homosexual sting operation at the height of the McCarthy-era hysteria. In 1956 he proved Hilbert's 19th problem, only to find an independent solution had been published by the Italian mathematician Ennio de Giorgi just months before.

Around this time, Nash met Alicia Lopez-Harrison de Lardé, an MIT-educated physicist originally from El Salvador. They married in 1957 in a Roman Catholic ceremony, despite Nash's atheism. In 1958 he was tenured at MIT, but by 1959 his mental illness began to manifest. Nash resigned from MIT and underwent sporadic treatment for schizophrenia for much of the next decade. His second son, John

Charles Martin Nash, was born soon after his first admission. Although Alicia and Nash divorced in 1963, he ended up boarding in her house following his release from his last hospitalization in 1970.

While he never stopped mathematical research entirely after the sudden onset of his illness, his gradual recovery during the 1970s and 1980s saw a second blossoming of his mathematical creativity and a series of productive collaborations, initially using email.

During the 1990s, he resumed some teaching duties at Princeton and, in 2001, Nash and Alicia remarried. Nash has stated that through his recovery he learned to manage the societally challenging aspects of schizophrenic behavior while trying not to restrict his incredible creativity.

While Nash is best known for his work on games theory, with 21

publications he made an array of astounding and sometimes baffling contributions to many other areas of mathematics. His recently declassified work on cryptography in the early 1950s was decades ahead of its time. His proposed encryption/decryption algorithms, while different from RSA or GPG, are similarly based on the concept of computational hardness and have since been shown to be as effective.

He made contributions to algebraic geometry and topology, and work in geometry produced the Nash Embedding Theorem in 1966, which showed that every Riemannian manifold can be isometrically embedded into some Euclidean space. Constructive proofs soon followed and today it's possible to visualize the embedding of a square torus in 3D space.

Honor Code amendments pass

CONNOR ROSEN AND

ADAM JERMYN

JOHN DABIRI

Contributing Writers

Dean of Undergraduate Students

of amendments to the Board of Control bylaws in a campus-wide vote. We strongly believe these changes will strengthen the Honor Code, address existing faculty and student concerns and maintain the most important aspects of autonomy that enable the Board of Control to work effectively.

The new bylaws require the Board to consult with the dean on all dismissals, and allow the Board to reconsider the case after this conversation with the dean if relevant information arises. This will give faculty greater insight into the dismissal process, and allow the dean to work with the Board to keep track of dismissals as well as convey additional information that may change the outcome of a case. The new bylaws also reinforce the Board's final say in dismissals. This is a strong step toward meeting faculty concerns about oversight of dismissals while maintaining the student-run nature of the process,

and will give the dean a greater ability to communicate faculty concerns to the Board as well as better communicate the Board's decisions to faculty members.

The bylaw amendments and changes to the Board of Control procedures came about through careful consultation among students, faculty and staff, as well as a concerted effort by student leaders to educate the student body and communicate faculty concerns and the potential benefits of the amendments to the student body. These positive changes were enabled by close communication among all involved parties, as well as the trust placed in student leaders by faculty and staff to accomplish mutual goals without unilateral decisions imposed upon the students by the administration. We believe this is a model for addressing future issues facing the faculty and students.

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We are looking for more contributors for the next academic school year.

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Have a great summer, and see you this fall!

A\$AP Rocky shows newfound strengths, predictable weaknesses on new album *At.Long.Last.A\$AP (A.L.L.A.)*

NAILEN MATSCHKE
Contributing Writer

The five months we've seen of 2015 have already been some of the best for hip-hop in recent memory, and amongst the avalanche of releases slated for this year, A\$AP Rocky's sophomore studio album *At.Long.Last.A\$AP (A.L.L.A.)* has been one of my most anticipated. I, like many others, got into Rocky with his debut LP *Long.Live.A\$AP*, which despite its mainstream sensibilities possesses no lack of replayability, as Rocky's versatile flow over a varied but memorable selection of beats produced several standout tracks and avoided too much filler. Since its 2013 release there's been every reason to be excited about its successor, as Rocky and the rest of A\$AP Mob have continued to rise to worldwide stardom through A\$AP Ferg's debut *Trap Lord*, successful fashion line launches, headline performances at EDM festivals and more.

The past year also saw Rocky releasing several singles (only some of which made it onto *A.L.L.A.*) in addition to a couple of leaked tracks, all of which were good and certainly got me excited, but in my opinion were not particularly amazing. The death of perhaps the Mob's greatest contributor, A\$AP Yams, on Jan. 18 was a large blow to his longtime friend, mentee and partner Rocky. After it was revealed that he and Rocky co-produced *A.L.L.A.* with Juicy J and Danger Mouse, and that the cover art is honoring A\$AP Yams, the emotional and artistic significance

of this release became clear. After its online leak led to an early release this past week, we finally get to see what its 18 tracks have in store, and while there are some significant things I would have liked to see done better, the album is a very solid release.

The biggest improvement *A.L.L.A.* brings is its remarkable consistency despite its length of over an hour; every song feels in place, Rocky continues to be able to own whatever beat he's rapping over and the only weak guest appearance in a long and impressive list is Kanye West's. Everything on *Long.Live.A\$AP* had at least some

redeemable aspects, but many of the best tracks relied heavily on whatever made them different from the rest (e.g., "Wild for the Night" or "iTrain"), while the less significant ones frequently suffered from a combination of boring production and overstaying their welcome. *A.L.L.A.*, on the other hand, has seriously fantastic production on every track, incorporating numerous instruments not typically found in pop-rap in conjunction with influences from non-electronic genres, and avoids gimmicks. Rocky has expressed that this

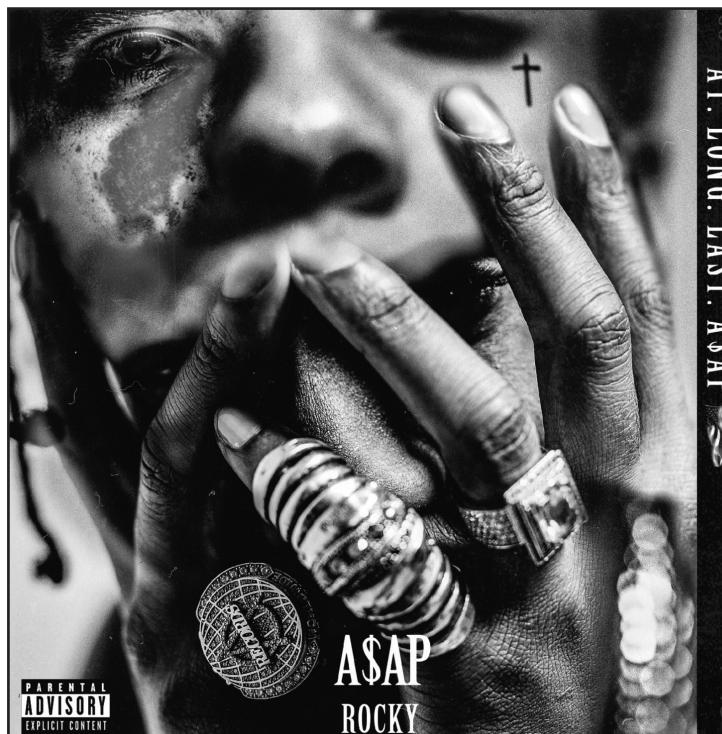
album bears more of his own creative influence, and while I don't mean to discount his co-producers, the result is a unique aesthetic that I really think sets Rocky apart

are best suited for. Nothing really reaches the crowd-moving levels of excitement found in previous hits like "Wild for the Night," and while it's certainly not for lack of effort,

most tracks on *A.L.L.A.* leave me wanting at least a little more out of Rocky himself. He has plenty of charisma and can walk the line between corny and clever with lines like "I visit Nice like it's my sister's daughter" on "Wavybone" or "All I wanna count is green numbers / Man that s--- is weird, lookin' like the matrix," and there are a few thematically

from Lil Wayne on "M\$" and verses from both Bun B and the late Pimp C of Underground Kings (UGK) on "Wavybone." Not all are stellar, as despite Schoolboy Q's tight and entertaining delivery, "Electric Body" ends up being "PMW (All I Really Need)" round two but even more devoid of substance, and it's hard to overstate just how bad Kanye's verse is on "Jukebox Joints." Every other featured artist delivers, though, adding to the already very cohesive experience.

Expectations were high for *At.Long.Last.A\$AP*, and I think A\$AP Rocky was able to pull together an ambitious project and meet them. I may still prefer *Long.Live.A\$AP*, but whereas the latter flip-flops between boring and excellent, *A.L.L.A.* is (apart from a couple moments) very good the whole way through. Rocky is not the most lyrically or technically skilled of rappers, and that in combination with the lower-key tone of this record leads to some boring or even lethargic sections, but Rocky still sounds good doing it. The production is the real star of the show, as Rocky goes in some exciting and well-executed new directions that work well together and stand out more from the pop-rap pack than even the Clams Casino-produced cloud rap of his *Live.Love.A\$AP* mixtape. Eventually, A\$AP Rocky will have to figure out a balance between the strengths of that mixtape, his debut album and *A.L.L.A.*, but for now I'm pretty happy with how his sound is evolving, and will definitely be putting quite a few listens into this album in the future.



-http://en.wikipedia.org/

from a lot of other hip-hop artists. From the psychedelic haze of "L\$D" to the *Twilight Zone*-esque pizzicato of "Electric Body" to the *My Beautiful Dark Twisted Fantasy*-worthy maximalism on "Everyday," just about every beat on this album is at a level you'd expect maybe a handful to reach on a pop-rap release.

This focus on interesting beats does seem to have limited the album's potential for huge singles, though, which is somewhat unfortunate as they are what Rocky's strong flow but weak lyrics

such as opener "Holy Ghost," which discusses Rocky's personal struggles with religion and the hypocrisy he's seen in others, and "Max B," which contemplates Rocky's criminal history while giving a nod to the eponymous hometown rapper serving 75 years in prison. The majority of content, however, is either things we've already heard from Rocky or totally generic subject matter. Some of this is made up for with a strong array of features, including a surprisingly long and attention-grabbing verse

Is there life beyond the Caltech bubble?

MONICA ENLOW
Contributing Writer

Since this is the last issue of *The Tech* for the 2014-15 school year, I figured why not write a reflection on my time here at Tech. This piece is not meant to be a rant or a complaint but simply a reflection that someone (or no one) can take something from.

This year I was told by Jarrid Whitney, the executive director of Admissions and Financial Aid, that I was the first admitted student in the Class of 2015 to accept to Caltech. At that time, some four years ago, I was called by the admissions office. My parents thought it was a lovely welcome call, and I didn't think twice about it. I am now about to graduate from Caltech, and I find out that the call was meant to gauge whether or not I had intentionally accepted to Caltech so quickly. Have I reconsidered my choice many times since then? Should I have reconsidered my choice more four years ago?

That's all in the past. Let's focus on the present.

I have been involved in many different areas on campus. In each

of those areas I have attempted to make a difference. Those areas of campus include, but are not limited to, the Caltech Center for Cultural Diversity, ASCIT and the Caltech Fund.

Last year, in one of the final issues of the paper, I wrote an editorial about racism on Caltech's campus. Since coming to Caltech, I have been constantly faced with the issue of diversity on this campus. I was the only enrolled black female when I was a freshman. I can now proudly say that there is one in every class; however, that number is not enough. I don't believe that Caltech wants to remain an institution that contains "token minorities," i.e., the select few underrepresented minorities that show up on every committee, board, advisory council, etc. I am encouraged by President Rosenbaum's renewed commitment to diversity. While I would have liked to have seen more of an administrative effort to address the issue of diversity before the final weeks of my senior year, it's better late than never. The first step to fixing a problem (and let's face it, diversity on Caltech's campus is a problem)

is admitting that there is one. Caltech is a unique institution that is very different from most other colleges and universities; I believe that when it comes to diversity, however, we should learn from our peer institutions. I am intrigued to see the progress Caltech will make in the upcoming years regarding diversity.

In that same vein, I am encouraged that Caltech is waking up. My roommate is currently president of the Feminist Club on campus, and I am consistently impressed by her efforts, and the efforts of many others, to raise awareness about issues that people don't think affect Caltech. In the news there are so many events regarding the treatment of women, minorities and LGBTQ individuals, and frankly I don't believe that the Caltech student body is as awake as it needs to be. I know as well as the next person that sets take time. Lab takes time. Sports take time. Sleep doesn't take enough time as it should. These shouldn't be excuses to stay ignorant, though. I see my friends at peer institutions involved in the social issues of the day (which will inevitably affect Techers once

they leave the safety of the Caltech campus), and I realize that I want to stay woke, but I can't think past the ACMo95c final I have due. I wholeheartedly appreciate the contributors to *The Tech* over the past year, while I was editor, who wrote pieces about current social issues in an attempt to wake up the Caltech community. I encourage more people to contribute to *The Tech* regarding social issues that our campus or other areas of the world are facing.

The California Tech has been one of my biggest passions over the past couple years. I believe in the power of journalism and the media, and as much as people don't want to admit it, I know they read this paper. I have been heard on paper more times than I have been heard in person, and I am encouraged by the campus discussions *The Tech* has fostered. I would like to see more contributors to *The Tech*, but unfortunately people are busy. If I had a nickel for every time someone said that they wanted to write an article for *The Tech* but they were "too busy," I would be able to make a dent in paying off my student loans. Do I believe that

The Tech should be a dumping ground for rants? No. Do I believe that *The Tech* should be a medium to foster productive discussions? Yes. As a former editor of this paper I can attest to the use of editorial discretion, and I believe that it is necessary but shouldn't deter people from writing articles. If all else fails, post your article on your Facebook or your blog and tell people to read it there. The point is, don't get upset with *The Tech* for choosing to publish or not to publish certain content. The editorial staff is doing the best they possibly can to ensure that the content published is quality and that the discussions that arise from the content published will be productive.

TL;DR: The Caltech bubble is a real thing. There are issues on this campus that need to be addressed and concerns that need to be raised. *The Tech* is doing the best it can to pop the bubble and make sure people stay woke. It's been real. It's been fun ... but it hasn't been real fun.

Pasadena NAACP President visits Amnesty International meeting

NEERA SHAH
Editor-in-Chief

On May 29, the local chapter of Amnesty International (A.I.) USA, Group 22, held a meeting which featured a talk from Gary Moody, president of the Pasadena branch of the National Association for the Advancement of Colored People (NAACP).

Moody joined the NAACP in 1981 and has since spent 14 years as the second vice president; this is his third year as branch president. His roots are in Pasadena, and he was even part of the first Black Student at Pasadena City College in 1969. He later joined the NAACP after realizing he wanted to be an advocate of peace and actually effect change.

Moody commented that the issue of violence has become very relevant not only on a national level but also right here in Pasadena. After becoming president and developing a greater understanding of the NAACP's mission, he has been able to increase the understanding of public and private policy in addition to faith-based policy. The NAACP currently collaborates with more than 30 churches in Pasadena to reach youth because, as Moody said, "Faith has often been the foundation of advocacy."

The NAACP works closely with other advocacy organizations such as the American Civil Liberties Union and Black Lives Matter. In addition, the NAACP has also recently started working with 20/20 Vision to provide employment opportunities to those in need. Employment remains a central issue both locally and throughout California. The NAACP works with youth to teach nonviolence through programs such as New Directions, and with local organizations to promote employment of youth. According to Moody, the opportunities for youth employment have decreased in recent years, providing a cause for concern.

Currently, Moody and the Pasadena NAACP are focused on dealing with local issues concerning violence and have even partnered with UCLA Professor Billie Weiss to understand how violence affects public health and economic development within a community. Another main issue is incarceration — California is even considered a "prison state" by many, including Moody. The NAACP has been trying to work with police departments to change policies and procedures to be fairer and less dependent on force. Further efforts include an open-door policy by the NAACP as a place for mediation between

citizens and police. One of the biggest cases that the NAACP has taken on recently is that of the shooting of 19-year-old Kendrec McDade. McDade was unarmed and shot by police in March of 2012, just after the Trayvon Martin case from Florida had gained national attention. Moody and the local branch of the NAACP have been following and advising in the McDade case since the shooting; the case is not yet fully resolved.

Moody ended his talk with a conversation on the issue of decreasing matriculation of Pasadena high school students at PCC (or any higher institution of learning). In his view, the toughest battle in education is reaching kids who are still in middle school to ensure that they finish secondary education and hopefully continue to college.

A constant theme throughout Moody's conversation was the importance of reaching out to youth and creating positive change. His most powerful statement of the night was in response to the misconception that the NAACP works exclusively with black people; after noting that the NAACP does, indeed, work with various other minorities such as Latinos, Moody said, "There is no black and white — there is a rainbow — and we all have hues. The NAACP works with people" to help them to the best of their abilities.

A.I. is a global organization which advocates human rights through campaigns, investigations and communications. More information about the organization can be found at www.amnesty.org.

Group 22 of A.I. has a monthly meeting as well as letter-writing meetings and book discussion groups once a month. For those interested, the next letter-writing meeting is Tuesday, June 9 at 7:30 p.m. at Rathskeller. The next book discussion group is on Sunday, June 21 at 6:30 p.m. at Vroman's bookstore; this month's book is Philda by Andre Brink. The next monthly meeting is Thursday, June 25 at 8 p.m. at the Caltech Y (505 S. Wilson).

All are welcome at these events.



Gary Moody, president of the Pasadena branch of the NAACP, visited this month's Amnesty International meeting to talk about advocacy.

Photo Courtesy of Neera Shah

Star Trek parody *Boldly Go!* received well by community at screening



The cast of Boldly Go! is ready to perform.

Photo Courtesy of Michael L. Wong



(From left) Uhura (Tiffany Kim), Captain Kirk (Kelvin Bates), Spock (Casey Handmer), Sulu (Michael Wong) and Chekov (David Coren) are on the Starship Enterprise.



(From left) Admiral Barnett (Brian Brophy) addresses Kharthak (Peter Lommen) of the Klingon Empire.

Photo Courtesy of Nehaly Shah

NEHALY SHAH
Editor-in-Chief

The Caltech community came together on May 28 to watch a staged reading/singing of *Boldly Go! (Where No Musical Has Gone Before)*, a musical parody based on *Star Trek*. The libretto was written by Caltech Ph.D. student Grant Remmen and his brother, Cole Remmen, an undergraduate at the University of Minnesota, and was directed by Brian Brophy, lecturer in theater-performing and creative arts at Caltech. The cast included undergraduate and graduate students, postdocs and Caltech and JPL staff. The foreword is provided below.

Boldly Go! is a musical of both substance and comedy: a parody based upon the universe of *Star Trek*. The United Federation of Planets encounters a grave threat from an unknown source. The Starship Enterprise, with its intrepid crew — Captain Kirk (Kelvin Bates), Spock (Casey Handmer), Dr. McCoy (Allen Corcoran), Nurse Chapel (Cierina Marks), Uhura (Tiffany Kim), Scotty (Jonathan Blackman), Chekov (David Coren) and Sulu (Michael Wong) — is dispatched to investigate, going to the very edge of the Neutral Zone. Along the way, they encounter a mysterious alien scientist named Takya (Holly Bender), for whom Spock finds himself emotionally susceptible. We also meet a nerdy and surprisingly human-like Klingon named Kharthak (Peter Lommen), who believes the sinister Klingon Empire could aspire to something greater. In the ensuing tale, the Enterprise faces its greatest challenge yet. Assumptions will be confronted, paradigms challenged, alliances tested and new contacts made — whether for good or ill has yet to be seen. And it's all set to a side-splitting tour de force of musical mayhem!

The saga that is *Star Trek*, originally created by Gene Roddenberry, takes place within a hopeful vision of the future. In the late 23rd century, we find the Federation, a multi-planetary government comprising Earth and other star systems such as Vulcan and Andoria. Occupying a small portion of the Milky Way Galaxy, this enlightened society of diverse alien cultures is surrounded by other not-so-friendly governments, including the Klingon and Romulan Empires. In *Star Trek*, we follow the exploits of the Starfleet Starship Enterprise, which, charged with a mission of scientific discovery, explores the unknown.

Despite its science fiction trappings, *Star Trek* has historically been focused on relevant real-world ideas. In the 1960s, *Star Trek* was a pioneer in presenting a society that had moved past the political and social issues that plagued the 20th century. In addition to this tradition of idealism, a significant and dedicated fan base has developed in the intervening decades, with its own distinctive culture that embraces the quirky and humorous side of *Star Trek*.

Boldly Go! builds on this heritage. While having fun with the sometimes farcical aspects of science fiction and parodying *Star Trek*, *Boldly Go!* also satirizes the musical theater genre, which, as any musical aficionado knows, comes with its own set of peculiarities and idiosyncrasies. At its core, *Boldly Go!* is a story about being true to oneself and one's convictions, about friendship and love, about discovery and wonder, about the triumph of the individual over adversity and about the joy of sharing with each other this vast and mysterious universe.

Boldly Go! is the first musical the Remmen brothers have written, but both have experience writing

music and had a lot of musical training through piano, voice and instrumental lessons. "As a theater major, I have created original devised works, though this is my first foray into playwriting," said Cole. He has been in productions since the age of 5, and has been involved in multiple university productions as a director and an actor during his time in college.

"I was greatly involved in theater in high school and really loved it," said Grant. "[Cole and I] had talked for several years about potentially writing a musical together. We always thought it would be a fun challenge. Along with working to capture the spirit of the iconic *Star Trek* characters, we loved creating new, original characters that fit into the universe of *Boldly Go!*," said Grant.

Cole and Grant started writing the parody in September of 2013 after they saw *Star Trek*. In the past six months, they have held informal readings elsewhere and a workshop at the University of Minnesota. There has not yet been a full production of *Boldly Go!*, but the positive reception (as evidenced by the laughs throughout and the standing ovation at the end of the reading) has led to a planned main-stage production to be directed by Brophy at Caltech during the winter term next year.

Grant is a third-year graduate student in theoretical physics at Caltech and plans to pursue a career in research as a professor. He is interested in aspects of theoretical particle physics related to gravity and cosmology.

Cole will be a senior at the University of Minnesota in the fall, with a major in theater arts and a minor in studies in cinema and media culture. He will be applying for graduate school in theater with an emphasis in directing.

SPORTS

THE CALIFORNIA TECH

JUNE 1, 2015

5

2015 Athletics Hall of Honor class inducted

GOCALTECH.COM

Actual Sports Content Editor

PASADENA, Calif. (May 20, 2015) – The Caltech Department of Athletics, Physical Education and Recreation inducted its second class into the Athletics Hall of Honor on May 17. Six former athletes and one pioneering team were enshrined at the conclusion of Alumni Reunion Weekend.

The 2015 class consists of Manny Bass '49, Bruce Chesebro '63, Karen Close (Tanaka) '83, Henry DeWitt '68, Alan Kleinsasser '74, Howell Tyson '50 and the 1971-72 Women's Fencing team.

Bass was a three-sport athlete while attending Caltech, starring in football as well as throwing for the track and field team and playing basketball. Long considered one of the best football players in Caltech history, the two-time All-SCIAC First Team tackle's notoriety stretched far beyond Pasadena.



Apparently we were at one point good at this "football" thing, thanks to athletes like Manny Bass.

-http://gocaltech.com

He became the first Beaver to be named Little All-Pacific, making the First Team in both 1947-48 and 1948-49, and All-Pacific Coast, earning Honorable Mention status. In addition, he earned Second Team Little All-America honors and was named the Sports Writers All-Southern California Second

Best Lineman as a senior. Bass also threw the discus with track and field, placing fourth in the SCIAC Championships in 1948. He returned after graduation to coach the line on the freshman team.

A dual-sport star in swimming & diving and water polo, Chesebro earned three Varsity letters with each team and captained both squads for two years apiece, as well as the freshman water polo team despite entering college with no competitive experience. The leading scorer all four years on the water polo team, he certainly made his mark in swimming as well, claiming the 50 Free SCIAC title as a junior in a conference-record 22.8 and anchoring two 400 Free Relay SCIAC champion squads, setting one conference and another meet record. Chesebro was also a two-time runner-up in the 100 Free to earn All-SCIAC First Team honors both years he competed, leading Caltech to a pair of team SCIAC championships with the two highest scores in team history. Although he missed the 1963 SCIAC Championships as a senior studying abroad in Europe, he went on to break both the school and SCIAC records in the 100 Free at the National AAU Championships. Among his many honors, Chesebro was awarded swimming's Campbell Award for sportsmanship, improvement and ability, named the 1961-62 Outstanding Caltech Athlete and received one of 12 national awards from Chemical and Engineering News for achievements in scholastics and extra-curricular activities.

Clearly one of the best athletes on campus in her era, Close ran her way to NAIA Championship titles in the 400-meter dash and 400-meter hurdles, earning All-America status in the latter as she placed sixth at the NCAA Championships. She is one of just two SCIAC champions in program history, having won the 400m hurdles as Caltech's only participant at the conference meet over a seven-year span and earning the most points of any Caltech team

until 1991. Close graduated with three Caltech records, including the 100-meter high hurdles, which she held for 11 years, and currently ranks fifth on the all-time list. She still holds the 400m mark (59.07) by more than a full second and the 400-meter low hurdles record (1:04.50) by nearly four seconds and is the only female recipient of the Goldsworthy Track Trophy for sportsmanship, team spirit and proficiency.

The most decorated swimmer in program history, DeWitt starred not just at Caltech but on a national scale. He won seven individual SCIAC titles, including the 50 and 100 Yard Freestyle three times each, setting five conference and meet records and breaking marks in both his other title swims while leading a pair of relays to third- and fourth-place finishes at the conference meet. DeWitt went on to claim back-to-back NAIA titles in both the 50 and 100 Free, setting meet records in both as a junior with a 21.88 50 Free and 48.57 100 Free, and led the 400 Medley Relay to a fourth-place finish. He also placed second in both events at the NCAA Championship, earning All-America status from both association. He went on to compete in the 100-meter Freestyle at the 1968 Olympic Trials in Long Beach and was a member of the American record-setting 400 Free Relay team in 1969. Upon graduation, DeWitt held 12 program records simultaneously, the longest of which remained intact for 27 years (both the 50 and 100 Free). Also named Caltech's Outstanding Athlete in 1968, he

was awarded the Campbell Trophy for sportsmanship, improvement and ability all three years on the Varsity team and captained the squad his final two. He joined the water polo team as a senior and instantly became an All-SCIAC

First Team honoree as a forward, also serving as team captain and winning the Coach's Cup. Additionally, DeWitt served as the Editor-in-Chief of the Caltech Big T yearbook, was awarded an Honor Certificate as a senior and became Caltech's only inductee into the NAIA Hall of

Fame in 1977.

One of just two four-time winners of the Goldsworthy Track Trophy for sportsmanship, team spirit and proficiency and captain of the cross country team as a senior, Kleinsasser won three



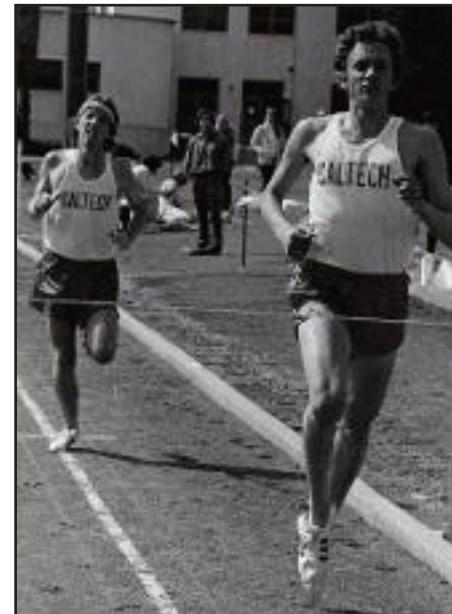
Who would leave a hurdle on the track while Karen Close is trying to run?

-http://gocaltech.com

SCIAC titles in the 880-yard and mile runs, going on to finish runner-up in the 800-meter run at the NAIA District championship twice and placing fifth in the 880y at the NCAA Championship to earn All-America honors. He graduated with two program records and two other Top-3 times in the 400-meter dash and marathon, currently ranking fourth and sixth, respectively. His converted marks for the 800m (1:50.74) and 1500m (3:52.44) are still program records by five combined seconds.

Tyson holds one of the longest-standing records in all of Caltech athletics, as his shot put mark of 49 feet, 4 1/2 inches has hardly been threatened since his graduation and fell just 1/4 inch shy of the conference mark at the time. A three-time SCIAC champion in the shot put and discus, including both titles in 1948, runner-up in the shot put as just a sophomore and freshman record-holder in the shot, Tyson also graduated with the third-best mark in program history in the discus and still sits in 10th all-time. He also contributed on both the football and basketball teams.

With the first class of women admitted to the Institute in 1970, the following year saw the advent of women's intercollegiate sports as freshmen Marie H. Beall, Katherine E. Delfosse, Debra L. Mielke, and Mary B. Ogilvie and sophomores Ann E. Clemmons and Janet C. Wainwright formed the women's fencing team. The squad competed in the foil across 12 matches, including the Intercollegiate Fencing Conference of Southern California Championships, where they improved against two of three opponents they had faced earlier in the year. This group helped pave the way for the bright future of women's athletics at Caltech, with the Beavers now fielding eight women's teams.



Despite the string blocking Alan Kleinsasser's path, that guy in second won't be able to catch up.

-http://gocaltech.com

Phil Murray named men's soccer head coach

GOCALTECH.COM

Actual Sports Content Editor

PASADENA, Calif. (May 27, 2015) – The Caltech Department of Athletics, Physical Education and Recreation has announced the hiring of Phil Murray as Head Coach for the Caltech men's soccer program.

"We are extremely excited to welcome Phil Murray to our team," Betsy Mitchell, Director of Athletics, Physical Education and Recreation, said. "His tremendous knowledge of soccer both on and off the pitch, as well as his deep desire to provide a positive educational experience as an educator and mentor for our students, is a dynamic combination. There is so much positive energy and momentum all across our athletic department right now and he will be a great addition."

Murray joins Caltech following a seven-year stint at Division I Fairfield University in Connecticut, where he served as Associate Head Men's Soccer Coach and the program's recruiting coordinator. Murray helped the Stags to a pair of MAAC championships and NCAA Championship appearances while raising the team GPA to over 3.0 in 2012 and 2014. He also served as the Assistant to the Chair of the NSCAA national rankings committee for five years while at Fairfield.

"I am very excited to be joining the Caltech athletic family," Murray said. "It is an honor and a privilege to be named the Head Men's Soccer Coach, and I want to thank Betsy and the search committee for having belief in my ability to lead the soccer program. I was incredibly impressed by the vision that she outlined for the entire athletic

department and cannot wait to get started on this journey.

I would also like to thank the



When your soccer team's got no head coach ... Who ya gonna call?
Phil Murray!

-http://gocaltech.com

Fairfield University staff, and particularly Coach Carl Rees, for an incredible seven years as a member of the coaching staff. The support and encouragement offered during the interview process helped make the decision to pursue this wonderful opportunity that little bit easier."

Prior to Fairfield, Murray spent three years as the First Assistant Coach at Division II Florida Southern College, where he coordinated daily training with the head coach and helped raise the team GPA to over 3.0 for the first time in program history. He has also coached at the club level, leading the nationally prominent Dix Hills Elite U17 boys program and Everton FC America's U16 Premier and U14 Boys teams.

In his playing career, Murray was a four-year starter, two-time All-Conference selection and All-

American as an undergraduate at Embry-Riddle Aeronautical University in Daytona Beach, Fla. He captained the squad to a pair of Florida Sun Conference and regional championships and participated in three NAIA National Championships. Prior to college, he spent four years as a youth professional at Blackburn Rovers FC in the English FA Youth Premier League, as well as the academies of Stockport County and Manchester United.

Murray graduated from Embry-Riddle in 2005 with a Bachelor of Science degree in Aviation Business Administration and earned his Master of Business Administration degree from Florida Southern in 2008. He holds a USSF 'D' license and is on track to complete his 'C' license and earn an NSCAA National Diploma in the summer of 2015.

ASCIT Minutes

ASCIT Board of Directors Meeting

Minutes for 26 May 2015. Taken by Sean McKenna.

Officers Present: Jay Palekar, Sean McKenna, Kalyn Chang, Annie Chen

Guests:

Call to Order: 12:05

President's Report (Nima):

- Absent

Officer's Reports:

- V.P. of Academic Affairs (ARC Chair: Jay):**
 - ARC committee signups are up. Find link or signups on Olive Walk. Interviews are on Sunday.
 - Unicorn advisors: faculty advise upperclassmen who will advise underclassmen
 - Want to make limited seating class registration better.
 - Looking into live grading: professors posting grades as they become available on moodle.
- V.P. of Non-Academic Affairs (IHC Chair: Cat):**
 - Absent
- Director of Operations (Sean):**
 - Making a better system for keeping track of ASCIT lights.
- Treasurer (Kalyn):**
 - Reminder that clubs are not allowed to be reimbursed for alcohol, per institute policy.
- Social Director (Annie):**
 - Puppies is canceled. Dodgers game is tentatively scheduled for June 6th.
- Secretary (Phillip):**
 - Absent

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 meeting will take place on June 2nd at 12pm in Winnett Lounge.

Meeting Adjourned: 12:25 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

Professor and Vice Provost, Cindy Weinstein is holding office hours for graduate and undergraduate students. 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 and the libraries. She also has key involvement in diversity matters on campus.

Student Office Hours for Spring Term 2015:

Wednesday, June 3, 12 p.m.-1 p.m.

There are four appointments per hour.

Sign up the day of the meeting starting at 11:30 a.m. in 104 Parsons Gates, Vice Provosts' Offices (x6339).

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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."

Caltech Students only!!

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FEATURE

THE CALIFORNIA TECH

JUNE 1, 2015

7

Caltech: How does one measure four years?

BRAD CHATTERGOON
Contributing Writer

Hey, Caltech. As you know, graduation is coming up and what that means for most seniors is that we are hauling it out of here as fast as we can. It's natural, now, to look back, reminisce and reflect on what Caltech has been for each of us. While I can't speak for everyone, I did gather the opinions of several seniors that crossed my path and the responses have been quite varied. To provide an idea of how far apart the worst and best opinions have been, the range starts at "Caltech is the worst thing that has ever happened to me," and ends with "I've been happy with my time here." As an economist at heart, the thing that I am most interested in is whether my net time here has been more positive or more negative. The only way I can think of to decide is by adding all the positives and all the negatives that have elapsed since first stepping onto campus on Sept. 15, 2011. So let us begin.

The first, and easiest, place to start would be examining the more quantitative data, also known as "anything with a number."

I am now \$200,000 poorer, but I am also 555 units smarter. I have lost four years of my life but, I also earned a position in business school for the next three. I have increased the number of countries I have traveled to by two and the number of languages I am familiar with by just as many. I have written 43 articles for The Tech and had five articles written in response (although all were in response to just one article). I have gained 20 pounds (mostly all muscle, I hope), and I have increased my Facebook friend list by about 350, but I also lost more hours of sleep than I would care to count. However, the quantitative comparisons are just the tip of the iceberg. The qualitative aspects are what really defined my time here.

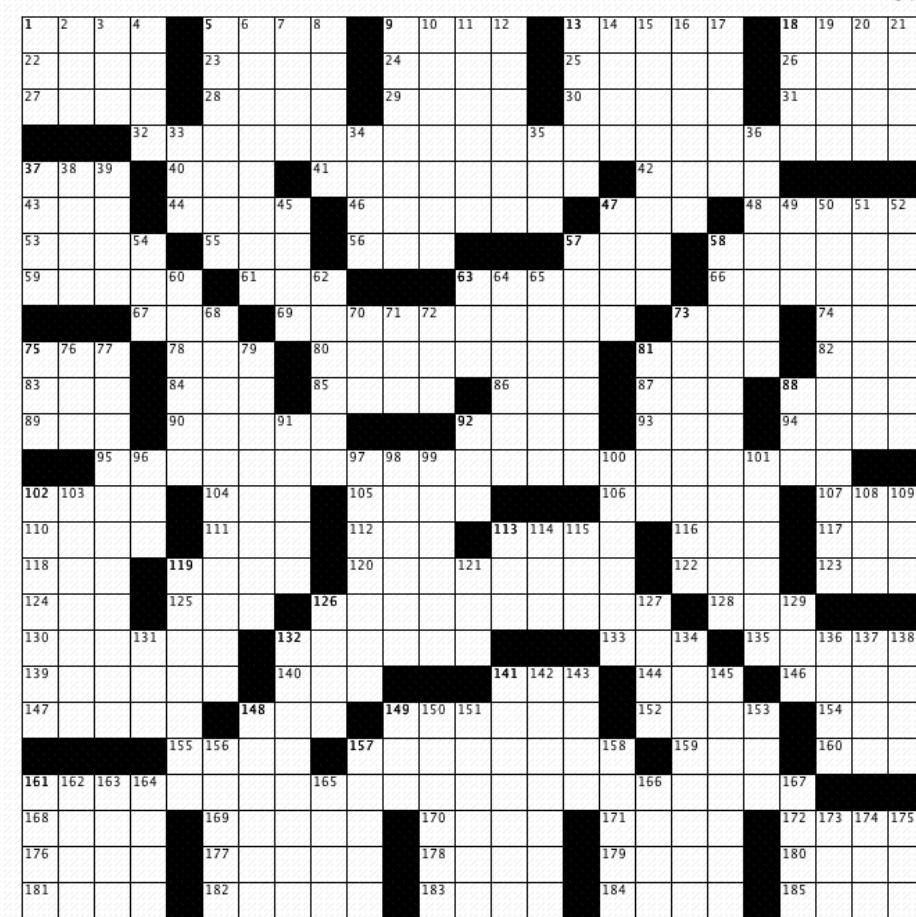
When I first came to Caltech, I was socially awkward, or rather, awkwardly social. I felt that having a higher IQ than most was enough to get me through life and that being "smart" in some sense made me better and more deserving than other people. Relatedly, I thought that I had all the answers and knew what was best. Further, I was hell-bent on finding a girlfriend and I sought the approval of others. I had no self-esteem and no clue about what it means to keep going when the going gets tough. I had never met anyone living in, or with ancestors from, the Asia-Pacific region. My opinion of what was happening around the world and traveling was non-existent at best and "why would I care about that" at worst.

While at Caltech, I realized that I am not as smart as I thought I was, but more importantly, I realized that the ability to get an A in a course is not the best marker of intelligence nor is academic capability the absolute indicator of what it means to be valuable. Through my advisers I realized the value

Yeezy taught me

ACROSS

- Medieval Irish person
- Grocery containers
- Shove into
- National park near Santa Fe
- Tiny amount
- Margarine
- Atmosphere
- Big
- Refuser of immortality
- Not Windows
- Emit light
- Customary, slangily
- Mental disorder common in children, abbr.
- Exhausted
- Category
- She couldn't afford a car, so she
- Explosive noise
- USMC vehicle
- Surpluses
- ____ wife
- I'll take that as ____
- Kiss, in England
- Concerning the main artery
- Franklin predecessor
- Purple shrub
- Fabric making device
- Sample a drink
- Everest and Kilimanjaro, abbr.
- Cry for help
- Baltimore team
- XP predecessor
- Male sheep
- Mraz and Segel
- Eastern Orthodox bishop
- Hobo
- Rough
- Before Christ, abbr.
- Machine, slangily
- Cell energy source, abbr.
- Pen tip
- Final say
- Walked on
- Much ____ about nothing
- The way
- Cable type, abbr.
- Can do
- Number of curls Shirley temple wore, to Caesar
- Conflict
- __, em, __, oh, pee
- Mother, in London
- Basic data structure
- Turing or Watts
- Omega
- Clears
- Miracle whip
- Special agents
- Hang low
- League of Legends slang
- Organization of workers
- Tax collection org.
- Bulbous flower
- Doctor's unit, abbr.
- Prefix meaning final
- Risked, along with life
- Titan
- Given name
- Vasopressin, abbr.
- Unit of thunder
- Military award
- Winter sport item
- Italian model Carangi
- Matrix protagonist
- Copy
- Saw
- Position above cpl.
- Atlantic island language
- Asimov or Newton
- Drunkard
- Chilly
- Papers
- Oldschool gaming console, abbr.



Sam Szuflita

- Software contract, abbr.
- Corn location
- Louis ____
- Leap
- Web style language, abbr.
- Rises
- Thin
- Angel dust, abbr.
- "I'm ____!"
- Baseball slang for a violent pitch
- Esteem
- Glock alternatives
- Black card
- Slangy animal name
- Generated
- Weather ____
- Diagnostic exam
- Not odd
- Dairy product
- Watch maker
- Send
- Cast a ballot
- Explain without words
- Santa's helpers
- Support
- Baths
- March event
- Suffix which implies supremacy

DOWN

- Machine component
- Cubit
- Feline horoscope
- Large village
- Christian Bale or George Clooney
- Goodbye, in Paris
- Differential operator
- 18th letter of the Hebrew alphabet
- Founder of modern neurology
- Ship steering devices
- Filled with horror
- Snakehead
- Ways
- Tighten up
- Paying little attention
- Genetic unit
- Egyptian president
- Silence
- Black gemstone
- Conical tent
- Former lovers
- Lou Gehrig's disease
- Test
- Hair product
- Desk layout
- Ointment
- Years, in Seville
- Mindstate
- Grades, abbr.
- Thin
- Eggs
- Speaking
- Translated via a cipher
- Kutcher and others
- Large crowd
- Con _____, musical instruction meaning mute
- "One for the ____"
- Glimmer of light
- South asian province
- One may drop
- Son of Zeus
- African wild cat
- Lab tools
- Catch
- Internet tech.
- Low ranking military member, abbr.
- Spirits
- Money dispenser, abbr.
- 2 π
- Gymnastics apparatus
- Marine hanger-on
- Aged between 9 and 12
- Sea eagle
- Dread
- Response to SYN
- One preceder
- Lizards

- Spit
- Intestinal bacteria
- Russian dollars
- Military rank
- Looks
- Israel or Yemen
- Outdoors co.
- Body of water
- Hawaiian necklace
- Wedding words
- Old boy
- Former Haitian president's nickname
- TCP header portion
- Hermanos, slangily
- Google product
- Concert selling site
- Author Fleming
- Not all at once
- Allow
- Controversial Web law, abbr.
- Might do this with a card or a nose
- Nerves
- NATO member
- Mars or Venus
- Peninsula
- Tim Burton biographical flick
- Theatre
- To be, in Ecuador
- Doesn't enforce
- Settle
- ____ Def
- Mogul governor
- Not alphas
- Gas station chain, in Rome
- Highest point
- Prevent, especially a plot
- Ed and Edd's friend
- Signs
- Followers of Zoroastrianism
- Poke
- Half
- Compete with
- Font units
- Total

of seeking guidance. Through my peers I realized that those around me always have things to teach me, and a part of that has been about cultures from all around the world and largely from the Asia-Pacific.

During my time here, despite the odds, I even managed to go through the cycle of love and heartbreak, and while my time was distinctly marked by a lack of belonging to the community, it was also a time for growth. The hit-or-miss nature of social life at Caltech meant, as someone who had missed, I spent a lot of time on my own, but learning to enjoy my own company was perhaps one of the greatest lessons that I gained from being at Caltech. Becoming free of the fear of being alone is truly liberating. It's why now I can travel abroad by myself or be comfortable spending entire days on my own working at the library

without ever feeling like I am missing out on something. It's a part of how I have learned to become comfortable with myself.

Now that graduation is drawing closer, who am I? In an ironic turn I view myself as less "special" and less "smart," but at the same time I am more confident in my ability to get things done. I have traveled to Indonesia and will soon travel to Japan, resolving to continue traveling the world on a yearly basis. My attitude toward work has changed from one of disdain to one of excitement about learning. Additionally, it no longer matters to me what others think as much as what I think and my new obsession is changing the world.

So am I net positive or net negative? I like to think that I have come out net positive, and that's really all I can ask for.

-Brad/Chad

THIS WEEK'S CROSSWORD

IS COURTESY OF

SAM SZUFLITA.

SEE PAGE 8 FOR SOLUTIONS

TO LAST WEEK'S PUZZLES

AND THIS WEEK'S

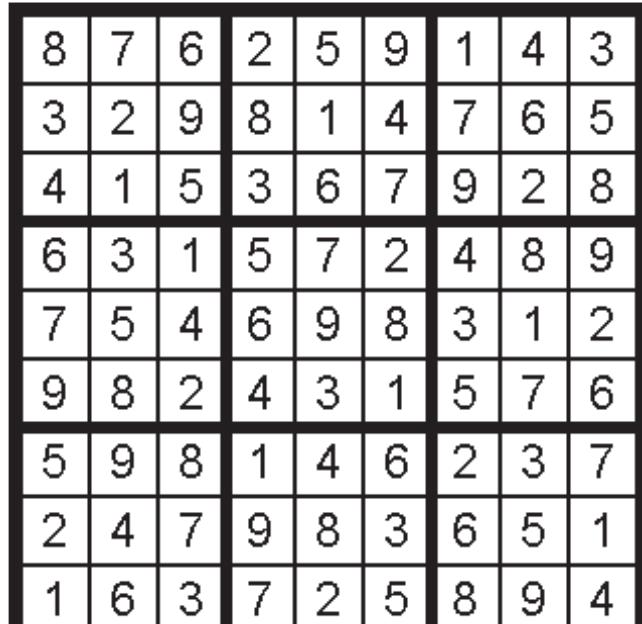
CROSSWORD.

Acquired Taste

Dr. Z



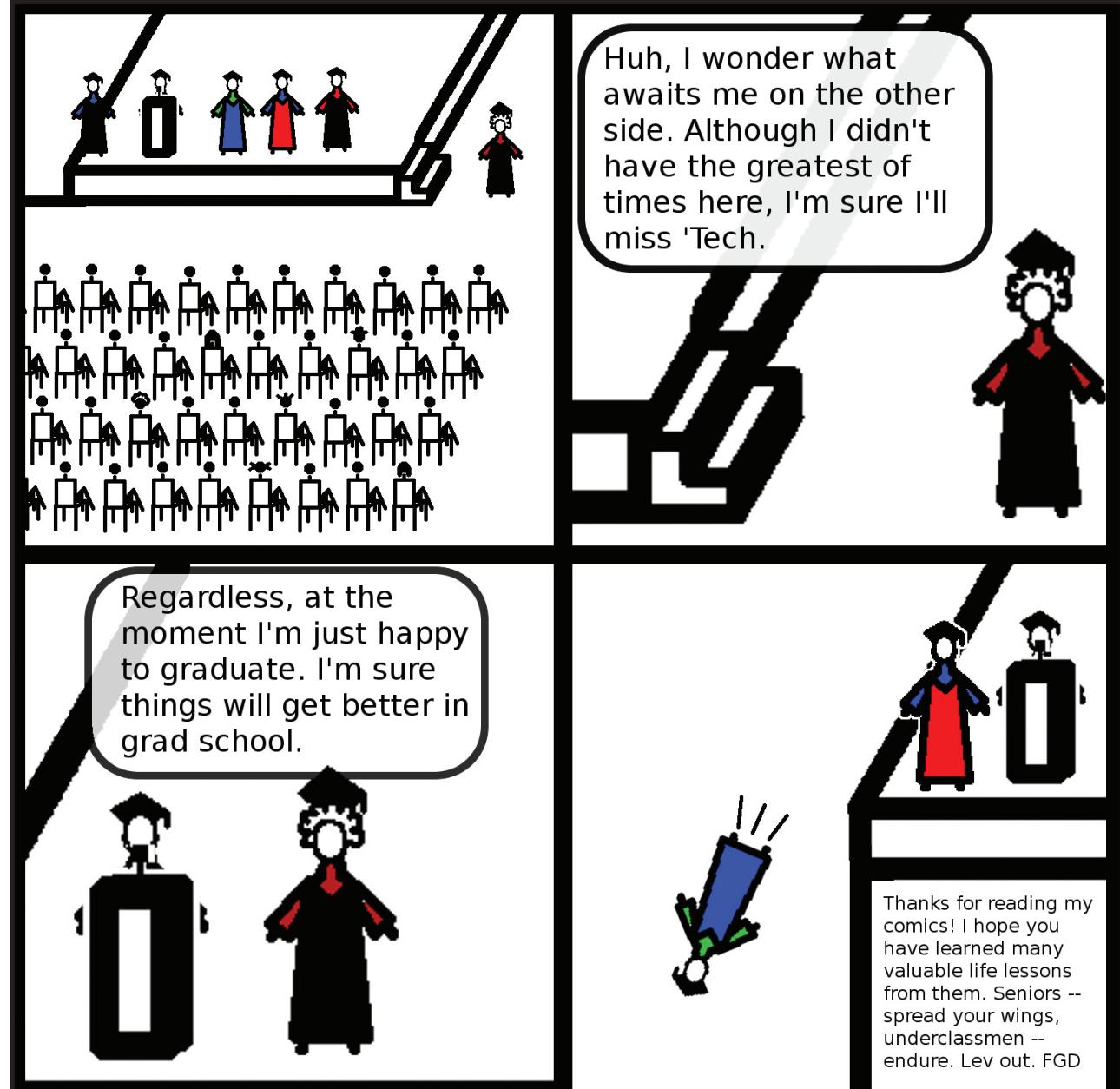
Answers to previous Sudoku



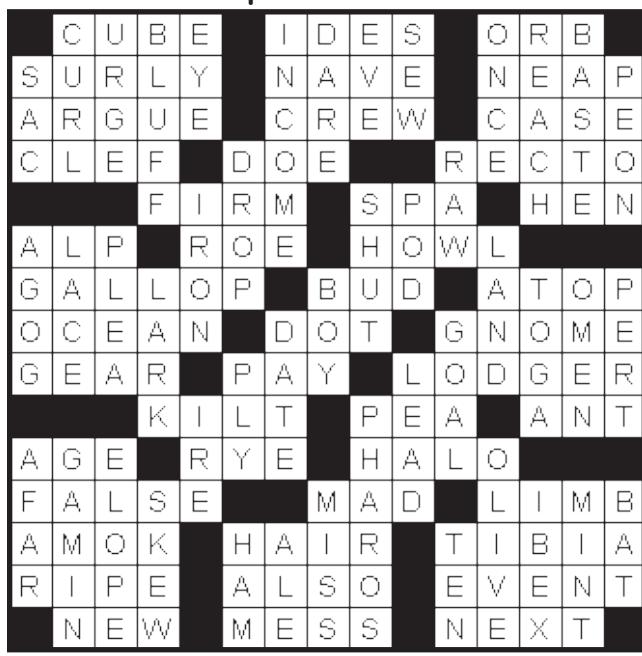
-http://puzzlechoice.com

"Stockholm Syndrome"

Lev Krayzman



Answers to previous crossword



-http://puzzlechoice.com

Answers to **CURRENT** crossword



Courtesy of Sam Szuflita



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