



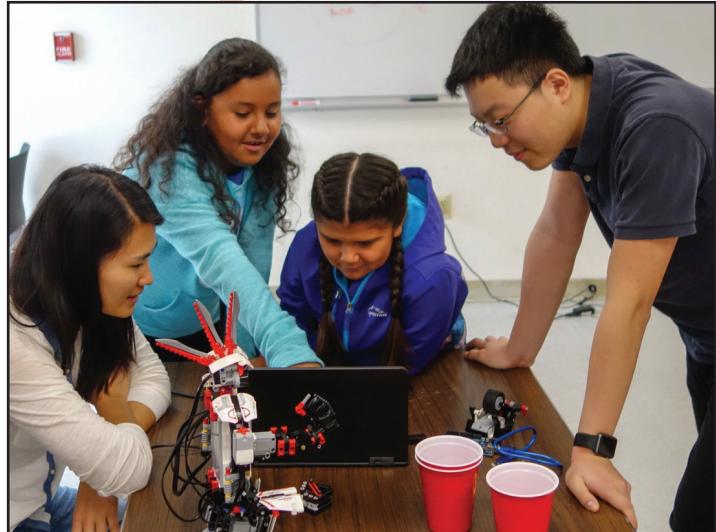
VOLUME CXIX NUMBER 24

PASADENA, CALIFORNIA

TECH@CALTECH.EDU

APRIL 18, 2016

Make-A-Difference Day: 100 volunteers at 12 sites



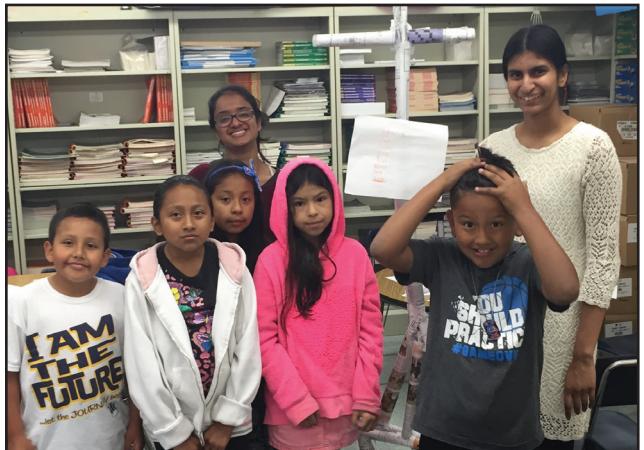
Twenty middle school girls watch student volunteers display a robot made by the Caltech Robotics Team.

Photo Courtesy of Tyler Okamoto



Students sort through 18,000 pounds of food with other volunteer groups at the LA Food Bank.

Photos Courtesy of Aishwarya Nene



Kavya Sreedhar is part of the group that visited the I Have A Dream Foundation.

Photo Courtesy of Kavya Sreedhar



Residents of the Alhambra Convalescent Home receive homemade cookies from Caltech students.

Photo Courtesy of Chloe Hsu



Volunteers help set up tents and organize parking for Habitat for Humanity's groundbreaking ceremony.

Photo Courtesy of Emil Khabiboulline

News briefs from around the globe

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

Polio vaccine switched in important step toward polio eradication

150+ countries have begun move to new vaccine targeting two remaining strains of polio virus [BBC]

Thousands rally in Brussels “march against hate”

6,500 people gathered in wake of recent suicide bombings that killed 32 people [TIME]

Student association calls for UC Davis chancellor to resign

\$175k paid to public relations firm by university to remove controversial images of university police officer pepper spraying student protesters [TIME]

State of emergency declared in Ontario First Nation of Attawapiskat

11 people attempted suicide on same day in Canadian community of 1,500 [CNN]

Ecuador rocked by powerful earthquake

238 people killed and 1,500 injured by magnitude-7.8 earthquake [TIME]

Small steps to a better world: Meatless Mondays

KRISTIE MIDDLETON
Guest Writer

Over the last decade, phrases like ‘go green’ and ‘reduce your carbon footprint’ have become firmly embedded in our lexicon, just as Earth Day has become an annual celebration. As an environmental advocate, this couldn’t make me happier. I’ve been inspired to see people switch to efficient light bulbs, recycle and use canvas shopping bags instead of paper or plastic. Nearly two-thirds of Americans say they recycle on a regular basis compared to a quarter of Americans in the 1990s. Yet, while more people have come to recognize the carbon footprint cost associated with everyday behaviors like driving cars, a leading cause of environmental degradation has remained largely hidden: factory farming.

According to the United Nations, animal agribusiness plays a prominent role in climate change. Wherever factory farms operate, there is sure to be environmental degradation. Untreated manure from hog farms runs off into

our rivers, streams and other waterways, killing fish and causing algal blooms. When this waste inevitably reaches our oceans, this creates what scientists call ‘dead zones’ — areas of the ocean where all life dies off or moves away due to a lack of oxygen. The damage done to our planet by animal agribusiness is well documented and ever increasing; as our population grows, so too does our demand for meat.

The good news is that more and more people are connecting what we put on our plates with our impact on the planet. The result is that we as a nation are enjoying more meat-free meals as a way to help ourselves and the planet that sustains us.

Since its inception in 2003, Meatless Monday has mushroomed. The idea is simple: enjoy a holiday from meat one day a week. It’s a simple solution with manifold benefits. According to the Environmental Defense Fund, “If every American skipped one meal of chicken per week and substituted

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Caltech Y Column: Upcoming 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. 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

we beat the heat and all the grad students will be back well before formal. We'll start from Colby canyon and go up and down the fun bouldering route to Strawberry peak. It is 6 miles total and 3000 feet elevation gain. You scramble up rocks the whole way, which is a lot of fun. Because it is short, it is a good trip for people with moderate hiking ability, but be aware because of the scramble on the rocks, it is a strenuous hike and if you are afraid of heights this might not be the best trip for you. Make sure to bring either sneakers with good traction or hiking boots, 2L of water, some snacks for the hike, sunscreen, and several dollars to pay your driver back for gas.

If you want to go, sign up at https://docs.google.com/spreadsheets/d/1Ao1rPbycLpL5_QE-VxLFYHHNUxeWyQy9KGwU08FNU/edit?usp=sharing.

We particularly need drivers so

duty to appoint a new justice, while also promoting more left leaning candidates. Was the Supreme Court always so politically charged? Why are the political views of Supreme Court justices so important nowadays? How has the Supreme Court changed? Please come for a talk and follow up discussion about these questions and more.

Lunch will be Served. Spaces are Limited. RSVP at <http://goo.gl/forms/UzqORV6gTb>.

3a. Pasadena LEARNS

Friday | 3:00 - 5:00pm | 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.

3b. Hathaway Sycamores

Wednesdays | 5:30-8:00pm | 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.

Other Announcements - Beyond the Caltech Y Caltech Earth Week 2016 Events

Ongoing Events | April 18th - April 22nd

Join the Caltech community for a week of events April 18 - 22 to celebrate Earth Day! Lunch events will be held Monday - Friday with food provided, discussing topics including water sustainability, solar power, and sustainability policy. There will also be evening talks on renewable energy and the future of transportation, and opportunities to engage with local environmental organizations. Check out www.earthday.caltech.edu for the full schedule of events!

Washington Elementary School Science Fair Judges Needed

Wednesday May 25th | 8:00 - 10:30 AM

Washington Elementary STEM Magnet will be having a Science/STEM Fair on Wednesday, May 25th. Judges are needed that morning from 8:00-10:30am. If you are able to assist for an hour or two during that time contact Mark Tremper with your availability. For more info email tremper.mark@pusd.us or call (626) 396-5840 Ext. 75604.

With the passing of Justice Antonin Scalia, the Supreme Court has been of primary focus during this election year. Senate Majority Leader Mitch McConnell and every Republican presidential candidate have argued that President Obama should not nominate a new Supreme Court justice. Democrats cite the President's constitutional



Strawberry Peak hike is among one of the many hiking events that the Caltech Y hosts for students.

Photo Courtesy of Caltech Y

505 S. Wilson Avenue.

Ongoing and past programs hosted by the Caltech 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. Strawberry Peak Hike

Saturday, April 23rd | 7:30 AM

Come join us for a hike up Strawberry Peak on Saturday April 23. The plan is to leave from the Caltech Y at 7:30 am, so that

Earth Week inspires conscious eating

Continued from page 1

vegetables and grains ... the carbon dioxide savings would be the same as taking more than half a million cars off of U.S. roads." A Carnegie Mellon University study found that we'd each do more good for the planet if we ate meat-free just one day a week than we would if we ate exclusively local foods.

There are even more compelling reasons: farm animals, like the dogs and cats we consider members of our families, are individuals with personalities, needs and the capacity to suffer. Yet on industrial factory farms, they're often treated like mere units on a production line with little consideration for their suffering. And, of course,

eating more plant-based foods and fewer animal-based foods is good for our health, too. The American Heart Association recommends "substituting some of the meat in your diet with vegetables" as a simple way to reduce our risk of heart disease (America's number one killer). Even former governor of California Arnold Schwarzenegger has touted the virtues of meatless eating, pointing to fitness celebrity

and vegetarian Bill Pearl, who, according to Schwarzenegger, is "one of the greatest bodybuilders ever."

Equally exciting is the new world of food you'll begin to explore when you enjoy more meatless meals. From exotic fare like Indian and Ethiopian dishes to familiar favorites like spaghetti with marinara and vegetables or bean burritos, there's no shortage of options.

Perhaps the easiest — and tastiest — way to improve our diets is by practicing the "Three R's": "reducing" or "replacing" consumption of animal products and "refining" our diets by choosing products from sources using higher animal welfare standards.

Small changes multiplied by millions make a big difference. Each of us, by pledging this Earth Day to participate in Meatless Monday, can make a tremendous difference for the world and its inhabitants all year long.

Kristie Middleton is senior food policy director for The Humane Society of the United States.

Humans of Caltech: Meet Jon Webster

The California Tech brings you stories of Caltech community members

KATHERINE GUO

Editor-in-Chief

Do you have plans for this term's Chandler Interhouse?

For this year's Midnight Madness, we're probably going to go a little overboard again. It's already planned. We're keeping it under wraps a little bit, but we're going to move it outside. That's as much as I'll tell you. But I promise it'll be fun. Doing these parties, we go into it with the goal of wanting the students to enjoy it, but we also think, "What kind of party would we want to go to? How can we make this fun? What would be more entertaining?" And basically it becomes our term-long side project to do these special parties.

What's been happening with the surveys and changing Board?

I'll be happy to speak to that — the general thought there actually came out of a discussion with the IHC. I was sitting with Cat Jamshidi and Nick Schiefer, and they mentioned that they thought Dbal didn't make the most sense in the world, and I was like, "Okay, well let me dream up an idea of what it might look like if we didn't have Dbal." That was actually how

[There are two dollar bills taped to the wall] What was the bet?

Actually ... I forget. Usually we have random bets quite often, like for dress dinner we'll have bets as to what time the last meal goes out. So like a dollar in the pot, just to keep everyone on their toes, keep them interested.

Continued on page 4

Deftones disappoints, shows its age on *Gore*

NAILEN MATSCHKE

Contributing Writer

Over its 28 years as a band, Deftones has gone from being a pioneer of the alt-metal explosion of the '90s to an aging titan that, like the genre itself, is past its prime. This evolution has been reflected in its music, as the group has transitioned from the nu-metal stylings of its earlier releases to a broader, more atmospheric sound influenced by somewhat less-saturated genres like post-rock and shoegaze. The youthful angst of Deftones' debut and classics like *Around the Fur* and *White Pony* had its cultural moment, and it certainly resonated with me in middle school, but listening to this material now leaves it feeling somewhat amateurish in both technical and songwriting aspects. Thankfully Deftones did not fall victim to the excess and stagnation of nu-metal, but the band's later albums have still struggled to find a fresh, relevant voice as they seesaw between commercial appeal and the experimental. When 2016's *Gore* leaked online this month, expectations seemed fairly high after the success of 2012's well-balanced *Koi No Yoran*, but after listening to it for myself I don't think I'm alone in my disappointment.

My biggest gripe with *Gore* is by far how little there is to make it stand out as a Deftones release, rather than one from any other group with alternative and metal influences. Most of the most memorable songs stand out not for their menacing riffs or unsettling vocals, but for how well they manage to ape the styles of other contemporary big names. Opener "Prayers / Triangles" is a dead ringer for a modern Katatonia track with its thick, clean vocals; simple, atmospheric riffs; and an especially canned-sounding, clean guitar lick.

"Acid Hologram" and "Geometric Headdress" have a bit more bite in the instrumentation, but still sound like Mastodon with half the technical ability, while "Hearts / Wires" and "Pittura Infamante" could be accomplished by downtuning any of the songs off Baroness' *Yellow & Green*, and "Phantom Bride" has a poppy enough tone, including supporting percussion from a

tambourine, to be a discarded My Chemical Romance track. I have nothing against these groups, all



-http://tinymixtapes.com/

something with broad appeal. On *Gore*, we instead get a number of creatively bankrupt tracks relying on the ideas of others.

Despite this weakness, there was still some chance for the album to redeem itself with its more inspired tracks, but these are lackluster in comparison to Deftones' hits at the peak of the band's cultural relevance. "Doomed User" and "Gore" stand out with the heaviest guitar work and Chino Moreno's trademark distorted vocals, but they would easily be weak tracks for Deftones two decades ago. Metal is an aging genre that has finally grown mature enough to push boundaries with artistry rather than blind competition to be extreme.

The era of big, dumb riffs and albums built around the mosh pit is over, and someone has already figured out how to blend every existing subgenre with hardcore. Deftones isn't just lagging behind its peers on *Gore*, but is also falling short of the standard the band set for itself with the disturbing, erotic lyrics and catchy, transcendent instrumentals of its early work. Copying the aesthetic isn't enough to replicate the magic, and no act

could justify an album solely on the basis of its heaviness given the current metal landscape, let alone a fairly accessible alt-metal act.

I am by no means a stranger to Deftones, and having clocked more than my fair share of listens on its best-known works, I was hoping that *Gore* would at least be on the level of *Diamond Eyes* or *Koi No Yoran*. While I haven't particularly enjoyed these more recent releases from the group, they at least meet a reasonable standard and are an enjoyable listen. *Gore* stands somewhere in the middle of the two, yet a level below, not willing to embrace experimentation yet crippled in any respect that would give it some radio play. Every track is either a generic interpretation of a style already perfected by another band with alternative influences or a mediocre call back to Deftones' glory days. At this point I think fans and the band alike have to accept that Deftones will never replicate its early success, largely due to its utter irrelevance amongst modern metal acts, to the point where the band have to uproot its entire style in order to sound fresh rather than copied a million times over. I would only recommend this album to established fans, though I doubt many will find it a noteworthy entry into their discography.

Response to "It's the economy, Bernie!": A defense of Sanders' economic platform

ANKIT KUMAR

Contributing Writer

In his latest hit piece on Senator Bernie Sanders, "It's the economy, Bernie!", Sean McKenna questions whether Sanders has properly thought out his position on breaking up large financial institutions, and whether his progressive platform would have any chance of success in a Republican-controlled House. While the author may, as he claims, disagree with Sanders on his economic policy, his dismissals of Sanders' responses in his April 1 New York Daily News interview, and subsequently of his entire economic platform on the basis of these responses, are founded on mischaracterizations that have been callously proliferated by most of the media.

Sanders believes that banks that are "too big to fail" (TBTF) should be broken up because their size commits the government to enacting bailout programs like those put forward in 2008 to avoid the destabilizing consequences of these banks potentially going under. Armed with the promise of this taxpayer funded insurance, these large financial institutions lack the proper incentives to avoid risky and immoral market behaviors.

With this in mind, let's take a closer look at what Sanders actually said in that April 1 interview. When asked by the Daily News about how he plans to break up the banks, Sanders replied that he would "[have] legislation passed,

or [give] the authority to the Secretary of Treasury to determine, under Dodd-Frank, that these banks are a danger to the economy over the problem of too-big-to-fail." McKenna characterizes this response as an indication of Sanders' lack of a clear direction forward.

To the contrary, this response represents a substantive policy stance, as there are several methods to tackle TBTF banks. One proposal is the SAFE Banking Act, which caps the balance sheets of financial institutions based on a percentage of GDP; this is the "having legislation passed" option that Sanders mentioned. Another option is the Sanders-drafted Too Big To Fail, Too Big To Exist Act, through which the treasury secretary-chaired Financial Stability Oversight Council (created by the Dodd-Frank Wall Street Reform and Consumer Protection Act) would create a list of TBTF institutions and work with regulators to break them up. McKenna paints Sanders' response as him being "unclear as to whether his own hypothetical administration or the treasury department would have jurisdiction under current law" to break up TBTF companies. Putting aside the fact that the Department of the Treasury is part of the administration (i.e., the executive), Sanders is actually correct that there are multiple options on the table, combining the executive branch and proposed legislation, to effectively tackle TBTF institutions.

Another criticism contained in McKenna's piece appears to be that Sanders' calls to "break up the big banks" are hollow, presumably because he doesn't spell out the exact process through which this break-up would work. However, as Daniel Tarullo of the Federal Reserve has explained, it's actually desirable to allow relative flexibility to TBTF firms in meeting those constraints. It is widely recognized that the role of government intervention here *should* be to let regulatory bodies decide on a target for TBTF institutions to meet, and then give those institutions the liberty to decide how they reorganize themselves in response. Far from lacking practicality or the "requisite expertise," as McKenna claims, Sanders has made a reasonable proposal that avoids government micromanagement.

McKenna further critiques Sanders' refusal to speculate on the long-term legal implications of the recent court ruling on MetLife's TBTF status. However, I would imagine the fact that the court opinion *hadn't even been released yet on April 1* might have something to do with this refusal.

Additionally, while McKenna's article was ostensibly about Bernie's economic platform, he makes no mention that Sanders' policies go far beyond breaking up banks. For the first time in decades, we have a candidate for the presidency who doesn't back away from progressive, social democratic ideals as if they were political taboo, but instead has

been their steady advocate for over 30 years — a level of consistency that Hillary Clinton can only dream about. Sanders is the only candidate who takes seriously the corrupting influence of money in politics and the election process.

He is the only candidate who consistently recognizes that the entirely unprecedented levels of income and wealth inequality in modern America are harmful to the economic well-being of the nation, and that it is unacceptable that the United States remains the only wealthy nation of the Organisation for Economic Co-operation and Development (OECD) in the world that does not provide healthcare to all its citizens.

McKenna concludes by implying that the ambition of Sanders' platform would render him unviable as an executive if the Republicans retain the House. First, let's discard the notion that Clinton stands a better chance of overcoming Republican obstructionism than Sanders does. She has been a central figure in establishment Democratic politics for over 20 years. One has to look no further than the essentially neurotic Republican obsession to implicate her in the Benghazi attacks as evidence of their disdain.

The fact of the matter is that any Democratic administration will have a Republican insurgency on its hands, but to not vote on one's principles for this reason alone is abject defeatism. Contrast this attitude with that taken by the Tea Party in the last decade, which

when faced with a Democratic-controlled Congress in 2008 engineered grassroots-fueled, sweeping victories in the 2010 midterm elections.

Ultimately, what McKenna and others who parrot the notion that Sanders is unelectable or unviable as an executive fail to realize is that Sanders is creating a grassroots movement to revitalize progressive politics in the United States. He has often outpaced President Obama's 2008 campaign in terms of individual contributions. His distributed phone banking operation has made over 46 million calls, and is well on track to outpace the Obama 2008 record of 100 million calls (which included the general election). Evidence of this growing movement exists right here at Caltech, where students on this historically politically-apathetic campus are getting involved in political organization to help Sanders win. We do not deny the challenges that lie ahead, but refuse to retreat into Clinton-esque defeatism. That reminds me, I should get a Bernie sticker for my laptop.

Ankit Kumar is a member of Caltech Students for Bernie Sanders, a group of Caltech volunteers working to elect Bernie Sanders as president. Visit the group's Facebook page at <https://www.facebook.com/Caltech4Bernie/> to get involved in volunteering.

Humans of Caltech: Meet Jon Webster

The California Tech brings you stories of Caltech community members

Continued from page 2

it started, like what would it look like if we didn't have Dbal, and we tried to come up with a way that, in our minds, we thought might enhance what we were offering, because if you come get breakfast or lunch, you can get hot meals whenever you want, as much as you want — it really becomes a value proposition, like okay, we can do that if we don't offer the C-store and Dbal, because you can't do all-you-can-eat and the C-store, right, it doesn't make sense. That's what we thought we could do, and we just wanted to find out if the students were interested in that. So that was the one-question survey that we sent out. We bounced the idea off the food reps a bit, and we tried to do a little bit of small sample discussions, just going to talk to people and asking what they thought. Everyone seemed to be pretty excited, but the survey response wasn't so positive. From a more global standpoint, we're here, we want to make sure we're feeding everybody, and we don't want people to necessarily be starving because an arbitrary number gets reached, and I think the IHC has mentioned that. I guess I should clarify, it wasn't the whole IHC, it was Cat and Nick, but it's like okay, it doesn't really make sense to have

an arbitrary level, so what's a way we can rethink it? And I don't think it's necessarily a dead topic, but I got one suggestion from a student saying, "Why don't you have town hall on this?", and I thought that was a great idea, talking to a broader base of students to what they think some solutions might be. Because we took a shot, and it obviously wasn't the most popular thing. I would say a lot of students are creatures of habit here. For example, our food committee chair, if we happened to not serve chicken noodle on Tuesday, would probably have a cow.

I think people always like to complain.

I think that's right, and to a certain extent, when it's good-natured, we're okay with it. We like constructive criticism — it helps us achieve our goals.

What are your other main goals for CDS?

I think the big one is dinner. We get a lot of complaints, and the ones that we get that are more genuine than the "Screw CDS!" types of complaints are those that revolve around dinner. We have a project right now where we're trying to change how we present things, and we're going to talk to the waiters about when to put food on the tables so that it stays

hot, and generally try to move in the direction where the food that we're serving is more appealing. We feel like the products that we buy are high-quality products, and we're trying to make everything as appealing as possible. If you ask any of my staff what their job is, the answer will be a very general "make things better." We want to

I think the problem with dinner is variety, honestly. We do three entrees but that's kind of the product of what makes Caltech, Caltech. It is a very Caltech thing to eat the way you guys do. And I think there's value to it, having everybody sit down and eat together; it's just hard. Anyway, I think variety and quality for dinner are constantly on

for board, we have a sous chef for board now, and we are hoping for big things from them. So hopefully you guys will tell us when you see the changes!

When did you start working here?

My mom has worked here for 50 years, so I grew up around Caltech and got a summer job working for Tom Mannion when I was 15. Then I moved over to the Einstein Papers for a few summers. In college, I was coming back and picking up my job at The Einstein Papers. Coming back here after college, I was just receiving invoices for Dining for a long time, and when Peter Daily came, he pulled me out of that role and started giving me more and more responsibility. I don't know that I would have gotten into this had it not been for picking up a summer job, but I honestly really enjoy this job; I get to have fun every day. So I've been here on and off since I was 15, and it constantly blows my mind how smart you guys are. I don't think I'm smart enough to realize the depth of everyone's brilliance here, to be quite honest. You guys are all very much ahead of where I was when I was in college, in regards to responsibility and the amount of stress you guys endure. I think that's very admirable, actually.

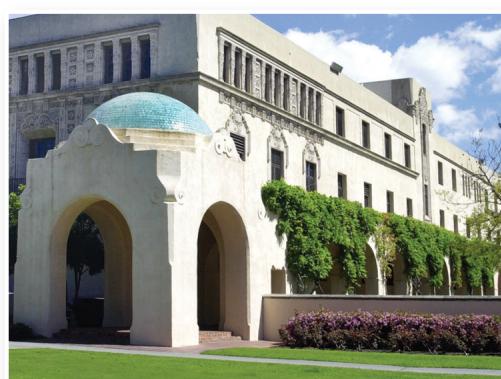


Photo Courtesy of Katherine Guo

take whatever we have and up the bar and eventually get to the point where people like the job we're doing.

our minds, and as such — I don't know how transparent this is to you guys — we just reorganized, and we have an executive chef

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SPORTS

THE CALIFORNIA TECH

APRIL 18, 2016

5

Men's tennis team moves into tie for second place in SCIAC

GOCALTECH.COM
Actual Sports Content Editor

PASADENA, Calif. (Apr. 15, 2016) – For the first time in over a decade, the Caltech men's tennis team won a third regular season SCIAC match in a key 5-4 victory over West No. 16 Chapman University, providing the perfect ending to Senior Day on Friday afternoon.

Having already earned the first national ranking in program earlier this season and a program-record No. 12 West Region ranking, the Beavers have seemingly left little else with which to shock the Division III tennis landscape. Yet Caltech now finds itself tied for second place in the SCIAC standings and in good position to claim its highest finish in the conference since placing fifth for three straight seasons from 1998-2000 and a program-best third in 1996.

The victory improves Caltech's SCIAC record to 3-1 and overall ledger to 9-5, including an 8-1 mark against unranked NCAA opponents, although Chapman did appear in the season's first two national rankings. The Beavers are also 7-4 in regional play, with three of those losses coming at the hands of nationally ranked foes.

Doubles began inauspiciously for the hosts as Chapman jumped

to two as West No. 19 Buford closed out #1. Freshman Derik Nguyen responded immediately with a 6-0, 6-4 victory to maintain his perfect record since moving up to #3, but the Panthers soon moved within one point of clinching the match as junior Ruthwick Pathireddy came up short in a tiebreak at #2, 2-6, 6-7 (4).

With their backs against the wall, the Beavers were left relying on what has been their calling card throughout the historic season – depth. Freshmen Andre Liu and Zixiao Li added another chapter in their storied rookie seasons with hard-fought wins at #4 (6-1, 6-4) and #5 (1-6, 6-1, 6-2), respectively, to level the match, with the decisive #6 matchup headed to a third set after mirror

out to a 1-0 lead with a surprise 8-4 win at #3, which had been the Beavers' most successful court (10-3) and the Panthers' least (2-11) all season. With what would already appear to be the decisive match in hand, Chapman solidified the 2-1 lead with an 8-6 win at #1 behind West Region No 4 doubles pairing Brett Buford/Charlie Werman while Caltech claimed #2, 8-5.

Chapman wasted no time in singles, increasing the margin 6-4 first and second sets. Junior Ramsathwick Pathireddy showed no nerves whatsoever in grinding out the 6-2 win and match clincher, vaulting the Beavers into a tie for second in the conference with their next opponent, the University of Redlands.

The win served as a perfect final home match for the senior trio of Alex Henny, Leonardo Zornberg and three-year captain Rushikesh Joshi.



Aw, yeah – going where no Caltech tennis team has ever gone before – to second place in SCIAC. This is one small step for men's tennis, and one giant leap for Caltech Athletics.

-<http://gocaltech.com>

feet for the first time in his career, posting a mark of 100 feet, 8 inches. "It has certainly been fun to see Morgan's improvement this season," Head Coach Ben Raphelson said. "This whole year, he has been an eager learner and has

embraced the daily opportunities to improve."

With roughly half the squad training through this meet and the other using it as more of a tune-up, those who did compete exceeded expectations, particularly

Kannan extends perfect scoring streak to 20 games

GOCALTECH.COM
Actual Sports Content Editor

PASADENA, Calif. (Apr. 13, 2016) – Senior Soumya Kannan extended her perfect scoring streak with two goals in her 20th game of the season against Division III No. 8 Occidental College on Wednesday afternoon.

Freshman Brittany Percin followed a pair of early Oxy tallies after a scoreless first two minutes



The dolphin mom searches for her pod.

-<http://gocaltech.com>

with the Beavers' first of the game. Kannan notched her first in the second quarter as the Tigers took an 8-2 lead at halftime. Each would net again in the fourth quarter, with Kannan's coming on a penalty shot that she powered through the outstretched fingertips of the Oxy goalie before the Tigers left with the 16-4 victory.

Kannan added two assists and three steals while freshman Katie Johnston drew three exclusions.

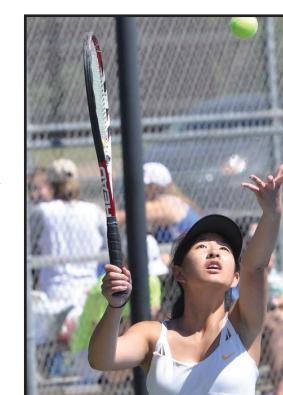
Women's tennis team moves up to No. 13 in West Region

GOCALTECH.COM
Actual Sports Content Editor

against national No. 5 Pomona-Pitzer Colleges and West No. 12 University of La Verne.

S K I L L M A N , N.J. (Apr. 14, 2016) – The Caltech women's tennis team has moved up a position to rank No. 13 in the latest Oracle/ITA Division III Women's Tennis Regional Ranking.

The Beavers have not been in action since the last rankings were published on Mar. 31 thanks to a forfeit by Whittier College and two rainouts



An offering of thanks to the tennis gods.

-<http://gocaltech.com>

the No. 11 position.

Caltech has posted a 6-1 record against unranked NCAA opponents this season, as well as a 5-4 record in regional competition, with all but one of those defeats coming at the hands of nationally ranked foes. Caltech's best-ever regional ranking came at the conclusion of the 2014 season, with the Beavers holding

top-10 list in the long jump as she cleared an additional one and one-quarter inches and junior Lilly Luo dropped a second in the 5k (21:48.45), weaving her way through a handful of other finishers and dodging a stray hurdle down the stretch.

The men's side found considerable success too. Sophomore Alex Bourzutschky approached his personal bests from last year with season-best times in both the 200m (24.51) and 400m (54.43), shaving .84 and 1.36, respectively. The 4x100 relay trimmed another .14 to clock a 47.55 – a shade under last year's top time – and freshman Ben Calvin improved in the 200m by .17 (25.93) and posted a 19.36 in the 110m high hurdles. Senior Anup Kishore continued his steady progress in his return from injury by bettering each attempt in the discus, eventually throwing four feet farther than last month (61 feet, one inch).

Hill nears 81-year-old hammer record at Pomona-Pitzer invite

GOCALTECH.COM
Actual Sports Content Editor

CLAREMONT, Calif. (Apr. 9, 2016) – Senior Morgan Hill threw within half a meter of an 81-year old Caltech track & field program record and notched personal bests in both his other throwing events in a wildly successful day for the Beavers despite rainy conditions at the Pomona-Pitzer Invitational.

Hill began his day with a foul on his first attempt but responded immediately, out-throwing his previous best mark by over two meters to reach 151 feet and 10 inches, which puts him just one foot, six and seven-eighths inches off Robert Parker's record from 1935. The senior placed 11th overall among a strong field of Division II and III competitors, ranking third among SCIAC throwers. He then cleared another career mark in the shot put by almost three inches (32 feet, two and one-quarter inches) and launched the discus over 100



You spin that hammer right round, right round. Like a record, Morgan, right round, right round.

-<http://gocaltech.com>

feet for the first time in his career, posting a mark of 100 feet, 8 inches.

"It has certainly been fun to see Morgan's improvement this season," Head Coach Ben Raphelson said. "This whole year, he has been an eager learner and has

embraced the daily opportunities to improve."

With roughly half the squad training through this meet and the other using it as more of a tune-up, those who did compete exceeded expectations, particularly

considering the rainy conditions. Freshman Muskaan Goyal had a day in the women's events, matching her PR in the discus before dropping another .12 in the 100-meter dash (17.66). Junior Lucy Chen inched closer to the

ANNOUNCEMENTS

THE CALIFORNIA TECH

ASCIT Minutes

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

ASCIT Board of Directors Meeting

Minutes for 16 April 2016. Taken by Phillip.

Officers Present: Nima, Sean McKenna, Phillip An, Jay Palekar, Bobby Sanchez, Annie Chen, Kalyn Chang

Call to Order: 12:02 pm

President's Report (Nima):

- ASCIT Round food day tonight (4/14/16) at midnight on the olive walk

Officer's Reports:

- **V.P. of Academic Affairs (ARC Chair: Jay):**
 - Registration system overhaul is still in process
 - 3-5 weeks HSS will reach out to students regarding classes
 - Midterm result surveys are out – contact Jay for results
- **V.P. of Non-Academic Affairs (IHC Chair: Bobby):**
 - Nima will be running ASCIT elections
 - RevCom secretary position was created and will be chosen yearly by the RevCom chair
 - Committee appointment meetings will be this Saturday
 - Faculty board appointment meetings will be on May 1st
- **Director of Operations (Sean):**
 - Projector in screening room is broken and will be fixed soon
 - Dev team will appoint four new members
- **Treasurer (Kalyn):**
 - Yearbook budget is on track to add revenue
- **Social Director (Annie):**
 - Trivia night will start up next week and happen until June 2nd
- **Secretary (Phillip):**
 - ASCIT Club fair will be tomorrow on the olive walk for PFW
 - ASCIT transition retreat is May 8th

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

Meeting Adjourned: 12:48 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

EARTH WEEK AT CALTECH

Monday, April 18	Data Science for Water Sustainability
Annenberg 105 12pm-1pm	Patrick Atwater, Project Manager for the initial phase of the Statewide Data Collaborative Noah Olsman, Caltech Graduate Student, Control and Dynamical Systems focused on Systems Biology Lunch provided
Tuesday, April 19	The 21st Century Solar Army
Winnett Lounge 12pm-1pm	Bryan Hunter, Caltech Graduate Student, Chemistry & Chemical Engineering Lunch provided
Tuesday, April 19	Renewable Energy: Progress and Prospects
Guggenheim 101 5pm-6:30pm	Harry Atwater, Howard Hughes professor of Applied Physics and Materials Science Refreshments provided
Wednesday, April 20	Effective Sustainability Policy
Winnett Lounge 12pm-1pm	Andy Wilson, Pasadena District 7 Councilmember Morey Wolfson, Pasadena Environmental Advisory Commission John Onderdonk, Caltech Sustainability Lunch provided
Thursday, April 21	Sustainable Transportation Expo
San Pasqual Walk 11:30am-1:30pm	Come check out the latest options in sustainable transportation! Lunch provided
Thursday, April 21	Investing in the Future of Transportation
Beckman Institute Auditorium 5pm-6:30pm	Paul Yeh, Partner, Kleiner Perkins Caufield & Byers Refreshments provided
Friday, April 22	Earth Day Resource and Engagement Fair
San Pasqual Walk 11:30am-1:30pm	Come check out local environmental organizations, enjoy music from ingMOB, and learn how you can get involved in promoting sustainability Lunch provided
Friday, April 22	Accelerating Innovation: Physical Science Startups at Cyclotron Road
Annenberg 105 3pm-4pm	Raymond Weitekamp, lead for the polySpectra project at the Cyclotron Road Accelerator
Friday, April 22	Interactive Artist Event
South End of Beckman Mall 5:30pm-7:15pm	Artist Kim Stringfellow discusses her sound art project about the history of the Owens Valley and the Los Angeles Aqueduct Coffee provided & food available
Friday, April 22	TACIT Performance of The Chisera (aka Lost Borders)
Ramo Auditorium 7:30pm-9pm	Attend the staged reading of Paula Cizmar's drama about water and engage in a post-show panel discussion
Tuesday, April 26 & Thursday, April 28	Sustainable Living Workshops
Winnett Lounge 12pm-1pm	Sustainable Works will lead two seminars about how you can make your lifestyle more sustainable. Come learn how your actions can make a difference. Students, staff, and faculty are all welcome - Lunch provided on a first come first served basis

Presented by:

Caltech sustainability



RESNICK INSTITUTE
science + energy + sustainability

Theater Arts Caltech



CCL Solar



Caltech Graduate Student Council



JCAP
JOINT CENTER FOR ARTIFICIAL PHOTOSYNTHESIS

Caltech SVC

CALTECH

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.

Wednesday, April 20

Tuesday, April 26

Friday, May 6

Thursday, May 12

Wednesday, May 18

Tuesday, May 24

Friday, June 3

The California Tech

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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. For subscription information, please send mail to "Subscriptions."

FEATURE

THE CALIFORNIA TECH

APRIL 18, 2016

7

Dilma's Dilemma: A look at Brazilian politics

SEAN MCKENNA
Contributing Writer

Dilma Rousseff was re-elected as president of Brazil in early 2014. Her second term has been a roller coaster ride almost from day one. A perfect storm of political and economic factors led up to a critical vote on April 17 by Brazilian lawmakers on whether to initiate an impeachment trial. As The Tech went to press, the result of this vote was still pending. Here's what you need to know about how Rousseff got into this mess and what happens next.

Brazil was one of the main benefactors of what has been known as "the commodities boom." Even as world financial markets were in chaos due to faulty subprime mortgages in 2008–2009, countries like Brazil and China were able to weather the storm partly due to the strong demand for commodities such as coal and steel. The commodities boom helped Rousseff win the election as the candidate from the Workers' Party, which had been in power. During her first term, though, the commodities boom turned largely into a commodities bust in the

same fashion as the recent bust in oil prices. Rousseff's popularity, like that of most politicians, seems to be directly tied to the strength of the economy, as the beginning of the commodities bust in 2014 led her to barely win the re-election campaign.

Since then, things have gone from bad to worse. The economic malaise has spread from the commodities sector to the Brazilian economy as a whole, with inflation and unemployment rising. Obviously, this kind of economic performance would disgruntle voters in a normal setting. But on top of the economy, corruption scandals have emerged. The most wide-reaching corruption scandal involves Petrobras, the Brazilian state-run oil company. Investigators are combing through this web of corruption to see how far it reaches into all of the various political parties. Upwards of one-third of the members of the lower house of parliament are under investigation.

Against this backdrop, it is natural to question Rousseff's competence. However, it should also be noted that she has not been charged with any wrongdoing

relating to the corruption scandals. Instead, the parliament is looking to impeach her for something that, according to many experts, is simply a technicality. They allege that the way her administration presented the federal budget at the end of her first term was disingenuous. However, the discrepancies the investigators point out are very minor, essentially amounting to putting make-up on the budget deficit to make it seem a little less bad while Rousseff was seeking re-election.

In my mind, far worse crimes could have been committed by a head of state, and far worse corruption probably was committed by some other members of the Brazilian government. The campaign against Dilma Rousseff misses the point: Brazil's economy needs structural reforms in order to lessen its dependence on commodities and achieve balanced and sustainable economic growth. We should hope that this charade is resolved soon and that the corruption probe will prune the government of cronyism. That is the best step forward for Brazil.

What is Senior Gift?

STEPHANIE WONG
GALEN GAO
BIANCA LEPE
Senior Class Co-Presidents
Senior Gift Chair

the scholarship fund and the SURF fund. After all we have gained from philanthropy during our undergraduate years, supporting Senior Gift is our opportunity to make sure that future classes can continue to enjoy Caltech.

Last week, we had a Senior Gift pizza party at Tom's to kick off the campaign. It was a huge success — we raised enough money for four charging stations! Over the next couple weeks, we will be continuing to collect donations for Senior Gift at many different locations and events. We will be tabling in front of Chandler during lunch every day from 11:30 a.m. to 1:30 p.m. until April 29. This Wednesday, April 20, we will also be collecting donations at our Senior Gift Dessert Night for seniors in Winnett from 10:00 to 10:30 p.m. The seniors will also be celebrating 51 days until graduation. Unfortunately we couldn't have this event on Thursday to make it 50 days. Welp. There will be a very large and magnificent cake, though.

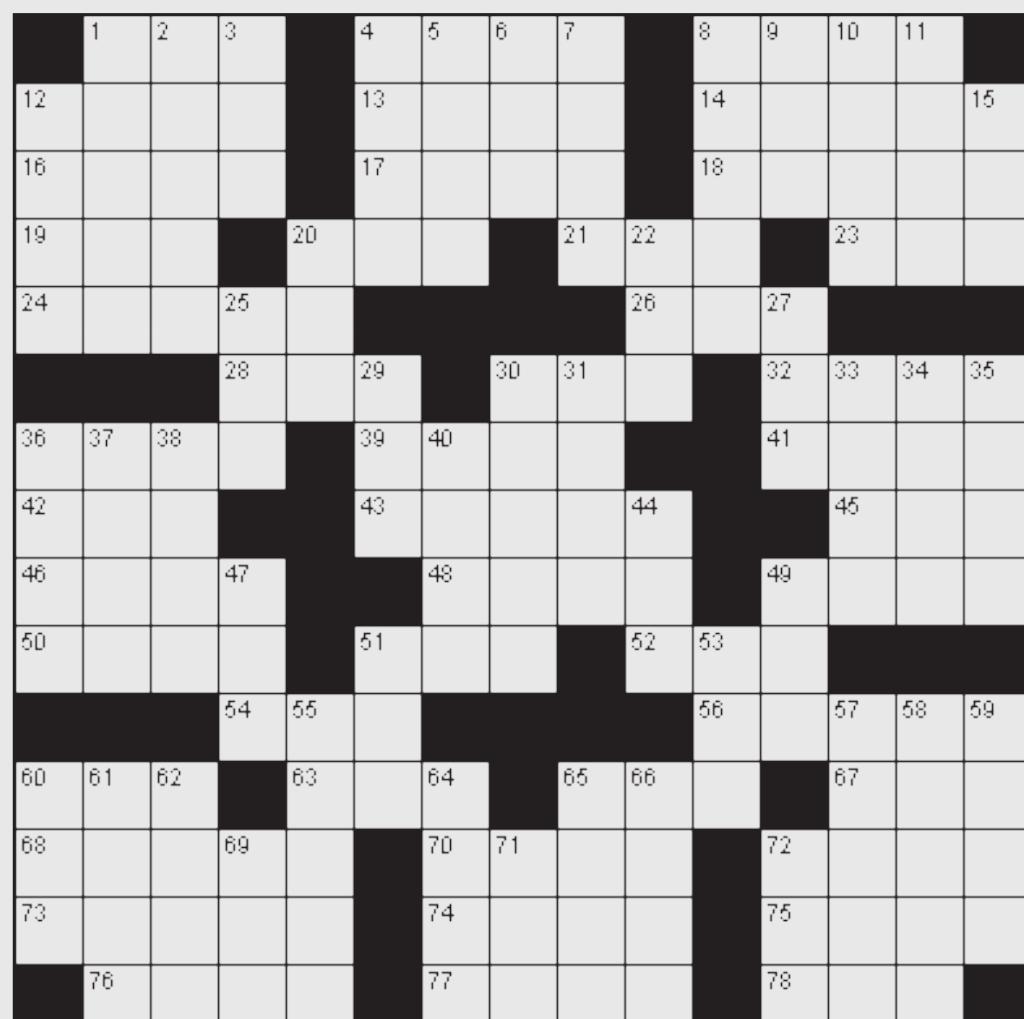
This year, we have chosen to raise funds for mobile charging stations. Many colleges around the country have already installed similar stations on their campuses, allowing for the convenient charging of phones, laptops and tablets without having to lug around your own charger. The idea for our gift this year came from Tom Mannion, who noticed that students were frequently leaving their chargers all over his house. If we reach our goal of raising enough funds for 10 or more charging stations, they will be placed all over campus in spots where people generally sit for long periods of time with their electronics. We even have the support of Professor Tom Soifer and two Development staff members, who have generously agreed to match student gifts up to \$3,000.

Y

ou're probably wondering why you should give to Senior Gift. For a lot of us, Caltech has become like our second home. Throughout our time here, we as students have benefitted from donations made by alumni through things like House Endowments for fun house events,

As the name does not really imply, the finale for Senior Gift will be the Break Through Campaign Kick Off campus celebration on Friday, April 29, on Beckman Mall starting at 5 p.m. We will have two of our charging stations there on display in one of the experiential stations, and Bucky Beaver will be on hand to help explain how to use them. That Friday will be the last day to give to Senior Gift.

Feel free to stop by our table outside Red Door during lunch if you have any questions or want to learn more about this great Tech tradition. You can also check out our website at <https://fund.caltech.edu/seniorgift>.



-puzzlechoice.com

Across

- 1. Acquire
- 4. Part of the hand
- 8. Constrictors
- 12. A narrow way or road
- 13. Comply
- 14. Lawful
- 16. Foreboding
- 17. A thin strip
- 18. Far beyond the norm

- 19. Total
- 20. Indicating maiden name
- 21. Possesses
- 23. Group of things of the same kind
- 24. Fashion
- 26. Definite article
- 28. Nocturnal bird
- 30. The night before

- 32. Fish traps
- 36. Decapod
- 39. Skin condition
- 41. Desperate
- 42. Lout
- 43. Aromatic herb
- 45. Operate
- 46. Male red deer
- 48. Convention
- 49. Small hard fruit

Down

- 1. Complete extent or range
- 2. Foe
- 3. Square root of one hundred
- 4. Impersonate
- 5. Having a strong healthy body
- 6. Pasture
- 7. Traditional story accepted as history
- 8. Redden
- 9. Lubricant
- 10. Subdivisions of a play
- 11. Father
- 12. Results from costs exceeding revenue
- 15. Make lacework by knotting or looping
- 20. Novel
- 22. Consumed
- 25. Tennis stroke
- 27. Conclusion
- 29. Workplace in short, for scientific research
- 30. Follow as a result
- 31. Garment that covers the head and face
- 33. Republic of Ireland
- 34. Proper alignment
- 35. Transmit
- 36. Monetary value
- 37. Charge per unit
- 38. A great distance
- 40. Feel concern or interest
- 44. On the sheltered side

- 47. Large African antelope
- 49. Female hog
- 51. Large body of water
- 53. Space between two things
- 55. Fling
- 57. Stage whisper
- 58. Trance
- 59. Detest
- 60. Playing card
- 61. Sleigh
- 62. Champion
- 64. Celestial body
- 65. Polynesian dance
- 66. Detail
- 69. Objective
- 71. Cutting tool
- 72. Archeological site

How I increased my stress and decreased productivity in 10 easy steps

KSHITIJ GROVER
Contributing Writer

I'm an experienced veteran of the working world. Let me tell you how to lead a better life (I'll also link to some cool articles I've written at the bottom that are on an ad-supported website and urge you to try my unrelated product that I'm launching today. Rate, Comment, Subscribe).

1. Clean your desk! Do it. Right after you finish this piece, get to work. No, really: it's a life-changing magic that will keep you on top of the *New York Times* best seller list for weeks on end.

2. Creative geniuses like Steve Jobs were fueled by the mess around them. Make sure your desk has inspiration on it. It has to be randomly placed. Albert Einstein once said, "If a cluttered desk is a sign of a cluttered mind, of what, then, is an empty desk a sign?" He went on to say, "I love the new Model 3" (*Brainy Quips 18*).

3. You should wake up early in the morning. The early bird gets the worm. The guy who leads Starbucks gets up early — 4:30 a.m.! (*Business Insider 5*).

4. Remember to burn the midnight oil. You've never heard of creative insomnia? It's all about the hustle. I don't care whether you're on a plane at 2 a.m. or you're chronically exhausted. You snooze, you lose. (*Elitism Hourly 26*).

5. Network a lot. Be expressive and social. Go to as many meetings as you can when you're in the office. Not invited? Take initiative. No calendar can dictate your schedule. Show up and say you're just checking out the vibe. If people attack you for

butting in, tell them it's for your personal growth. Networking has immense ROI (Return On Irritation).

6. People respect those who are silent. Don't speak too much. Stay distant. Eat lunch at your desk. It creates an air of mystery. If you are in any social situation, the only thing you should say is "interesting." You may either nod or shake your head along with this verbal outcry. Most importantly, when you speak (and do this with caution), only whisper. Whispers are the loudest.

7. Dress to impress. You've got to dress for the role you want, not the role you have. Formal Fridays present a false dichotomy. You can never be overdressed for the occasion.

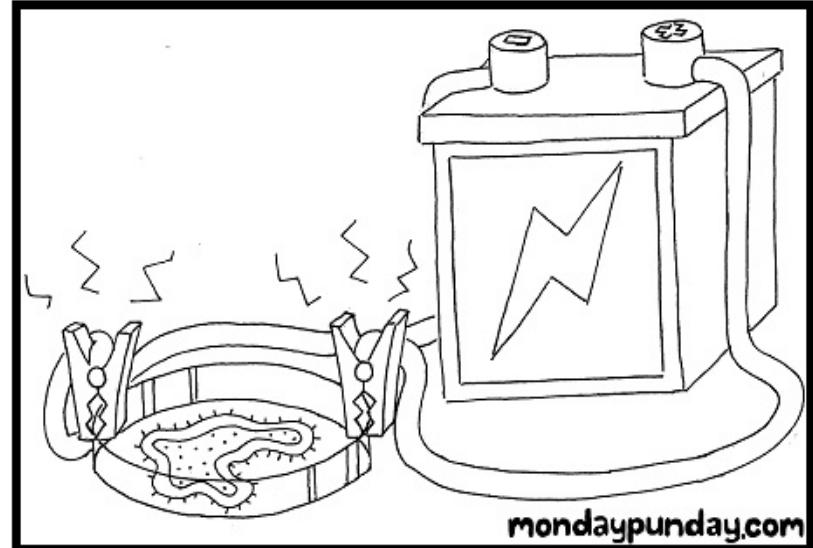
8. Be casual. Wear a tank top to work because your comfort is all that matters. Cultural norms are the poison of our society. Never allow your self-worth to be dictated by what others think. If you're focused on fitting in, you can't stand out.

9. People-pleasers are charming. Be a Yes-Man (especially if you're a Woman). If you ever feel overwhelmed by agreeing to something, refer to #4. The only thing that matters is whether you're delivering above expectations.

10. No one likes a pushover. Push others over. Assert dominance at every possible opportunity. If you're asked to do something by your boss, schedule a one-hour one-on-self to discuss it. Don't say "yes" unless the task will revolutionize who you are as a person.

Meditate deeply on these things every morning. Just don't overthink your life — go for it.

Monday Punday



mondaypunday.com

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

Think you know the answer? Take a guess at mondaypunday.com/164

Answers to current crossword (p. 7)

