



VOLUME CXXI NUMBER 25

PASADENA, CALIFORNIA

TECH@CALTECH.EDU

MAY 7, 2018

# The California Tech

## Conversation with the Caltech Christian Fellowship

MILAN ROBERSON  
Editor-in-Chief

Last Sunday, while hard at work writing an editorial and laying out the Tech, I participated in the Text-a-Toastie event hosted by the Caltech Christian Fellowship. My lovely butter and Nutella sandwich on white bread was delivered by Laura Hu and Noelle Davis, who agreed to chat with me. The following transcript of our conversation has been lightly edited for clarity:

**Roberson:** Thanks for coming here, Noelle and Laura. So, first off, a question that's pretty specific to this event: Are there preferences among the CCF membership between sandwich-making and sandwich-delivering, or are the tasks rotated between participants?

**Davis:** So, there are preferences. Some people are more outgoing and like to talk to people, and then there are those who prefer to stay in and make the toasties. I think that, after coming a few times, everyone decides to at least try both tasks a few times.

**Hu:** We find that everyone ends up experiencing every role at least at some point. It also happens as the need demands it, depending on how many requests we have and how many sandwiches we have backed up that we have to deliver.

**Davis:** Sometimes if someone comes in and isn't really sure about going out and interacting with people who may not be super friendly towards Christianity, going out with somebody else and then seeing that people are actually pretty nice about it encourages them to be fine with doing it on their own.

**Roberson:** What does CCF do? Can you give me an overview of your goals as an organization and maybe some specific events that you do?

**Hu:** I just joined this year and for me, coming to Caltech, it was really important to me to find a community of believers. We are the Caltech Christian Fellowship and I think fellowship is a big part of it. It's where people can come together and grow in their faith and support each other. Also, the things that the organization does aren't limited to just believers; we have events like Text-a-Toastie and Blue Slip Milkshakes and other things within the larger community.

**Davis:** So, event-wise, we have internal events like small groups that meet and read the Bible and try to figure out what being a Christian means, and we have

more outreach-type events like this and Blue Slip Milkshakes, and then we work with a few external organizations who do lectures on campus about the interplay between science and religion, like Science and Faith Examined and the Veritas Forum.

**Roberson:** It sounds like CCF is really good for people who need it. I guess I should also say this before I go on asking more questions: If you don't feel like answering a question, that's totally fine. Not all of them are as easy as the first two, but if you want to give your best try at responding to something to which you might not have the answer already formed, that's okay. I already appreciate y'all taking the time to come here and do this. So you said that CCF meets and does Bible studies where you try to figure out what it means to be a Christian. Are there some commonly-held beliefs among the membership about things that are not necessarily about Christianity, but questions of morality that Christianity is sometimes used to answer? You're welcome to talk about any or all of the few things I had in mind. For example, whether or not churches should officiate marriages of their gay members, or whether one should support the expansion or restriction of abortion rights. The Catholic church, in particular, was for a while not too keen on the use of condoms, because it meant that people were having sex for reasons other than procreation. Is there a wide range of opinions at CCF, or are these kinds of topics things that you try to talk about and hash out what you think is right based on the Bible, and whatever other personal senses of morality that you have?

**Hu:** I can start, just because I think I come from a vantage point where I wasn't always a Christian. I wasn't raised in a Christian household; I wasn't raised in a church setting. For me, faith is something incredibly personal, and I think it's easy to see the Bible as a set of guidelines, but in my own personal journey it's really been relationship-emphasis versus religion-emphasis. I think there are problems with churches around the world, and part of that is a historic relic as well. For me, coming to CCF, as well as in my own experience, the focus wasn't on the political or the very pressing issues in our society today, but rather a kind of day to day personal growth. I think, for me, what's most important right now is having an understanding

of what faith means and what the narrative presented in the Bible means and its significance. So the Bible itself is this complex literary work, and it encompasses this narrative and this holistic story of personal salvation. For me that is so significant often times it overshadows the pressing issues but they're not like the center of the story.

**Davis:** For me, as Christians, Christianity or God is the reason why we have morals and why those are important. We do derive our idea of what's right and wrong from the Bible.

**Hu:** The thing about that, though, is the Bible isn't meant to be taken literally because of its literary structure. There's narrative and there's poetry, which is very clearly not meant to be taken literally, and there's prose in the form of letters and instructions. I think, as a person, I'm really limited in saying what is right and wrong, saying what is good and what should be done. It's always this constant journey of study and prayer and trying to understand what direction to go in.

**Davis:** I think that's an important point about not taking every single thing in the Bible as if it were a list of rules.

**Hu:** It needs to be part of a bigger structure. I think what Christians often do is pinpoint certain sentences and try to extrapolate from them, but I think it's really important to see it as one holistic narrative.

**Davis:** With that said, I think that personally — and I know this applies to other people in CCF as well — I do have opinions that don't align with general political views, so in those cases I do get my idea of what's right and what's wrong from the Bible.

**Roberson:** Thanks for your thoughtful answers. There are some things in the Bible, though I haven't studied it extensively, that really resonate with me and other people who are not necessarily believers. We see some ideas expressed and think "this is an idea that that I strongly agree with," in particular lessons about taking care of your neighbors and people in general. I have a couple quotes I'd like to share as examples. In Leviticus 25:35-38: "If your brother becomes poor and cannot maintain himself with you, you shall support him as though he were a stranger and a sojourner, and he shall live with you. Take no interest from him or profit, but fear your God, that your brother may live beside you. You shall

not lend him your money at interest, nor give him your food for profit." Another snippet, in 2 Corinthians 8:13-15: "For I do not mean that others should be eased and that you burdened, but that as a matter of fairness your abundance at the present time should supply their need, so that their abundance may supply your need, that there may be fairness. As it is written, 'Whoever gathered much had nothing left over, and whoever gathered little had no lack.'" These ideas about equality really speak to me. In 2016, Pope Francis said, "It is the communists who think like Christians. Christ spoke of a society where the poor, the weak and the marginalized have the right to decide." How do these sentiments and your faiths more generally tie into your idea of what the perfect world looks like, how you want society to be and how to move it in that direction?

**Davis:** "Perfect world," that's a hard question.

**Hu:** I was an atheist and then I came to this encounter, and afterwards, it was like my worldview had changed completely. Something really radical about that is the perspective that we are not of this world, that there are problems that have been here since the dawn of Homo sapiens sapiens that have been deep-rooted issues ever since the inception of society. I don't personally think that they're addressable. Simply looking at the range of moral standards that humans have on Earth, I think that's not something that we as people can reconcile. It's a really good question, but not something that directly applies to me as a believer because I do not believe in a perfect world. Not on Earth.

**Davis:** Okay, perfect world, I guess all I can say is that there's this one verse in the Bible that says all of the rules of the Bible can be summed up as love God and love your neighbor. So I guess in a perfect world, people would do those things.

**Hu:** Everything is rooted from that selfless love.

**Roberson:** I think maybe "perfect world" was a bit too strongly worded but —

**Hu:** Like how society should be?

**Roberson:** Not necessarily "should be" but like about problems in society that exist, and not necessarily ways to fix them but agreeing that these are problems. Just to

throw some out there: the fact that there are something like six times as many empty houses in America than there are unhoused people, the fact that enough food is produced to feed 10 billion people and end worldwide hunger but so much is thrown away and the distribution of the food is a problem ....

**Hu:** I kind of see what you're saying. The person of Jesus Christ embodies this kind of "agape" love, which is unlike the "eros" romantic love, the "storge" familial love, or the "philia" intellectual love. This kind of love is just selfless. It's why he reached out to the poor, to those cast aside. I think that there are all these verses in the Bible that emphasize that kind of love as a foundation, as the driving force behind everything that we do. I think if that kind of love can motivate each and every one of us then these problems wouldn't exist.

**Roberson:** I think I definitely agree with you there. Love for humanity or selfless love I think would go a long way towards fixing a lot of the world's problems.

**Davis:** Can I ask you a question?

**Roberson:** Yes!

**Davis:** Okay, you were saying how some of those verses really resonated with you about selfless love and caring for humanity. What's your motivation, or why do you think it's important to care for humanity? What's the logical basis behind it?

**Roberson:** I'm not sure exactly where that comes from. I think there's something inside of me that says "this is wrong" when I see society being unfair. I don't know if I have a distinct logical basis for that, like I know that you mentioned that the Bible is a basis for a lot of your beliefs on what is right and wrong. I think situations of inequality that I think are wrong are when people are being exploited. I don't know if I can say this another way than it just feels wrong. I don't know if I have a specific basis for that, but I still feel strongly about equality.

**Davis:** Thanks!

**Roberson:** One last question before I'm almost done with you: You mentioned that CCF has events where you talk about the interplay between science and faith. How does your faith interact with the science that you do?

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# ANNOUNCEMENTS

THE CALIFORNIA TECH

## Conversation with the Caltech Christian Fellowship

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**Davis:** I study Electrical Engineering and honestly it doesn't really. Okay one thing, so I believe that God created the universe, so when I see beauty in equations or things like that, then I'm like wow that's really cool, but that's about it for me.

**Hu:** When I was an atheist, I watched this film about Newton and the narrator specifically emphasized that he, more so than science, was even more interested in doctrine. Everything scientific that he did was based off of this religious motivation. I didn't really understand that. When I became a believer, part of my motivation to come to Tech was to be able to explore science in a holistic manner so I can unravel God's design, but I can't exactly say that's happening. For me, it isn't science but literature where I would go as far as to say that I feel God's presence. When it comes to writing it's like the words surface and it's kind of like how one would speak of the Muse: some sort of creative communication there that is also, in a sense, unravelling God's design.

**Roberson:** Personally, I was raised, not very strictly, as a Hindu, and I think my beliefs now can be best described as vaguely Hindu agnostic, but I still probably believe that there's some

sort of God. You mentioned seeing beauty in equations or in the natural world, I think that's also something that I see. It feels touching almost that something so beautiful, so cool exists, and that I can experience it.

So to wrap things up, do you have anything else you want to say to the readers of the Tech?

**Davis:** Thanks to you! This is a neat opportunity.

**Hu:** This was really impromptu and that was really neat I think.

**Davis:** These kinds of discussions don't come up very often at all.

**Hu:** I think we all want to stay open-minded and interact with all kinds of perspectives and really earnestly convey what we believe.

**Roberson:** I hope I've given you the opportunity to do that.

**Hu:** Yeah!

**Roberson:** Thank you so much for taking the time from your busy sandwich-delivering schedule to give me some words.

## Correction to "ASCIT's Hot New BoD"

In an April 30 article, the California Tech erroneously reported the name of the new ARC chair. She is Erika Salzman, not Erika Salzmann.

## Upcoming Events

EDITORS-IN-CHIEF

The Upcoming Events column serves to inform students of upcoming events. The list is compiled by the Editors-in-Chief from information available around campus.

### Huntington Hospital Blood Drive

Tuesday, May 8th | 8 AM - 4:30 PM | Avery Dining Hall | Huntington Hospital

Help Huntington Hospital by donating blood Tuesday or Wednesday at Moore Walk. Look for their large RV. Walk-ins welcome.

### Coffee & Career

Tuesday, May 8th | 3:30 PM | Red Door Cafe

Are you a movie nerd? Do you want to find out what a film scientist does?

Join Coffee & Career for an informal coffee hour chat with our guest, Nafees Bin Zafar, a visual effects engineer working in film. Nafees develops new types of visual effects and software for the film industry. He has worked in engineering and management roles at Digital Domain, and at DreamWorks Animation.

**Emotional Well-Being Workshop for Students: Stress Management**

Wednesday, May 9th | 12 PM | Avery Library

On May 9th at noon, Dr. Lauren Stevenson will talk about simple and effective stress management tools that you can use starting immediately. This workshop is part of the counseling center's Emotional Well-Being Workshop Series, and is open to all graduate and undergraduate students. Free lunch is provided on a first-come, first-served basis. Come join us!

### Caltech Wellness Day

Thursday, May 10th | 8 AM - 2 PM | Beckman Institute

The First Caltech Wellness Day will offer many wellness activities!

- Free Biometric Screenings
- Wellness Related Vendors
- Chair Massage
- Meditation
- Aromatherapeutic Yoga
- Tai Chi
- Stress Relief
- Health Shakes Demo & More

### Kaiser Permanente Mobile Health Vehicle

Thursday, May 10th | 9 AM - 3:30 PM | Beckman Institute

Get on a roll with your health!



This week's recommended Tech usage after reading was brought to you by a dedicated reader. Photo courtesy of Anne Dorsey.

## ASCIT Minutes

Meetings are every week in SAC 13

### ASCIT Board of Directors Meeting

Minutes for May 5, 2018. Taken by Dana He.

**Officers Present:** Sakthi Vetrivel, Erika Salzman, Varun Shanker, Alice Zhai, Dana He, Rachel Sun

**Guests:**

**Call to Order:** 9:18 pm

### President's Report (Sakthi):

- ACRL had meeting. Minutes posted online. Talking about new Rotation system that's not gameable and can be completely transparent. Sarah has been running all sorts of simulations to try to come up with an objective sorting algorithm. Next report comes out fairly soon. If any questions, contact anyone on the ACRL.
- New ASCIT Secretary: Rachel Sun.

### Officer's Reports:

#### V.P. of Academic Affairs (Kavya):

- ASCIT Teaching Awards deadline is next Sunday.

#### V.P. of Non-Academic Affairs (Sarah):

- Finished two versions of convex penalty algorithm.
- IHC and ACRL will be holding office hours sometime soon.
- New Rotation rules will be released next week.

#### Director of Operations (Sara):

- Not in attendance.

#### Treasurer (Varun):

- Nothing to report.

#### Social Director (Alice):

- Sent out survey about ASCIT events people like. A lot of people want Big I. Will talk to Sarah about it.
- Will do Huntington Gardens tickets this Saturday.

#### Secretary (Dana):

- Bylaws have been changed on Donut.

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:** 9:33 pm

## ARC Minutes

Meetings are every week in SAC 13

[No meeting this week due to midterms]

**Present:** N/A

### Announcements

[No meeting this week.]

### Programming

**ASCIT Teaching Awards:** nomination period has started! If your nominee wins, you are invited to the Athenaeum awards banquet (date TBA).

We have course compliments at arc.caltech.edu on a rolling basis -- submit a compliment to receive a free lunch with a professor!

The ARC website at arc.caltech.edu has more information about what the ARC does if you are interested. We meet every Sunday at 11am in SACB122 and our meetings are open to everyone! If you have any questions, please feel free to email ksreedha@caltech.edu.

# ADVERTISEMENTS

THE CALIFORNIA TECH

MAY 7, 2018

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## Emotional Intelligence Toolkit

### EMOTIONAL AWARENESS

Get better at knowing what you're feeling, and see how your thoughts and feelings affect each other. **April 16 & 23**

### OPEN-MINDEDNESS

Learn how to be more flexible in the way you see the world. **April 30 & May 7**

### FACING FEAR

Learn how to hang in there with difficult situations and emotions without having to avoid them. **May 14 & 21**

*3 modules, 2 sessions each  
attend one module, or all three!*

**Mondays, 4-5pm  
Avery Library**



counseling.caltech.edu

## EMOTIONAL WELLBEING SERIES 2018

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EVERY LIBRARY @12PM

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COUNSELING SERVICES

**MAY 9**

STRESS  
MANAGEMENT

**MAY 16**

MINDFULNESS

oh god how did  
i get here i am  
not good at  
computer

are you good at computer?  
join the tech!

## SLEEP BETTER.

### ◆ COGNITIVE-BEHAVIORAL THERAPY FOR INSOMNIA ◆

A 4-WEEK GROUP  
4:00 - 5:00

TUESDAYS  
MAY 1, 8, 15, 22

PRE-SCREENING REQUIRED  
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## LET'S TALK!

CONFIDENTIAL, BRIEF CHATS  
WITH COUNSELING SERVICES  
STAFF MEMBERS

- ASK QUESTIONS
- TROUBLESHOOT CONCERN
- FIND ADVOCACY OPPORTUNITIES
- LEARN ABOUT RESOURCES

NO APPOINTMENT NEEDED!

FRI MAY 4  
12-1:30PM  
156 CRELLIN

MON MAY 14  
10:30AM - 12PM  
300 BROAD

WED MAY 23  
12:30-2PM  
243 ANNENBERG

MON MAY 7  
10-11:30AM  
243 ANNENBERG

THURS MAY 17  
12:30-2PM  
256 S. MUDD

TUES MAY 29  
3-4:30PM  
256 S. MUDD

FRI MAY 11  
2-3:30PM  
156 CRELLIN

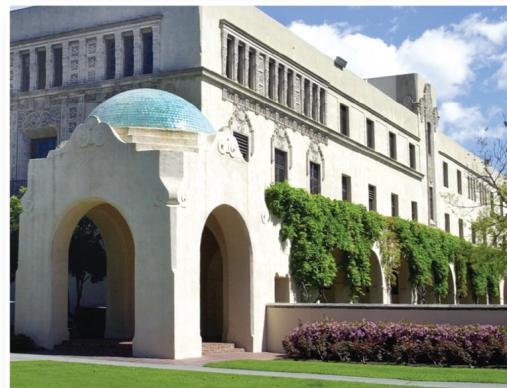
MON MAY 21  
3:30-5PM  
300 BROAD

WED MAY 30  
11:30AM-1PM  
243 ANNENBERG

*Let's Talk is not a substitute for formal counseling and is not considered mental health treatment. Let's Talk staff can listen to your specific concerns, help you problem-solve, and connect you with on and off-campus resources that could be helpful to you.*

MENTAL HEALTH AWARENESS MONTH 2018

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Must qualify for CEFCU membership to join. Minimum \$5 deposit and one-time \$5 membership fee due upon opening any CEFCU account. Federally insured by NCUA.

# ANNOUNCEMENTS

THE CALIFORNIA TECH

## Upcoming

*Continued from page 2*

Kaiser mobile health vehicle is coming to you.

**Gaypril STEMinar: Dr. Shana Goffredi**

Thursday, May 10th | 9 AM - 3:30 PM | Beckman Institute

Please help us welcome Dr. Shana Goffredi in a discussion of her personal, academic and professional experiences. Dr. Goffredi is an Associate Professor of Biology at Occidental College. Dr. Goffredi's research interests concern beneficial symbiotic partnerships between bacteria and invertebrates. Dr. Goffredi's funding has come from the National Science Foundation, and she has published in journals such as *Frontiers in Microbiology*,

## Events

Environmental Microbiology and Science. Her B.S. is in Biology/Marine Science from the Univ. of San Diego and her Ph.D. is in Ecology, Evolution, and Marine Biology from UC Santa Barbara. RSVP encouraged: <http://diversitycenter.caltech.edu/RSPV>

**Caltech Chamber Music Ensembles: Mother's Day Concert**

Sunday, May 13th | 3:30 PM | Dabney Hall, Lounge

Maia Jasper White, Conductor. Enjoy works by Beethoven, Faure, Brahms, Vivaldi, Mozart, and many more performed by Caltech's brilliant and multi-talented students.

**Dish & Discuss #16: World Wide-Web**

Monday, May 14th | 12 PM | Avery Dining Hall

The theme for Dish & Discuss during Third Term is "Explore the World."

What does it mean to feel safe in the digital age? Join the CCD as we discuss safety strategies and how the world is impacted by online interconnections.

The Caltech/JPL Community is invited for a workshop series (lunch is provided!) on a variety of topics intended to increase cultural intelligence, engage critical discourse, and provide an inclusive space for the exploration of diverse identities, thoughts, and interests.

**Book Lovers' Soiree**

Monday, May 14th | 7:30 PM | Antheneum, Rastskellar

*The Room* by Jonas Karlsson.

The evening book group meets on the second Monday of the month. We gather for a casual, informal discussion of the selected book from 7:30 to 9:00 pm at the Rathal Fresco during the summer months or the Rathskellar during the school year. Feel free to join us on a regular basis or just drop in occasionally for a particular book discussion.

Contact Sonya Wierman [sonyawierman@gmail.com](mailto:sonyawierman@gmail.com)

**MACH 33 "Lie After Lie After Lie"**

Monday, May 14th | 8 PM | Ramo Auditorium

In the late 1840s, before the age of Pasteur and Lister and the knowledge of sepsis, a Hungarian obstetrician named Ignaz Semmelweis found that the simple expedient of hand-washing could

help physicians reduce maternal death by up to 90 percent. His discovery was rejected by his superiors — indeed by the whole western world — and he went mad. *Lie After Lie After Lie* is about science denial, male power over women's bodies, and the backwardness of living in a post-truth world.

Tickets are \$15 plus a \$3 online ticketing fee. Tickets for Pasadena Playhouse members and for students are \$10. The series of all three MACH 33 plays is \$40 (or \$25 for Playhouse members and students). Special-pricing tickets are available by calling the Pasadena Playhouse at 626-356-7529.

## AMAZON SKYMALL



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<https://goo.gl/forms/WzRUSDwFKQKaPJHh1>

## Baseball closes season with Chicago trip

GOCALTECH.COM  
Actual Sports Content Editor

CHICAGO (Apr. 29, 2018) – The Caltech Baseball team ended the 2018 season on the road at the University of Chicago where the Beavers made an especially big push to win their fifth game in the first game of Saturday's doubleheader.

**Saturday Game 1:**  
U of Chicago 7, Caltech 4

The Beavers came together for a three-run sixth inning to force the home team into a save situation. Junior Connor Moffatt, Caltech's best offensive player in the series opened the inning with a double into center field before freshman outfielder Mitchell Watson matched Moffatt for a double of his own into the outfield to bring the first run across. Junior catcher Mark Burleson then scored Watson on a sacrifice fly before senior first baseman David Watson reached singled and snagged an extra base on a misplayed ball. Watson eventually came around for the Beavers' third run thanks to a base knock from freshman Dillon Holder. Both of Saturday's games spanned seven innings, however and with the visiting team peaking late one has to wonder how a full nine-inning game would have played out.

Four different players logged at least two hits as Caltech outhit Chicago, 11-7. Junior Jonah Krop held the mound for his final start of the season and went six innings with six punch outs. The junior successfully dropped his ERA for a third year in a row to lead the team's crop of starters and upped his

strikeouts per nine by nearly two whiffs per game.

**Saturday Game 2:**  
**U of Chicago 15, Caltech 1**

Caltech's lone run came in the fourth inning when Mitchell Watson brought senior shortstop Chris McCarren home from third base. McCarren, along with sophomore Cortland Perry accrued the Beavers' only two hits of the game.

**Sunday:**  
U of Chicago 11, Caltech 3

The Caltech offense had a much better go of it in Sunday's game, picking up three hits as a team over the only nine-inning game of the series. Connor Moffatt found his form from the earlier game on Saturday and cracked a double down the left field line in the fifth inning to score infielders Dillon Holder and Cortland Perry. Thanks to his RBI double, Moffatt will go down as the team leader in RBI's this season.

Perry, meanwhile took the mound for Caltech and between the pitcher's mound and batter's box had the best all-around game of any Beaver. He led the team with two hits and even stole his seventh base of the season. On the mound, he struck out four batters and pitched all eight innings. The Beavers' other extra-base hit came from Chris McCarren, who doubled to right field in the final at-bat of his Caltech career.

Head Coach Matthew Mark and the Beavers will lose three seniors but return all of their starting pitchers and outfielders for 2019.



I do believe it would have improved the Beavers' score if their hitters actually kept their eyes open....  
-gocaltech.com

## SCORES

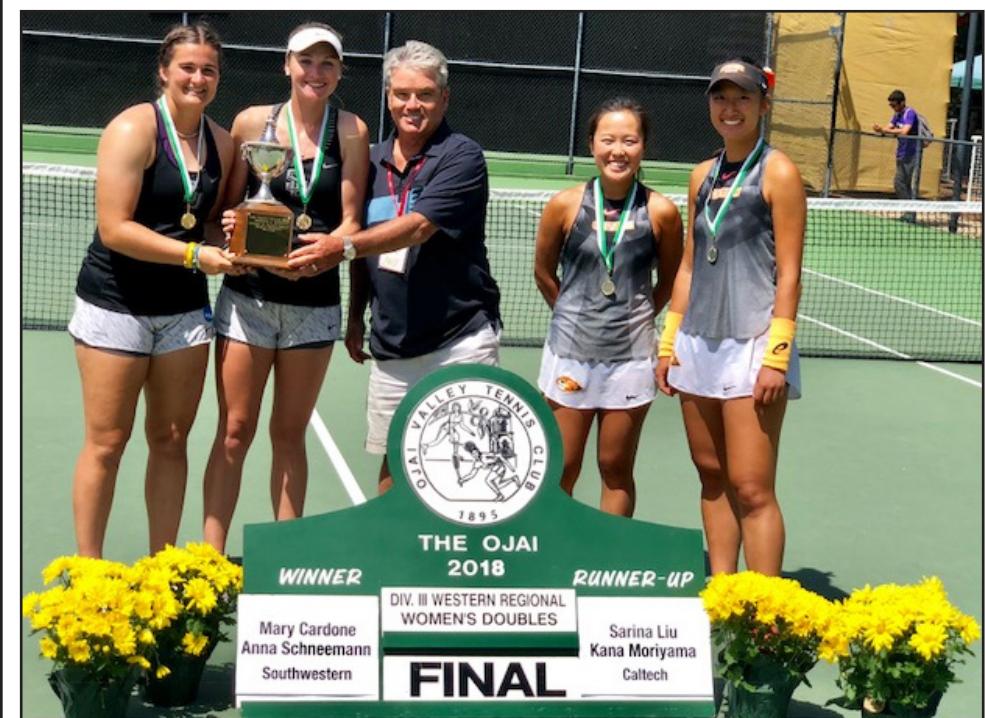
May 4, 2018

Men's Tennis at Pomona-Pitzer

L 1-5

L 1-15

## Women's doubles reaches final, Wang wins backdraw at Ojai



Ah yes, the awkward trophy hold pose - a classic in sports photography.

-gocaltech.com

GOCALTECH.COM  
Actual Sports Content Editor

VENTURA, Calif. (Apr. 29, 2018) – The Caltech women's tennis team saw success in both the singles and doubles draws at the 118th Annual Ojai Valley Tournament this past weekend. The Beavers' top doubles team headlined the weekend with an appearance in the women's doubles championship.

Junior Kana Moriyama and freshman Sarina Liu entered the women's doubles tournament as the second-seeded team and met expectations with Friday and Saturday victories to set up a Sunday showdown with the top-seeded team from Southwestern University. According to the latest rankings from the Intercollegiate Tennis Association, Liu and Moriyama are the region's 14th-ranked team while the team of Schneemann and Cardone from Southwestern are ranked ninth. The Caltech duo came up short in the final, but used the weekend to score two victories over teams from the University of California Santa Cruz and SCIAC foe

Men's tennis up in nation

GOCALTECH.COM  
Actual Sports Content Editor

PASADENA (Apr. 26, 2018) – The Caltech men's tennis team once again moved to its highest national ranking of all time according to the latest set of rankings from the Intercollegiate Tennis Association.

A strong finish to the regular season has the Beavers up to 33rd in the nation. The Beavers have along the way locked up the third-seed in the SCIAC playoffs and broken a handful of individual records. Freshman James Wei became the winningest singles and doubles player ever when Caltech defeated California Lutheran University on Apr. 20. Classmate Varun Shanker combined with Wei on the doubles record, as the rookie duo has played every match together this year. Shanker and Wei are now each ranked 13th and 14th in the West region while the Beavers are now ranked ninth among 20 ranked teams.



I can't tell if he is more afraid of the ball coming at him or the spell he looks like he is casting.  
-gocaltech.com

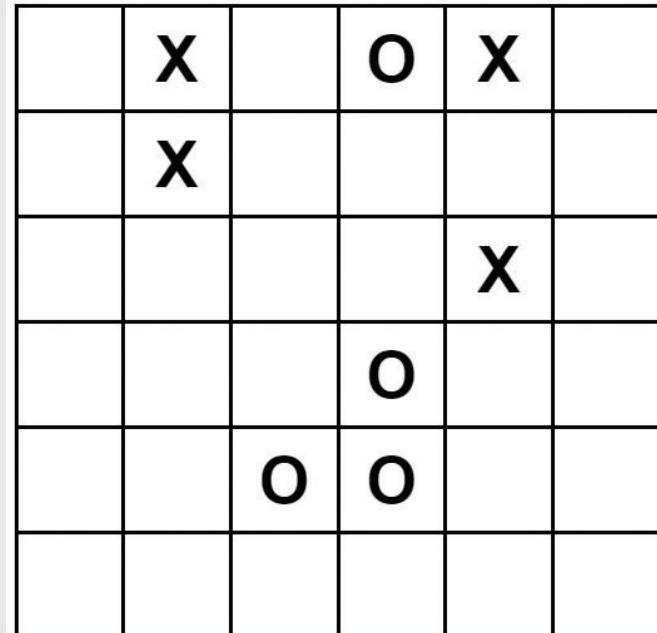
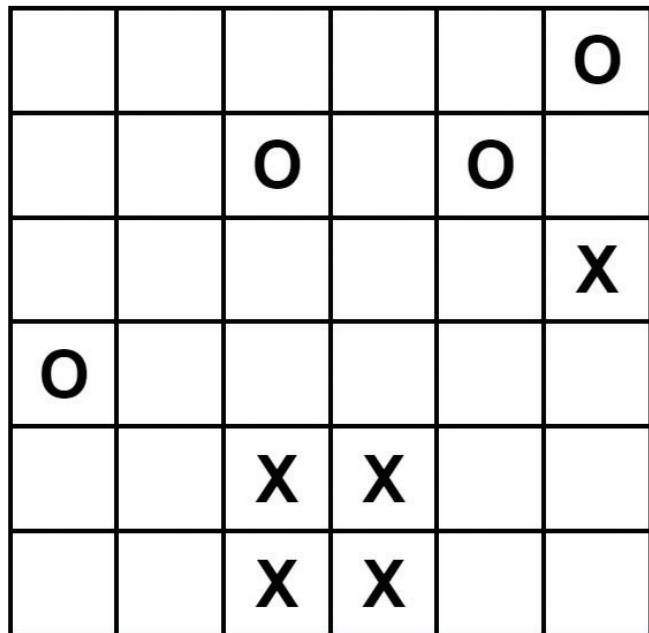
## Binario

Binario (Binox, Zinerio etc..) is a simple puzzle that requires the use of only two symbols.  
The rules are pretty simple:

1. The puzzle is filled with only with Xs and Os.
2. Horizontally and vertically, there can be no more than 2 of the same symbol sequentially.
3. There must be an equal number of Xs and Os in each row and column.
4. Each row must be unique. Each column must be unique.

As an aside, I learned about this puzzle from Glen George since the EE10b project this year is to program a handheld version.

Puzzles from krazydad.



## Plain Ol' Crossword

Just a simple plain old crossword on this page!  
Well, not the standard shape since it is a diamond, but the clues are all pretty straightforward.  
You even can see the shape of the crossword!

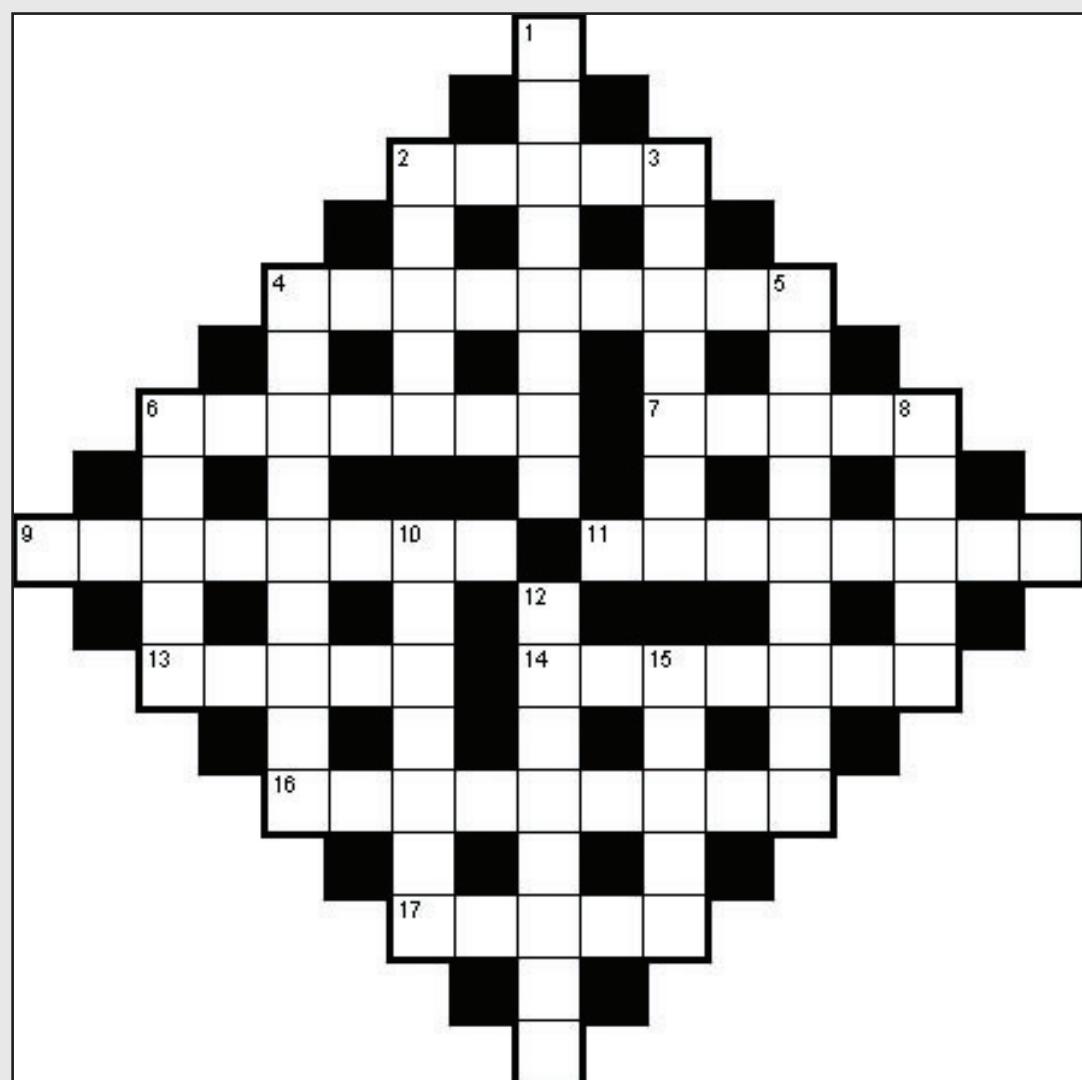
crossword from <http://www.puzzlechoice.com>

### Across

2. Repulse (5)
4. Prolonged (9)
6. Deadlock (7)
7. Tripod (5)
9. Answer (8)
11. Rare (8)
13. Additional (5)
14. Abjure (7)
16. Unwilling (9)
17. Shinbone (5)

### Down

1. Character set (8)
2. Hazards (5)
3. Lamp (7)
4. Protagonist (9)
5. Discordant (9)
6. Publication (5)
8. Demarcation (5)
10. Type of onion (7)
12. Melting pot (8)
15. Crown-like headdress (5)



### Random Fact:

Humans have fewer chromosomes than potatoes.

# PUZZLES

THE CALIFORNIA TECH

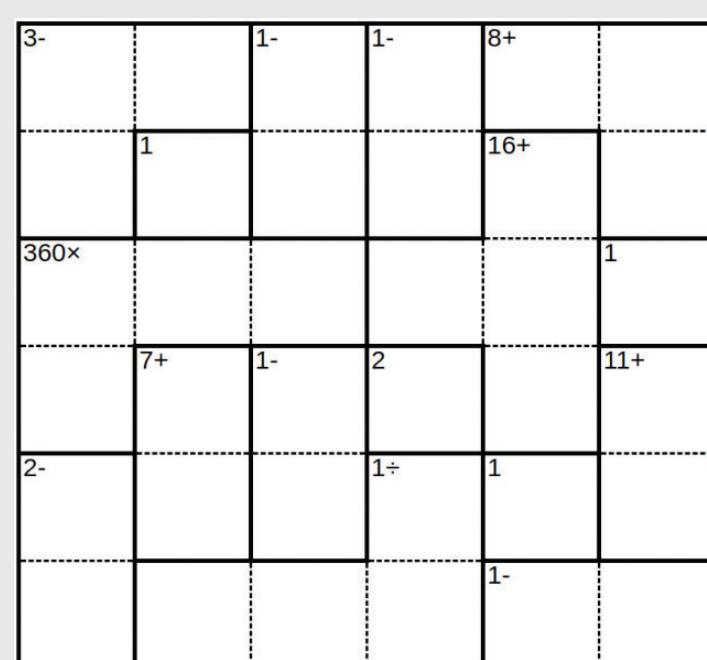
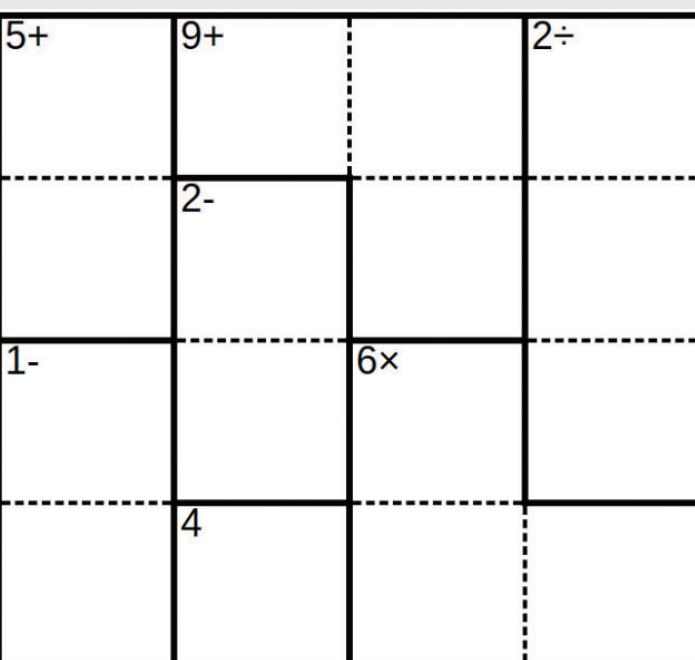
MAY 7, 2018

7

## Mathdoku (KenKen®)

How to play Mathdoku (KenKen®):

We have both a 4x4 and a 6x6 this time!



## Diagramless Crossword

The diagramless crossword is similar to a standard US style crossword except in this puzzle there are five main differences:

1. You start with an empty 17x17 grid and are required to block out the unused cells yourself.
2. The clue numbers in the upper left corners are not filled in, so you have to figure out which cells are the correct ones and write in the clue numbers in small print.
3. The word lengths are not given, but all are at least three letters long.
4. The completed grid will form a pattern with rotational symmetry.
5. Every white cell forms part of an Across and a Down answer.

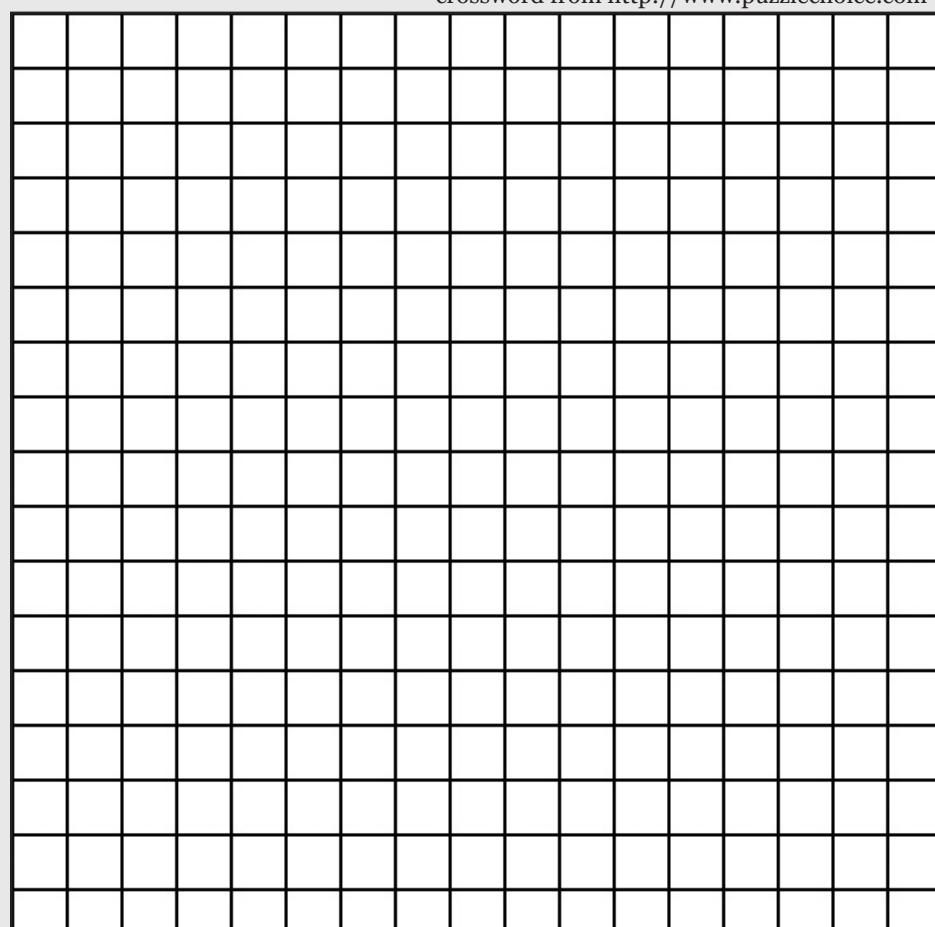
I've really enjoyed seeing people do these puzzles!

Hint: 1 Across starts at Row 1, Column 11

### Across

1. Subdivision of a play
  4. Once more
  6. Various
  9. Location
  10. Stepped
  12. Leather used to sharpen razors
  13. Not at any time
  15. Prairie wolf
  17. Single person flight
  18. Golf term
  19. Cover
  20. Thin strip of wood or metal
  21. A paying taxi passenger
  22. Gash
  24. Vine with evergreen leaves
  25. Currency of Tunisia
  26. Sloping trough
  28. For each
  29. Cork float used in fishing
  31. Askew
  32. Habitation for bees
  33. Metal-bearing mineral
  35. Sunburn
  36. At the peak
37. Essay
  39. Machine
  41. Head of an abbey
  42. Post at the top or bottom of a flight of stairs
  44. Incisive
  45. Transfer of something from one person to another
  47. Jockey
  48. Baby bed
  18. Cooking utensil
  21. Military strength
  23. Foil
  25. Dedicated
  27. Large vase
  28. Mountaineer's spike
  30. Surf
  32. Performer who overacts
  34. Glowing wood or coal
  38. Be obedient to
  40. Something surviving the past
  43. Famous beach and resort near Venice
  46. Examine carefully

crossword from <http://www.puzzlechoice.com>



**The Necessity of the Superbug**

By People for the Ethical Treatment of People (Except Everyone Valuing Ethics in Science)

"Superbug." A scary word indeed! Images flash through our minds of being bed-ridden in the hospital, our body dying to some totally untreatable variant of ... the common cold. Old, 'easy' diseases turned into first world killers through wasteful antibiotics and merciless evolutionary pressure.

What if it turned out that we needed these friendly fellows? What if they could be used to accomplish a great good in the world? Currently 2 out of every 3 farm animals in the world are raised in factory farms. There is little argument to be made that these animals aren't miserable. Their brief hormone-accelerated development cycles are often spent entirely unable to turn around, or sometimes move at all. The environmental impact is also far from negligible: factory farms are already responsible for rendering 35,000 miles of US rivers polluted to the point that they cannot be used for drinking water anymore.

I want you to imagine a future where we could end all of this. One well-designed plague, resistant to all FDA approved farm antibiotics, and with enough specificity in its targets that it only affects cows. A disease that weakens heart muscle until the animal passes out and dies painlessly. And then another disease, maybe, for chickens; hogs; rabbits; sheep. The meat-peddling agribusiness industry would collapse due to loss of "product". People would refuse to buy what even was available, due to fears of infection. In time a cure would come out, but do you really think they could stop the process? So much suffering could be stopped. So much energy, water, land saved. I know you think it's wrong anyway, I do too. But can you convincingly say why you think it's wrong?

## Answers to Puzzles and Crossword:

<http://bit.ly/2Imd8xM>



Sophie Piao (b. 1997)  
inb4 "is this loss?", 2018  
Digital.

We are always accepting submissions  
for comics, and will pay you.

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**Letters from the Editors-in-Chief**

Amrita Rhoads: Press "f" to pay respects.

Sophie Piao: f

Milan Roberson: f

Dan Xu: f

This week's recommended Tech usage after reading is: when kitty has an oopsies.

**The California Tech**

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