

## Grand Canyon visit among Caltech Y alternative spring break trips

**MATTHEW CEDENO**  
Contributing Writer

For spring break 2016, 21 Techers left campus to explore Sedona and the Grand Canyon. Led by students Xaomi Du, Tyler Okamoto and Matthew Cedeno, along with Caltech Y staff member Greg Fletcher, these students got the chance to explore Grand Canyon National Park and its many trails. The group left campus early morning on March 17. Everyone split into five cars fully packed with Techers and equipment for the cold nights. From Pasadena, the cars went to the California-Arizona border for lunch and a nice stretch. After an eight-hour car ride, the group finally arrived, setting up camp in Camp Verde, AZ, 30 miles south

of Sedona. The group enjoyed a night under the stars with a warm campfire and s'mores.

Trail at the Grand Canyon while the rest took the scenic route to Sedona. From Camp Verde, the

went to the Grand Canyon after a 100-mile drive, enjoying the view of Arizona's mountains and plains. Once at Grand Canyon National Park, everyone split into groups to take on the different trails of the park. One group took the Rim Trail to see all of the different overlook points at the top of the Canyon. Others went on the South Kaibab or the Bright Angel trails to get different breathtaking views from within the canyon. After a gorgeous sunset, all of the students met back at Maswik Lodge for a well-earned dinner at the Maswik Food Court. Everyone then retired for the night back at the park's campsite, but not before

provided a majestic view for the students. After packing up camp, everyone finished the morning with another hike along the two main trails. Shortly after departing from the national park, the group met up at a pizza place for lunch and relaxation. The delicious pizza was a great way to chat as a group about the experiences of the trip and to fuel up for the ride back home. The drive back to Caltech was long, but stops along the way took people to different points in Arizona and California. Most of the group had dinner at the Barstow station before returning to campus.

Overall it was an exciting three-day trip into Arizona and the Grand Canyon. For some it was a new experience camping, and for others it was a tough challenge to get as far down into the canyon as possible. The views and hiking trails were experiences no one will ever forget. The Alternative Spring Break trip to the Grand Canyon was able to overcome many logistic challenges to create a memorable adventure into one of America's great national parks.



A few of the 21 students who went to the Grand Canyon are enjoying one of their many hikes of the trip.

Photo Courtesy of Greg Fletcher/Caltech Y

A van of Techers left before sunrise to tackle as many checkpoints along the Bright Angel

students drove to Cathedral Rock, a popular photo spot in Red Rock State Park. From there, the group

another campfire and round of s'mores. The night was chilly, but everyone slept well in their zero-degree sleeping bags and tents.

To get a good view of the sunrise, travelers drove out of the campsite early to get to Yaki Point, the park's best spot for the event. The South Kaibab Trailhead also

## News briefs from around the globe

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

### Tesla Model 3 electric car debuts

276k already pre-ordered; deliveries to begin in late 2017 [BBC]

### First commercial flight leaves Brussels

11 days after terror attack, airport resumes operations, expected to be at 20 percent in a week [TIME]

### Khalid al-Barnawi, head of Ansaru, arrested

\$5M bounty placed on head of al-Qaida-linked group in 2012 [BBC]

### Batman v Superman falls in second weekend at box office

68-percent drop in sales worse than industry average of 60 percent [LA Times]

### South Pacific island of Vanuatu struck by earthquake

6.9-magnitude quake rocks island; no casualties reported [CNN]

### Plane crashes into car on I-15

1 killed, 5 injured as small plane hits freeway 50 miles north of San Diego [TIME]

### Amtrak train derails outside Philadelphia

2 killed, 31 taken to hospital as train slams into backhoe that was sitting on the tracks while traveling from New York to Savannah, GA [TIME]



A group of 12 Techers visit Catalina Island as part of the Caltech Y's Alternative Spring Break.

Photo Courtesy of Caltech Y



Ten students got the opportunity to practice their Spanish and their Health Ad skills on a weeklong trip to Lima, Peru. Students volunteered with Medlife, an organization that provides free medical services to underserved communities in Peru, Ecuador and Tanzania. The Techers shadowed doctors, worked in triage taking blood pressures, set up the clinics and even formed a bucket brigade to carry concrete up to a staircase building site. In between, they tried the best coffee in Lima (verdict: Caf e Bisetti) and went to the beach. — Suzannah Osekowsky

Photo Courtesy of Jenny He

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## Caltech Y Column: News and events

### 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. More information about the Caltech Y and its programs can be found at <https://caltechy.org>. The office is located at 505 S. Wilson Avenue.

#### Upcoming Events:

#### 1. Make-A-Difference Day

Saturday | April 9 | Join over a hundred Caltech students

Volunteer for Make-A-Difference Day on Saturday, April 9th. Signups are requested by Tuesday, April 5th but we will continue to add volunteers as space allows.

The Caltech Y is partnering with agencies from all over Pasadena and the greater LA region for one day of community service. All members of the Caltech community are invited to participate in one of a variety of community service projects at the Boys and Girls Club, Habitat for Humanity, LA Food Bank and many more sites. You can choose to work with kids or animals, do construction or outdoor projects or visit with the elderly. Projects are led by other students and will be 3 to 6 hours - including travel, depending on the project. Meals, transportation, and t-shirts are provided. The day ends with a BBQ.

For more details and to sign up, please visit: [https://www.caltechy.org/programs\\_services/areas/mad/](https://www.caltechy.org/programs_services/areas/mad/)

#### 2. The Studenski Award

Are you wondering about the next step in your life? Have you reached a crossroad where you would benefit from an opportunity to explore? Would a trip, an opportunity to volunteer with an organization, or a chance to try a new skill or interest this summer help you gain clarity? If you answered yes to any of these questions, then the Studenski Award might be for you.

The Studenski Memorial Award is a grant of up to \$6000 established in the memory of Paul Studenski, a Caltech student who was killed in an automobile accident while traveling across the United States in 1974. It is awarded to a Caltech undergraduate who, having reached a crossroads in life, would benefit from a period away from the academic community to obtain a better understanding of self and to

explore possible directions for the future.

Proposals (1 to 2 pages maximum) are due Friday, April 15th by 12:00 noon to [caltechy@caltech.edu](mailto:caltechy@caltech.edu) (in word format).

Visit [www.caltechY.org/programs\\_services/areas/Studenski/index.php](http://www.caltechY.org/programs_services/areas/Studenski/index.php) for proposal guidelines and sample proposals. For more information, contact Athena Castro [athena@caltech.edu](mailto:athena@caltech.edu) or Greg Fletcher [gregf@caltech.edu](mailto:gregf@caltech.edu) or join us for dinner:

Studenski Informational Dinner Wednesday, April 6th 5:30 PM. Hosted by Tom Mannion at his house. RSVP by April 4th to <http://tinyurl.com/studenski>

#### 3. The Caltech Y Advocating Change Together (ACT) Award

Got an issue or cause that warrants attention? Explore the issue - by attending a conference, training, or workshop, or choosing to immerse yourself with a mentor or organization that is changing the world then plan some programs on campus to educate us all. Awardees can receive up to \$4500 to cover expenses for their educational experience, including registration and program fees, travel, lodging, food, and incidentals. Caltech Y activists determine the cause they will address, their educational experience, and the type of programs to organize.

Tackle hunger and homelessness, immigration policy, poverty, education policy, science and public relations, science policy or whatever you choose - it's your opportunity to ACT! The Caltech Y ACT Award, made possible with generous support of the Caltech Employees Federal Credit Union, offers students an opportunity to pursue an interest in local, national, or world issues; service or advocacy.

Applications are due by Monday, April 18th at noon. Visit [www.caltechY.org/programs\\_services/commservice/ACT/index.php](http://www.caltechY.org/programs_services/commservice/ACT/index.php) for applications and more information, and/or stop by the Caltech Y or contact us to learn more about this exciting opportunity!

#### 4a. Pasadena LEARNS

Friday | 3-5 p.m. | Madison, Jackson, and McKinley Elementary School

Come volunteer at Madison, Jackson, and McKinley 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 Vansh Kumar.

#### 4b. Hathaway Sycamores

Wednesdays | 5:30-8 pm | Highland Park

Volunteer at Hathaway-Sycamores, a group that supports local underprivileged 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](mailto:srichers@tapir.caltech.edu).

#### Other Announcements — Beyond the Caltech Y Learn to Bike Safely on the Road — Traffic Basics

Saturday | April 2nd | 11 a.m.-1 p.m. | Caltech Y

Did you know it's safer and faster to ride on the road? This course will teach you basic principles of bicycle and traffic safety. Bring your bike and helmet, as this course includes an easy ride that will put what you learned into practice. There is no charge for this course, as it is subsidized by Caltech Transportation on behalf of Caltech Bike Lab. The class is taught by local organization C.I.C.L.E. RSVP required: <http://www.cicle.org/event/c-i-c-l-e-s-traffic-basics-class/>. Caltech/JPL have priority signup but members of the public are welcome to join.

#### 2016 Caltech Badminton Tournament

Saturday | April 16 | Brown Gym

The Caltech Badminton Club invites you to the campus-wide 2016 "Spring Swing" tournament!

Levels: Beginner, Intermediate, Advanced

Events: Men Singles, Women Singles, Men Doubles, Women Doubles, Mixed Doubles

The event is open to all members and friends of the Caltech community. No tournament fee! Register online at <http://badminton.caltech.edu/Events.html> (maximum of 3 events) by Sunday, April 10, 2016.

We will provide tournament-grade shuttlecocks for each match. You are welcome to bring your own racket, or you can use a gym racket.

Contact: Yuh-Shyang Wang, [yw4ng@caltech.edu](mailto:yw4ng@caltech.edu).

## Caltechlive!

SATURDAY, APRIL 9, 2016/8 PM

### The Intergalactic Nemesis: Target Earth

#### A Live-Action Graphic Novel



Comic book culture meets 1930s radio shows in this captivating sci-fi theatrical spectacular for all ages. Can investigative reporters team up with a mysterious librarian to save Earth from an invasion of sludge monsters from the planet Zygon?

Caltech / JPL Faculty & Staff \$5 off • Students \$5

\$42, \$37, \$32 / \$10 YOUTH

Caltech's Beckman Auditorium

[www.events.caltech.edu](http://www.events.caltech.edu)



Call campus x 4652 for information

## Caltechlive!

### Science Sundays

APRIL 10, 2016 / 2 PM

#### How Sticky is Your Gecko?



Discussion Leader: **Justin Rolando**  
Chemistry and Chemical Engineering

In this presentation we reveal how geckos will soon save lives. These sticky lizards are among the best climbers in the natural world. And they could be the key to everyday heroes one day climbing like Spiderman.

\$10 (GENERAL ADMISSION)

Recommended for ages 8 and up.

Free Parking

Caltech's Beckman Auditorium

[www.events.caltech.edu](http://www.events.caltech.edu)



Call campus x 4652 for information

## Bolton rants: Topology edition

**BOLTON BAILEY**  
Contributing Writer

I'm here to talk to you today about stupid mathematical terminology.

Chapter 1: Open and Closed Sets

Given a topology (under the standard "open sets" definition), we call sets belonging to the topology "open" and their complements "closed." I'm no historian, but it's easy to see how this terminology arose — "closed" sets are called "closed" because they are closed under the taking of limits. This term is actually quite natural to the English language: If we take a sequence of elements of a closed set, that sequence can never "go out of" the set (in the sense that a sequence "goes to" its limit), and so we think of the set as "closed" because a sequence cannot leave it. "Open" sets are open because open is the opposite of closed.

But this notion of being an opposite is exactly the problem behind this definition: Being a "complement of a closed set" and being "not a closed set" are completely distinct properties. In many natural examples of topologies that arise throughout mathematics, there are both closed sets whose complements are closed (in fact, the very definition of topology says that the empty set and the universe of the topology are such sets) and sets which are not closed and the complements of which are not closed. This leads to ridiculous terms like "clopen" for sets which are both "closed and open," which is a combination

that makes no sense in the usual English definition of these words.

For this reason, it would seem that renaming "open" sets to something else would be best for clarity of learning for students first hearing these terms. Here are some possible candidates:

"Neighborhood Sets": This term has the benefit of already being in wide use as a way of describing sets which are almost always open. An "open neighborhood" of a point is an open set containing that point. Unfortunately, this word does arise from Felix Hausdorff's neighborhood definition of topologies, which, while archaic, uses the word in a different way.

"Boundary-disjoint Sets": The boundary of a set is the set of points which are a limit point of both the set and its complement. Thus, open sets are those which are disjoint from their boundary. Unfortunately, this is something of a mouthful, and the concept of a boundary is not very important or central to openness.

"Topology Sets" or "Topological Sets": After all, open sets are sets which belong to the topology. Unfortunately, this doesn't evoke any concept commonly used in English to help learners understand what the word means.

"Co-closed Sets": This would clarify the point that open sets are complements of closed sets. However, it doesn't scan well to define one of the foundational objects in topology in terms of a more advanced object.

Here is the solution I think is the best:

"Internal Set": Just as "closed sets" are exactly those sets which are the "closures" of other sets in the usual mathematical parlance, an "internal" set is one which is the "interior" of some set in the normal terminology. Furthermore, this reflects the key idea behind the natural analytic definition of an open set in a Euclidean space: Each point in the set has a radius around it which is contained within that set. Thus, every point is surrounded by the set, and the point is therefore "internal" to the set in this sense.

Thus, we propose the new terminology:

A topology is a collection of subsets of a space, called the "internal sets" (instead of "open"), such that the union of any collection of internal sets is internal, any intersection of a pair of internal sets is internal and the empty set and the space are internal. The complement of an internal set is called closed. Alternatively it is closed if it is closed in the traditional sense of closure under the taking of limits. A set is called open if it is not closed. We intuitively call a sequence an opening of a set if that sequence witnesses that the set is open (that is, if it is a sequence which converges to a limit outside the set). A set which is both internal and closed is called internal-closed. The union of all internal subsets of a set is called the interior of the set (consistent with the current definition of interior).

## The embargo should go

**SEAN MCKENNA**  
Contributing Writer

President Obama visited Cuba on March 21 and 22, becoming the first sitting president to visit Cuba since Calvin Coolidge in the 1920s. This is the next step in the progression of the Obama administration's policy toward the nation. The president announced in 2014 that the executive branch would normalize relations between the two countries. That decision and the decision to visit Cuba have drawn sharp criticism from many other lawmakers, notably the Cuban American duo of Ted Cruz and Marco Rubio. President Obama's next goal is to convince Congress to lift its embargo on Cuba, but Congress is generally weary over taking action. A common criticism is that the U.S. and Cuba should not resume relations while Cuba's Marxist government continues to oppress its citizens.

This criticism is flawed on several fronts. First, we should not believe that the United States is so lofty as to only engage nations with flawless human rights records. Russia has shown egregious contempt for human rights in Ukraine and supported Bashar Assad's similar attack on human rights in Syria, yet Secretary of State John Kerry has met routinely with his Russian counterpart this spring. The United States has an obvious interest in engaging with Russia, and we should observe that the same can be said for Cuba. The economic potential for the U.S. to expand into this market, as well as

the necessity of political relations in order to deal with migration, dictate that we should engage with this country instead of isolating it further.

Continued isolation will only prolong the time that Cubans are oppressed, so it is self-defeating to require that relations are only normalized after oppression has ended. As long as the regime can use the U.S. embargo as a propaganda tool, it has power over its citizens to persuade them to buy into Cuba's status quo. A leader's rallying cry that "we are doing our best even in the face of the Great Power's oppression" will stir up resilience among the subjects. Conversely, evidence of economic freedom will motivate social change.

When the Berlin Wall came down, many observers said they were shocked to see East Berliners wearing the same clothes and listening to the same music as Westerners. Historians argue that they had been able to pick up radio and TV signals from the West despite the physical separation, and what they saw had motivated their desire to end the communist regime. While America is far from perfect, most would agree that we would prefer Cuba's political system to look like our own as opposed to its current state. Most would also agree that there is no desire for regime change à la Iraq. So, it only makes sense that sharing our way of life with the Cuban people will whet their appetite for a change of regime from within.

## A psychedelic experience with punk ethic: *Painting With* by Animal Collective

**CRYSTAL LIANG**  
Contributing Writer

Baltimore-originated psychedelic pop band Animal Collective may be one of the most iconic musical groups of the past decade. The feel to the band's music could be described as childish, jubilant, unpretentious and playful. Ambition seems to be absent as a driving force for the group's musical output. Rather, it seems that the members are and have always been (since their teenage years, when the childhood friends began collaborating) motivated by a pure desire to make music that sounds good, interesting and new to them — and, as of late, a need to provide for their families, which some lament as a damper on their creativity.

Over the past 15 years or so, the group has released a string of acclaimed albums, each with its own distinctive characters, from the tribal, freak-folk *Sung Tongs* to the futuristic, rocky *Strawberry Jam*, culminating in 2009 with *Merriweather Post Pavilion*, an album of transcendently joyful pop songs that has been hailed as "one of the landmark American albums of the century so far" and drawn comparisons to The Beach Boys' masterpiece *Pet Sounds*. In

2012 *Animal Collective* followed that up with *Centipede Hz*, which critics met with a less-than-thrilled reception, citing its cluttered sound and weaker songwriting — a painful blow for *Animal Collective* fans.

The closing (and my personal favorite) track on *Centipede Hz*, "Amanita," had as one of its last lines, "I'm gonna come back and things will be different" — and indeed they are in *Animal Collective*'s newest album, *Painting With*, released on Feb. 19. The group has cleared away the sonic splatter of its last two releases to reveal a new radiant palette. It seems to me that the band has abandoned the dreamy, reverb-heavy headspace of traditional psychedelia and turned the attention to a less explored aspect of the psychedelic experience: perceiving things with intense clarity and almost cartoonish vividness. While synths, sound effects and vocals used to drown in an all-encompassing soupiness, here each sound seems more carefully chosen and distinct thanks to the minimal, lucid production. The songs themselves are starker, more compact and immediate, like a "techno Ramones," as the group described in an interview.

Indeed, each song seems to almost instantly warp the listener

into its own world as immersive and creatively rendered as the best video game levels. In fact, the first track, "FloriDada," evokes cartoons like *Adventure Time* and retro video games with its boingy synths, electric energy and beat that skips playfully along. Avey Tare is an

animated storyteller here, his vocals ranging from a wistful croon to a manic rap, giddily describing the "everywhere place" (part of the Dadaist theme of the album) while Panda Bear chips in with his boyish voice like somewhere who was there, too.

In the next track, "Hocus Pocus," we're greeted by a prickly electronic arrangement that pays tribute to both IDM godfather Richard James and neo-medieval prog group Gryphon. "Vertical" features counterpoint vocals, the melodies

floating dizzily high amidst samples of birds, whistles and bells, with low-frequency oscillators (LFOs) burping like frogs far below. "Lying in the Grass" plays out like a swampy fever-dream of exotic woodwinds and underworldly mutterings, and "The Burglars"

the group, which is somewhat infamous for its dopey, quirky persona. Although Panda Bear's songwriting unfortunately feels stagnant (with a few exceptions), Avey Tare is as thoughtful and creative as ever. But for better or for worse, the band has reined in its once unbridled energy that had allowed the group to attain the ecstasies (e.g., "In the Flowers" on *Merriweather*) and reach the critical levels of earnestness (e.g., "Banshee Beat" on *Feels*, "For Reverend Green" on *Strawberry Jam*) for which many cherish the band.

In contrast, the songs on *Painting With* are more mature, their shapes and textures crafted with a surer hand. The spruce vocals that follow the modulation in "Hocus Pocus" with almost English propriety would not have been possible on previous albums, nor would the frosty irony in "Bagels in Kiev" or elegant cadence and melodies in "Vertical." One of the triumphs of the album, the effervescent "On Delay," unfurls like a Japanese ukiyo-e painting, vibrant yet cool, combining jagged electronics with dainty piano flourishes.



<http://pitchfork.com>

revs up and shoots forward like a cosmic racer on the Rainbow Road. Oddly, *Animal Collective* displays a maturity and grace in this album that one would never have dreamed to associate with

*Continued on page 7*

# ASCIT Formal at the Sofia Ballroom at Noor



Photo Courtesy of Katherine Guo



Photos Courtesy of Dingyi Sun

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# Goyal records three personal bests at PLNU invite

**GOCALTECH.COM**  
Actual Sports Content Editor

SAN DIEGO (Mar. 26, 2016) – Freshman Muskaan Goyal recorded personal bests in all three events in which she competed and the majority of the Caltech track & field team posted season-best marks at the Pt. Loma Nazarene University Invitational on Saturday.

“This was probably our best collective meet of the season, top to bottom,” Head Coach Ben Raphelson said. “Hopefully I can say that every week from here on out.”

Goyal added over a foot to her best shot put mark to reach 23 feet, six and one-quarter inches and threw the discus an additional four feet to clear 52 feet, one inch, then lowered her fastest wind-

unaided time in the 100-meter dash by .36 (17.78).

Junior Lucy Chen also enjoyed a pair of highlights in the horizontal jumps, tying her career-best mark (seventh on the all-time Top 10 list) in the triple jump and adding nearly a foot to her long jump distance, touching down at 14 feet, one and one-quarter inch – just four inches shy of that Top 10 list as well.

Several runners on the men’s side made gains across four events. Freshman Rohan Doshi



THREE for you, Glenn Coco! You go (throw that disc), Glenn Coco!  
-http://gocaltech.com

shaved almost four second to clock a 2:02.43 in the 800m, while sophomore Chris Haack crossed

the line a full four seconds quicker than his previous best in 2:25.18. Senior Kevin Yei trimmed half a second from his 200m time for a 24.91 and sophomore Alex Bourzutschky chopped a whopping 1.5 seconds from 400m time just two weeks prior, finishing in 55.80.

Senior Elliott Simon, freshman Michael Hashe and sophomore Gene Vaughan showed well in the 1,500m. Simon shaved five seconds (4:46.57)

from his season best as Hashe (4:47.62) and Vaughan (4:53.32) each ran their first of the season, with Vaughan overcoming some late breathing difficulty to nearly tie his career best. In the men’s field events, senior Anup Kishore continued his comeback from injury with a solid improvement in the triple jump, coming within one meter of his personal best. Senior Morgan Hill focused on modifications to his technique and still managed to come within a fair distance of his season best marks in each throwing event, possibly setting himself up for big gains in the coming weeks.

“The team fit in a great training stint over break and everyone is highly motivated to continue building momentum into SCIACs,” Raphelson said.

# Burleson breaks out in return to SCIAC play versus Chapman

**GOCALTECH.COM**  
Actual Sports Content Editor

PASADENA, Calif. (Mar. 26, 2016) – Freshman Mark Burleson broke out with a triple-slash line of .429/.500/.714 in Caltech baseball’s first SCIAC weekend series in three weeks, against Chapman University.

## Caltech 0, Chapman 10

Sophomore David Watson tossed five innings of two-hit ball in the series opener, but after two walks put runners on first and second base with one out in the bottom of the first inning, Chapman’s Jared Love blasted a three-run shot to take the lead. Caltech threatened to respond immediately with runners on first and second in the top of the second, but a double play cut out the danger for Chapman.

Neither team scored over the next three innings, although Caltech came

close in the top of the fourth when Watson was gunned down at home on a double by senior Daniel Chou. The Beavers also advanced a runner to third on two occasions, but with two outs in each instance neither could be brought home. The Panthers tacked on another run in the bottom of the fifth and went on to put up two more in the sixth and another four in the seventh to shorten the game.

## Caltech 1, Chapman 16

The Panthers jumped out to a 4-0 lead in the first game of the Saturday doubleheader and added two runs in each of the next three

innings, capping their scoring with a six-run fifth. Chou and Burleson led off the second inning with a single and walk, respectively, but were stranded and the Beavers would not score until the bottom of the fourth. Freshman Tucker Reese led off with a single up the middle and stole second as Chou struck out in the next at-bat, then came around to score when Burleson smashed a double over the centerfielder’s head. Caltech had another chance to get on the board in the fifth inning as three batters reached base safely, but the first was caught

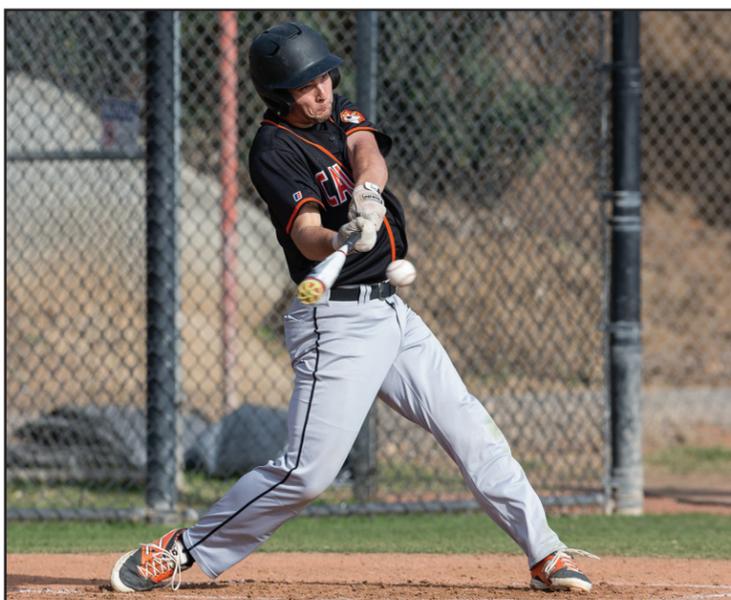
double by Burleson in the second was erased when he was thrown out trying to advance to third and a leadoff single by sophomore Chris McCarren went for naught when he tried to reach third on a throwing error, but was also gunned down.

The Beavers finally lit up the score board when down to their final chance in the bottom of the seventh inning. Sophomore Garrett Levine drew a leadoff walk and advanced to second base on a passed ball, then moved to third on a single by Burleson, who moved up to second on a wild pitch in the next at-bat.

Junior Harrison Jacobs then stepped to the plate and quickly found himself down in the count, 0-2, but stayed in it and connected for a massive ground-rule two-RBI double to right centerfield. Junior Kai Kirk brought him home with a triple to deep left center and crossed the plate on a bloop single by junior Jared Reed

for Caltech’s fourth run. Reed promptly stole second still with none out, but a pair of strikeouts and a comebacker to the pitcher ended the rally.

Burleson led the Beavers with a .429 batting average (3-for-7), including two doubles, and added a walk while throwing out two runners attempting to steal. Kirk batted .375 (3-for-8) with two walks and a stolen base while Chou hit .333 (3-for-9) with a double. Kirk also tossed four innings in relief, allowing just two earned runs on five hits and four walks while striking out three.



With the amount of facial distortion, I can say with only 85 percent certainty that this is Mark Burleson.

Photo Courtesy of Bob Pallermini

# Men’s tennis ranked program record No. 12 in West Region

**GOCALTECH.COM**  
Actual Sports Content Editor

SKILLMAN, N.J. (Mar. 31, 2016) – Caltech men’s tennis has been ranked a program record No. 12 in the West Region in the initial Oracle/ITA Division III Men’s Tennis Regional Rankings.

The Beavers have posted a 5-1 record against unranked NCAA opponents this season along with their first-

ever win over a nationally ranked team back on Feb. 26. They are 4-4 in regional play, with all but one of



Does this hat qualify as a snapback? Rush ponders this and many other philosophical questions, causing him much anguish.

-http://gocaltech.com

those defeats at the hands of nationally ranked foes, and currently rank fifth among SCIAC teams. Caltech’s most recent regional ranking was No. 13 to begin the 2015 season, while the program also achieved its first-ever national ranking earlier this month, coming in at No. 40.

# Kannan nets pair of goals against DIII No. 5 CLU



A rare sighting – the wild Soumya Dolphin in her natural habitat.

-http://gocaltech.com

**GOCALTECH.COM**  
Actual Sports Content Editor

PASADENA, Calif. (Mar. 30, 2016) – Senior Soumya Kannan scored a pair of goals in a SCIAC defeat to Division III No. 5 Cal Lutheran University on Wednesday night.

Kannan netted the game’s opener before some point-blank misses combined with a strong Regals attack and superior depth led the visitors to an 18-3 victory. Freshman Brittany added the Beavers’ other goal, added three blocks and matched Katie Johnston with four steals apiece.

## ASCIT Minutes

Meetings are every Wednesday at 4 p.m. in SAC 13

No minutes were submitted this week

*The 2016 CA presidential primary is on June 7, but it's best to get registered in advance to ensure that you can cast your vote. If you haven't already voted in this election cycle and are a US citizen, you can vote here in CA!*

*We will be hosting a voter registration drive from 12-4 p.m. on April 12th in front of the Caltech Bookstore.*

*If you have a CA state ID or licence: register at <http://registertovote.ca.gov/> (and request a mail-in ballot!). You can check your LA County registration status at <https://www.lavote.net/vrstatus>.*

*If you don't have a state ID/license, come to this event and we will get you registered to vote through paper forms! We will have both registration forms and mail-in ballot forms available (since June 7 is during finals week). Everyone is welcome to approach us for help and/or forms, regardless of party affiliation.*

- Caltech Students for Bernie

## REMINDER FROM COUNSELING CENTER:

### Meditation Mob

(drop-in mindfulness meditation group)

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

Bottom floor of Winnett

## VICE PROVOST'S OFFICE HOURS

Vice Provost, Chief Diversity Officer and Professor of English, Cindy Weinstein, holds regular office hours. This is an opportunity for undergraduate, graduate students and postdocs to meet and discuss what they'd like pertaining to the Council on Undergraduate Education, Caltech accreditation, the Staff and Faculty Consultation Center, Student-Faculty Programs, the Center for Teaching, Learning and Outreach, the Caltech Diversity Center and the libraries.

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

### Spring Term Office Hours

12 p.m. - 1 p.m.

Tuesday, April 12

Wednesday, April 20

Tuesday, April 26

Friday, May 6

Thursday, May 12

Wednesday, May 18

Tuesday, May 24

Friday, June 3

## Caltech Public Events Hiring Ushers

**Flexible hours.**

**No experience needed.**

**Outgoing Personality.**

**Pay Rate:**

**\$15 per hour**

**Caltech Students  
only!!**

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Letters and submissions are welcome; e-mail submissions to [tech@caltech.edu](mailto: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 p.m. 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](mailto:tech@caltech.edu). For subscription information, please send mail to "Subscriptions."

## Painting With contains Animal Collective's strongest pop songs

Continued from page 3

In the irreverent spirit of Dadaism, the band also indulges in some self-reference, a departure from its usual childlike sincerity. "Golden Gal" begins with a sample from the sitcom *The Golden Girls*: "No, Blanche, she's upset because they keep changing the taste of coke!", foreseeing how the band's dramatic stylistic change would be received by certain fans and critics. The sense of loss and longing in the bridge of the otherwise exuberant "FloriDada" becomes more painful when one realizes that the band may be singing not only about a young man leaving home to travel the world, but also about the band itself and its relationship to its fans.

Most sobering of all is the closer, "Recycling," penned by the ever self-deprecating Panda Bear. The autumnal track, which reflects on being a musician and the cycles of creation and fame, is filled with cyclical sounds—one of which sounds like a ghost of the luminous synth arpeggios that featured heavily on *Merriweather*—as we drift away on Panda Bear's resigned vocal melodies and dreamy, morphing synths. The song ends with a spare assortment of wooden and metal noises, cycling round and

round like a forgotten machine until, at last, it breaks down.

I cannot help but wonder if the surprising number of major music reviewers so vehemently opposed to the album were simply determined to dislike it. By now it is, after all, no longer fashionable to like Animal Collective, which the band itself seems to implicitly accept with that last track. And in our current cultural climate, denigrating the all-white male group is a strategic move: edgy without being racist or sexist. Critics point to the alleged overuse of hocketing, uninspired melodies and arrangements, and crowded gimmicks—but these certainly don't comprise the bulk of the album, and truly egregious moments (e.g., the choice of following "Spilling Guts" with "Summing the Wretch"), which these critics generalize to the entire album, are few and far between. Particularly nostalgic critics and fans seem to melodramatically conflate the band's new emotional continence, which works to the band's advantage on this album, with "lifelessness."

Marrying the crisp, high-definition aspect of the psychedelic experience with the stripped-down punk ethic, the

album succeeds as an interesting and worthwhile listen. Some duds are, of course, inevitable with any experimentation. But to me the album contains some of the strongest pop songs in the band's entire catalog. I hope that the band is not too discouraged by the

criticism, which seems to pine for the now trite washy, sentimental indie aesthetic of the 2000s, and continues in new directions.

**Worst tracks:**  
"Natural Selection"  
"Summing the Wretch"

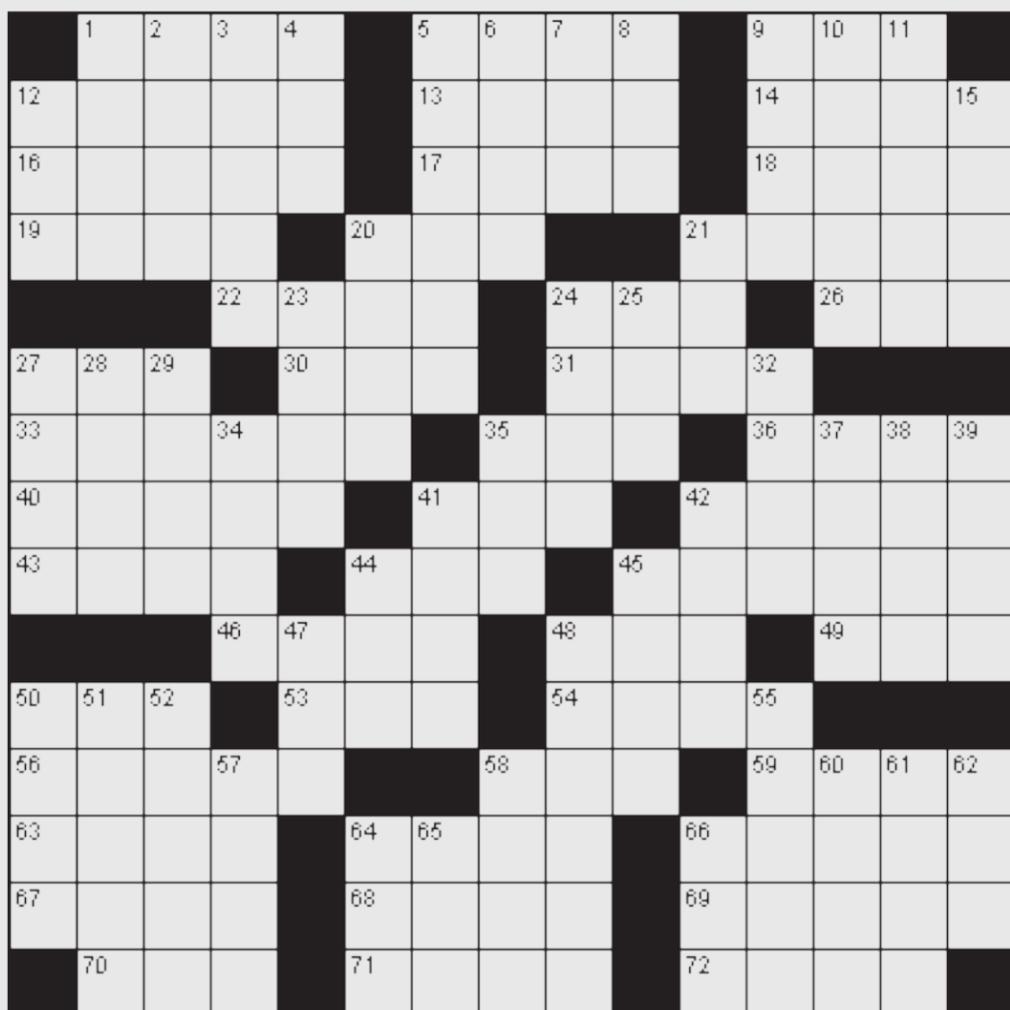
**Best tracks:**  
"FloriDada"  
"Hocus Pocus"  
"Vertical"  
"On Delay"  
"Golden Gal"

## C | a | R | e | D

### Caltech Alliance for Reflecting on Eating Disorders

Meets every other THURSDAY 12:00 - 1:00 PM  
<https://healthpromotion.caltech.edu>

## Crossword



-<http://puzzlechoice.com>

### Across

1. Part of a book
5. An aggressive remark
9. Restaurant bill
12. Underneath
13. Chills and fever
14. Kind of starch
16. Publish
17. Transmitted
18. An instinctive motive
19. Entranceway
20. Writing tablet
21. Part of a stable
22. Watch face
24. Number of items in a brace
26. Up to now
27. Back muscle
30. Mouthpiece used to control a horse
31. Ecstatic
33. Combined
35. Levy
36. Particle
40. Unwind
41. Sauce made of fermented beans
42. Kinship group
43. Water jug
44. Writing implement
45. Large seabird
46. Long narrative poem
48. A small drink
49. Oculus

50. Male sheep
53. Allow
54. Finished
56. Lament
58. Maven
59. Untie
63. Exchange for money
64. Chop
66. Extraterrestrial being
67. Large woody plant
68. Fiend
69. Palisade
70. Golf peg
71. Bard
72. Make a long and difficult journey

### Down

1. Currency of Cuba
2. In addition
3. Any of numerous fruits with hard rinds
4. Female sheep
5. Volcanic rock
6. Elderly
7. Operate
8. Wager
9. Drawn tight
10. Impressive display
11. Brass instrument
12. Tender
15. Thaw
20. Discharged a debt
21. Concession given to placate
23. Type of wild goat
24. Serving dish
25. Increase in phase
27. Tempt
28. Afresh
29. Thin flat slab of fired clay
32. Mountain lake
34. Counterweight used to obtain net weight
35. Unit of weight
37. Prong
38. Take orders
39. Boundary line
41. Faction
42. Finishing line for a foot race
44. Pastry item
45. Donate
47. Travel a route regularly
48. Kind of receptacle
50. Remainder
51. Awake
52. Scrimmage
55. Measuring stick
57. Mirth
58. Unit of area
60. Square root of eighty-one
61. Pack of cards
62. Single
64. Jump lightly
65. In the past
66. Astern



Answers to current crossword (p. 7)

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

-http://puzzlechoice.com

Monday Punday



This picture represents a common phrase, title, or person.

Think you know the answer? Take a guess at [mondaypunday.com/135](http://mondaypunday.com/135)

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