

A Trumpian mess - a review of the second debate

RAMYA DESHPANDE
Page Editor

"Because you'd be in jail," smirked the same man who once proclaimed his endless wit in avoiding taxes, as he interrupted a presidential candidate with 30 years in public service.

"I am very embarrassed by it and I hate it, but it's locker room talk and it's one of those things," he said, attempting to explain away sexual assault.

"Have great respect for women. Nobody has more respect for women than I do", he continued, standing next to a woman who has devoted her career to equal pay, reproductive rights and family leave.

It's difficult to digest the reality. This was the second presidential debate for the highest office of the United States and it showed us how horrifically unfit a particular candidate is for the presidency.

As Morgan Kousser, Professor of History and Social Science here at Caltech, puts it, "I was beginning to wonder if I'd just romanticized previous campaigns; misremembered what had gone on, when I happened upon rebroadcasts of previous debates on CSPAN. But in fact, every presidential debate before this year was much better. Richard Nixon and Jack Kennedy were so much better prepared than Trump is, and they discussed the particulars of each other's programs and their own with considerable precision. Even Reagan was infinitely more serious and, I thought that I'd never say this, more acute about policy than Donald Trump is".

Let me paint the picture: the Trump campaign's guests included three women who have accused President Bill Clinton of sexual assault - a base attempt to attack a female candidate through her husband - while Clinton invited



Avery students gather to watch the second presidential debate.

Photo Courtesy of Antonio Rangel. Avery Faculty-in-Residence

News briefs from around the globe

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

U.S. hostages freed in Yemen

2 U.S. citizens held by Houthi rebels freed and flown to Oman [BBC]

New York surgeons separate conjoined twins

16 hours of surgery later, the McDonald twins were separated at the head [BBC]

International community agrees to limit pollutants from ACs

170 countries will curb use of hydrofluorocarbons to combat global warming [TIME]

European probe nearing Mars landing

577 kg satellite has separated from its launcher and should land on Wednesday [BBC]

Giant panda believed to be oldest in captivity dies

38 year-old Jia Jia was put to sleep in Hong Kong after her condition worsened over the past few weeks [BBC]

Bridge collapses off Bali island in Indonesia

8 were killed and 30 others injured due to crowds on an old bridge in Bali [BBC]

Raging wildfire has destroyed 22 homes in Nevada

3400 acres of land have been affected by fire that 1000 firefighters are working to contain [CNN]

a woman with breast cancer, a member of the Little Rock Nine, and a woman whose daughter was born with hearing impairments to highlight the span of her political career. The first question of the debate asked the candidates if they felt they were modeling appropriate and positive behavior for today's youth. Clinton emphasized her message of unity, of working with every American and of a future for our children and grandchildren; Trump began by claiming he agreed with everything she said and then proceeded to criticize Obamacare and the Iran deal and expressing his wishes to improve "our inner cities for the African-American citizens that are so great". Amidst threatening to send Clinton to jail, accusing the Clinton campaign of starting the birther issue - "You're the one that sent the pictures around, your campaign sent the pictures around with President Obama in a certain garb, that was long before I was ever involved. So you actually owe an apology" - and discussing his various political blunders, the American electorate received a shallow coverage of issues. As Professor Kousser points out: "Every effort by a moderator or a reporter or an audience member or Hillary to get below the most superficial level on any policy topic has been unsuccessful, and so much of the campaign is about Trump's personal qualities that everything else gets squeezed out".

Rangel), I couldn't help but feel disillusioned by the predominantly liberal Caltech crowd: everyone around me scoffed at Trump's gaucheries while applauding Clinton's policy points.

Trump couldn't possibly get elected, I thought to myself. Indeed, we've become accustomed to collectively shaking our heads and rolling our eyes at him and assuming that everyone else feels the same. Yet, the reality is that 41% of likely voters still support him, 14% of voters felt they were more likely to support him after the debate and more Independents and white voters favor him over Clinton [NBC/WSJ poll]. Yes, there exists a small, frightening possibility that Donald J. Trump could be the next Commander-in-Chief of the United States. I say this as a concerned citizen who cannot vote in this election: the blame will rest squarely on our shoulders if this undeserving candidate is elected. You, as an empowered voter, have the ultimate power to stop it; you can vote and you can influence the voter population. Because if you don't, we will forever be labelled as the era which chose a politically incompetent, racist businessman over a former United States senator, politically active First Lady and Secretary of State.

Watching the debate (generously hosted by Avery's Faculty-in-Residence, Professor Antonio

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Caltech Y Column

CALTECH Y

The Caltech Y Column serves to inform students of upcoming events and volunteer opportunities. The list is compiled by Katherine Guo from information given by the Caltech Y and its student leaders.

Founded by students in 1916, the Y was organized to provide extracurricular activities planned and implemented by students as an opportunity to learn leadership skills and discover themselves. The mission of today's Y remains the same—to provide opportunities that will prepare students to become engaged, responsible citizens of the world. The Y seeks to broaden students' worldviews, raise social, ethical, and cultural awareness through teamwork, community engagement, activism, and leadership. More information about the Caltech Y and its programs can be found at <https://caltechy.org>. The office is located at 505 S. Wilson Avenue.

Ongoing and past programs hosted by the Caltech Y:

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

Make-A-Difference Day: Hillside 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. Union Station Adult Center

Saturday | October 15th | 5:15 - 9:15 PM | Pasadena

Prepare and serve dinner to the residents at Union Station Adult Center in Pasadena. Food and materials are provided. The Adult Center provides shelter, meals and supportive services for more than 150 homeless men and women each year. For more info and to RSVP email aychen@caltech.edu.

2. Presidential Debate Viewing

Wednesday | October 19th | 6:00 - 7:30 PM | Caltech Y - 505 S. Wilson Ave

Join us to watch and discuss the final televised debate between Presidential Candidates Donald Trump and Hillary Clinton, moderated by Fox News Sunday Host Chris Wallace. Why watch alone when you can hang out with others and enjoy together? Informal gathering. Pizza will be provided.

RSVP Required: <https://docs.google.com/forms/d/e/1FAIpQLSf93uEuW-r8XgUFhu8kFZ6B3d7EwhjCBtofrg1axu05k4qxMQ/viewform>

3. Estimating the Impact of Voter ID Laws: Lunch Discussion with Professor Jonathan Katz

Lunch Discussion with Professor Jonathan Katz

Friday | October 21st | 12:00 - 1:30 PM | Spaces are limited, lunch provided

Join the Caltech Y Social Activism Speaker Series (SASS) for a lunchtime seminar with Professor Jonathan Katz, the Kay Sugahara Professor of Social Sciences and Statistics and Chair of the Division of the Humanities and Social Sciences at Caltech. Recently there have been a number of court cases concerning state's adoption of voter

identification requirements. Dr. Katz will discuss how to estimate the impact of these laws on turnout, particularly on minority as well as older voters. He will pay particular attention to the difficulties in using existing data to make reasonable estimates.

RSVP Required: <https://goo.gl/forms/4gRhP9yIgiSLHVan2>

4. Griffith Park Observatory - Caltech Y Explore LA Series

Saturday | October 22nd | 5:00 - 10:00 PM | Cost: \$15 | Transportation provided

Sign-up starting Thursday, Oct 13th at the Caltech Y at 10:00 AM

(Payment due at time of sign up)

Join the Caltech Y on a journey to the center of the universe through Griffith Observatory. It is Southern California's gateway to the cosmos! Visitors can look through telescopes, explore exhibits, see live shows in the Samuel Oschin Planetarium, and enjoy spectacular views of Los Angeles and the Hollywood Sign.

This offer is for students only; however, students purchasing tickets are permitted to purchase tickets for up to one guest each - and that guest can be a non-student. Explore LA is coordinated by the Caltech Y. The Caltech Y is located in the Tyson House 505 South Wilson (Bldg. 128).

5. The Big Bang Theory - Live TV Taping

Tuesday | November 15th | 5:00 - 11:30 PM (including travel) | Cost: \$7 | Burbank

Spaces Limited to Undergrads - first come, first served

Sign Up: <https://goo.gl/forms/r2UD9XcgTI6XtaIz2>

Are you interested in seeing a live taping of the Big Bang Theory? We are preparing to order tickets for Tuesday, November 15th. The taping lasts about 3hrs however the time including travel there, entrance, and travel back is estimated to be closer to 6 hours. Although the tickets are free, transportation is not included and so, The Caltech Y is partially subsidizing a bus. Questions can be forwarded to Damien Bérubé (dberube@caltech.edu) or Angelina Pan (apan@caltech.edu)

Please note: Tickets have not yet been acquired... we will use the sign up list in order to get the tickets... so if you sign up - then you must be prepared to show up: your ticket will bear your name! If you get a spot, we will contact you by October 24th and you will also be expected at that time to make your \$7 payment. As a celebration for the completion of midterms for freshmen, we will hold some prioritized tickets for them. Nevertheless, all members of the Caltech undergraduate community are welcome to attend as space allows.

6. Washington DC Science Policy Trip

December 13th - 17th | Washington DC

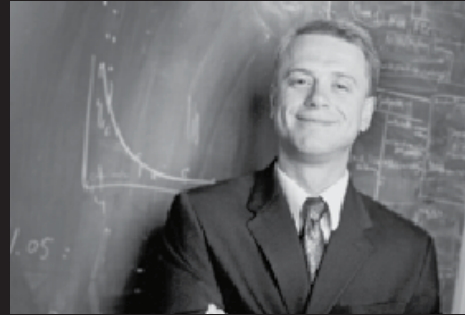
Join us for an exploration into Science Policy in the nation's capital! Our five day trip includes lodgings and most meals; flights - if you choose; educational discussion sessions, and of course the opportunity to see Washington, DC landmarks like the White House, the Memorials; Smithsonian Museums; the National Archives; and the Capital. Discussion leaders include those who have played a role in setting and implementing science policy for the United States including: Academics, Lobbyists,

Caltechlive!

EARNEST C. WATSON
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Wednesday, October 26, 2016 | 8 PM

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\$500 (with round trip flight to DC and back to LA)

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\$150 (no travel - join us in DC)

The Washington, DC Science Policy Trip is coordinated by the Caltech Y with generous support from the George Housner Fund. Questions and applications may be directed to caltechy@caltech.edu.

Visit: https://www.caltechy.org/programs_services/areas/dc/ for more info and applications (due by Tuesday, October 25th).

7. Hathaway Sycamores

Every Wednesday | 5:30 - 8:00 PM | Highland Park

Volunteer at Hathaway Sycamores, a group that supports local underprivileged but motivated high school students. There are a variety of ages and subjects being tutored. The service trip includes about an hour of travel time and 1.5 hours of tutoring. Transportation is included. For more info and to RSVP email Sherwood Richers at srichers@tapir.caltech.edu. Eligible for Federal Work Study.

Beyond the Y

1. SEPAC - Science and Engineering Policy at Caltech presents A Discussion with Dr. Elizabeth Bodine-Baron with RAND Corporation

Friday | October 14th | 9:00 - 10:00 AM | Gates Annex Library

Join SEPAC (Science and Engineering Policy at Caltech) for a discussion with Dr. Elizabeth Bodine-Baron. Elizabeth is a Caltech alum now working at RAND Corporation, a non-profit institution that helps improve policy and decision-making through research and analysis. Join us for a discussion on science policy, alternative careers, cybersecurity, and more!

Elizabeth Bodine-Baron is an engineer at the RAND Corporation specializing in complex networks and systems. Her research interests include network analysis and modeling for both domestic and national security issues. Recent work has included improving the Air Force's acquisition policy related to cybersecurity, studying the impact of cyber attacks on defense systems, and social network analysis for national security, intelligence, and health applications. She has recently led several projects involving social media for policy analysis, from using Twitter data to identify ISIS support and opposition networks to developing best practices for social media analysis. Prior to joining RAND, her research focused on the role of social networks in various engineering and economics problems, such as distributed search, matching markets, epidemic spread, and vaccination behavior. Bodine-Baron received a B.S. in electrical engineering and a B.A. in liberal arts from the University of Texas at Austin in 2006, and a Ph.D. in electrical engineering from Caltech in 2012.

RSVP at <https://goo.gl/forms/LvPO3uZp17jeobms2>

The City of Astronomy

LORI DAJOSE
Caltech Media Relations

This article is adapted from a story that was originally published online at caltech.edu.

Pasadena has a rich history of astronomy discoveries, from the exploration of planets at NASA's Jet Propulsion Laboratory (JPL), to the discovery of the universe's expansion at Mount Wilson Observatory, to determining the extragalactic distance scale of the universe at Carnegie Observatories. This year, 10 Pasadena-based scientific institutions and organizations have partnered to celebrate Pasadena as the "City of Astronomy" during Pasadena's first Astronomy Week from October 16–22.

"Royal Astronomer Martin Rees called Pasadena the center of 'the universe of astronomers' a generation ago," says Caltech president Thomas F. Rosenbaum, Sonja and William Davidow Presidential Chair and professor of physics. "Caltech is pleased to help build on this tradition and we are indebted to Mayor Terry Tornek for his leadership in making Astronomy Week a reality."

The institutions involved include Caltech, Carnegie Observatories, the Giant Magellan Telescope, IPAC at Caltech, NASA's JPL, Kidspace Children's Museum, Mount Wilson Observatory, Pasadena City College, The Planetary Society, and Thirty Meter Telescope. Caltech manages JPL for NASA.

For the past 100 years, Caltech has been a hub for astronomy. The university facilitated the telescopes at Mount Palomar and Owens Valley in California, the twin Keck telescopes in Hawaii, and is a founder in the efforts to build the Thirty Meter Telescope, astronomy's next-generation observatory. Also at Caltech, the Infrared Processing and Analysis Center (IPAC) was founded more than 25 years ago to support the US astronomers using space-based astronomy programs. IPAC currently manages science operations for NASA's Spitzer Space Telescope, an infrared observatory that studies everything from planets to distant galaxies. NuSTAR, a NASA X-ray telescope, is exploring black holes, young exploded stars and many other phenomena, and is led by

Fiona Harrison, the Benjamin M. Rosen Professor of Physics and Kent and Joyce Kresa Leadership Chair, Division of Physics, Mathematics and Astronomy at Caltech.

"Pasadena's concentration of astronomy facilities gives it a unique place in the world," says Gordon Squires, senior staff scientist with IPAC and coordinator of IPAC's involvement with Astronomy Week. "Institutions within Pasadena have developed, several times, the largest telescope in the world. Another interesting fact that many people don't know is that George Ellery Hale, a solar astronomer and one of the founders of Caltech, helped design the Pasadena Civic Center and City Hall, shaping and defining the character of our city. We are hoping that Pasadena Astronomy Week will be a place to tell these stories."

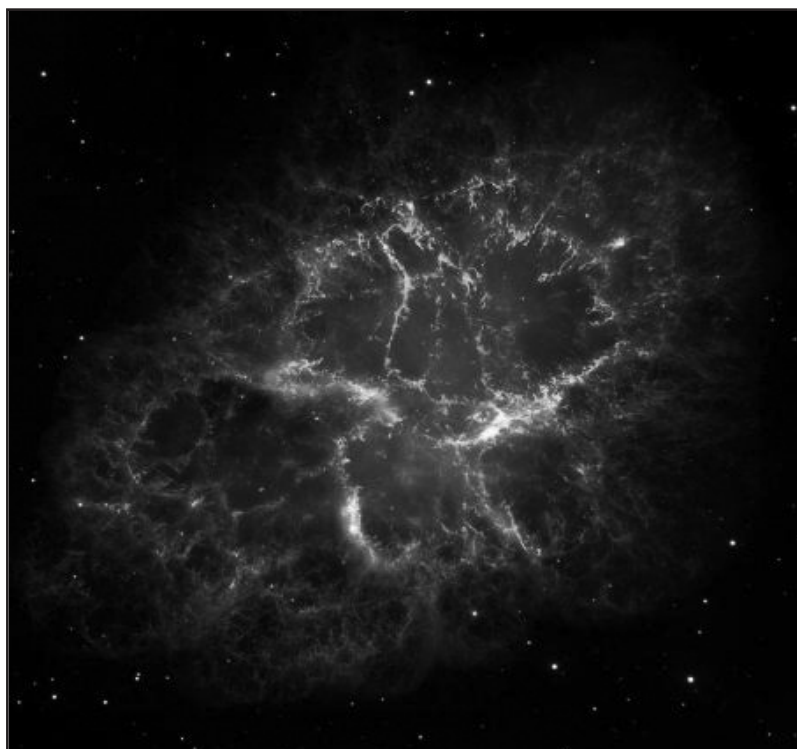
Pasadena Astronomy Week will begin with Carnegie Observatories' annual open house. Caltech will host three evenings of Astronomy on Tap—short talks, given by astronomers about general astronomy and astrophysics, at a bar in Old Town Pasadena called Der Wolfkopf. Astronomy on Tap was started this summer by the Caltech Astronomy Outreach group, led by NSF Postdoctoral Fellow Cameron Hummels. "Not only have Caltech scientists made seminal contributions to the field of astronomy, but we have worked extensively for public science education in the larger Los Angeles community with free public activities including lectures, stargazing, and discussions," Hummels says.

The week will also include stargazing opportunities at a Pasadena public elementary school and Mount Wilson, a public lecture at JPL, and the first Pasadena Astronomy Festival.

The week was chosen to coincide with the annual meeting of the Division of Planetary Sciences (DPS) of the American Astronomical Association, held in Pasadena this year. As part of Astronomy Week, DPS will host a free public talk and access to the conference's astronomy art exhibit.

"The DPS meeting is a major international astronomy conference. Its location in Pasadena this year is a great opportunity for partnership," says Squires.

A full list of events can be found here: <http://www.cityofastronomy.org/events/>



This image shows a composite view of the Crab nebula, an iconic supernova remnant in our Milky Way galaxy, as viewed by the Herschel Space Observatory and the Hubble Space Telescope. The image combines Hubble's view of the nebula at visible wavelengths, obtained using three different filters sensitive to the emission from oxygen and sulphur ions and is shown here in blue. Herschel's far-infrared image reveals the emission from dust in the nebula and is shown here in red.

Photo Courtesy of ESA/Herschel/PACS/MESSE Key Programme Supernova Remnant Team; NASA, ESA and Allison Loll/Jeff Hester (Arizona State University)

Building Blocks of Life's Building Blocks Come From Starlight

ELIZABETH LANDAU
Caltech Media Relations

This article is adapted from a story that was originally published online at caltech.edu.

Life exists in a myriad of wondrous forms, but if you break any organism down to its most basic parts, it's all the same stuff: carbon atoms connected to hydrogen, oxygen, nitrogen and other elements. But how these fundamental substances are created in space has been a longstanding mystery.

Now, astronomers better understand how molecules form that are necessary for building other chemicals essential for life. Thanks to data from the European Space Agency's Herschel Space Observatory, scientists have found that ultraviolet light from stars plays a key role in creating these molecules, rather than "shock" events that create turbulence, as was previously thought.

Scientists studied the ingredients of carbon chemistry in the Orion Nebula, the closest star-forming region to Earth that forms massive stars. They mapped the amount, temperature and motions of the carbon-hydrogen molecule (CH, or "methyldyne" to chemists), the carbon-hydrogen positive ion (CH+) and their parent: the carbon ion (C+). An ion is an atom or molecule with an imbalance of protons and electrons, resulting in a net charge.

"On Earth, the sun is the driving source of almost all the life on Earth. Now, we have learned that starlight drives the formation of chemicals that are precursors to chemicals that we need to make life," said Patrick Morris, first author of the paper and researcher at the Infrared Processing and Analysis Center at Caltech in Pasadena.

In the early 1940s, CH and CH+ were two of the first three molecules ever discovered in interstellar space. In examining molecular clouds -- assemblies of gas and dust -- in Orion with Herschel, scientists were surprised to find that CH+ is emitting rather than absorbing light, meaning it is warmer than the background gas. The CH+ molecule needs a lot of energy to form and is extremely reactive, so it gets destroyed when it interacts with the background hydrogen in the cloud. Its warm temperature and high abundance are therefore quite mysterious.

Why, then, is there so much CH+ in molecular clouds such as the Orion Nebula? Many studies have tried to answer this question before, but their observations were limited because few background stars were available for studying. Herschel probes an area of the electromagnetic spectrum -- the far infrared, associated with cold objects -- that no other space telescope has reached before, so it could take into account the entire Orion Nebula instead of individual stars within. The instrument they used to obtain their data, HIFI, is also extremely sensitive to the motion of the gas clouds.

One of the leading theories about the origins of basic hydrocarbons has been that they formed in "shocks," events that create a lot of turbulence, such as exploding supernovae or young stars spitting out material. Areas of molecular clouds that have a lot of turbulence generally create shocks. Like a large wave hitting a boat, shock waves cause vibrations in material they encounter. Those vibrations can knock electrons off

atoms, making them ions, which are more likely to combine. But the new study found no correlation between these shocks and CH+ in the Orion Nebula.

Herschel data show that these CH+ molecules were more likely created by the ultraviolet emission of very young stars in the Orion Nebula, which, compared to the sun, are hotter, far more massive and emit much more ultraviolet light. When a molecule absorbs a photon of light, it becomes "excited" and has more energy to react with other particles. In the case of a hydrogen molecule, the hydrogen molecule vibrates, rotates faster or both when hit by an ultraviolet photon.

It has long been known that the Orion Nebula has a lot of hydrogen gas. When ultraviolet light from large stars heats up the surrounding hydrogen molecules, this creates prime conditions for forming hydrocarbons. As the interstellar hydrogen gets warmer, carbon ions that originally formed in stars begin to react with the molecular hydrogen, creating CH+. Eventually the CH+ captures an electron to form the neutral CH molecule.

"This is the initiation of the whole carbon chemistry," said John Pearson, researcher at NASA's Jet Propulsion Laboratory, Pasadena, California, and study co-author. "If you want to form anything more complicated, it goes through that pathway."

Scientists combined Herschel data with models of molecular formation and found that ultraviolet light is the best explanation for how hydrocarbons form in the Orion Nebula.

The findings have implications for the formation of basic hydrocarbons in other galaxies as well. It is known that other galaxies have shocks, but dense regions in which ultraviolet light dominates heating and chemistry may play the key role in creating fundamental hydrocarbon molecules there, too.

"It's still a mystery how certain molecules get excited in the cores of galaxies," Pearson said. "Our study is a clue that ultraviolet light from massive stars could be driving the excitation of molecules there, too."

Herschel is a European Space Agency mission, with science instruments provided by consortia of European institutes and with important participation by NASA. While the observatory stopped making science observations in April 2013, after running out of liquid coolant as expected, scientists continue to analyze its data. NASA's Herschel Project Office is based at NASA's Jet Propulsion Laboratory, Pasadena, California. JPL contributed mission-enabling technology for two of Herschel's three science instruments. The NASA Herschel Science Center, part of IPAC, supports the U.S. astronomical community. Caltech manages JPL for NASA.

More information about Herschel is available at:

<http://www.herschel.caltech.edu>

<http://www.nasa.gov/herschel>

<http://www.esa.int/SPECIALS/Herschel>

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Bradley posts career high in Orange Out win

GOCALTECH.COM
Actual Sports Content Editor

PASADENA, Calif. (Oct. 13, 2016) – Senior Chris Bradley scored a career-high nine goals to fuel Caltech men's water polo to a 14-9 Orange Out victory over LA Trade Technical College in a Battle of the Beavers on Wednesday night.

The Beavers improve their non-conference record to 4-10 ahead

of the beginning of SCIAC play on Saturday.

Bradley, who entered the day ranked second in the SCIAC with 55 goals this season, took over the conference lead by one with the performance and is one of just two players to clear even 35 goals at this point.

LA Trade Tech scored the first goal of the game and regained the lead after an equalizer by Bradley,

but the senior then struck for back-to-back goals to complete his 13th hat trick and hand the Beavers a 3-2 lead they would never relinquish. Freshman Bradley Justice notched a key goal to extend the margin to two, which Caltech held at 5-3 after the first quarter.

The visiting Beavers pulled within one thanks to a penalty early in the second quarter. Bradley netted two possessions later to

make it 6-4, but LATTC refused to back down, notching another just 13 seconds later. Caltech took control at that point, however, with Bradley netting his sixth and sophomore Eshan Govil scoring twice before the end of the quarter for a 10-5 halftime lead.

Bradley netted another three goals in the third quarter before taking a breather, at which point LATTC began to fight its way back

into the mix with three unanswered goals by the midway point in the fourth quarter. Sophomore Shaurya Gilani held things down in goal, though, making 16 saves over the course of the game while senior Tim Menninger scored his first career goal as insurance with just under two minutes remaining for the final 14-9 score line.



LOL look at the guy in the back, probably thinking "I wish I could score as much as Chris Bradley." Photo Courtesy of Bob Paz



Orange you glad you came to a winning game? Photo Courtesy of Elise Cutts

Née scores third goal of season in La Verne defeat

GOCALTECH.COM
Actual Sports Content Editor

PASADENA, Calif. (Oct. 12, 2016) – Sophomore Tristan Née scored his third goal of the season and the Caltech men's soccer team's first at home since the opener in a 4-1 defeat to the University of La Verne on Wednesday.

The Leopards jumped on the scoreboard early with goals in the seventh and 15th minutes, with both coming via through balls behind the defense and into the box. Née forced a save from the La Verne goalkeeper midway through

the half, as did sophomore Jack Banaszak on a free kick in the 29th minute, but the Leopards scored a third goal just seconds later on a rebound following a deflected shot.

Caltech steadily offered a greater threat on offense throughout the game. Freshman Kevin Yu hit the cross bar on a free kick in the 38th minute and coming out of halftime, the Beavers ripped four consecutive shots over a four-minute span, although none found their mark. Shortly after senior J.D. Feist weathered three shots on goal within a minute at the other end, Née finally put one in the back of

the net for Caltech. The sophomore collected a pass from junior Chris Haack, turned and dragged the ball to his right, took two steps to get away from his defender and curled a low shot into the far post to make it 3-1 in the 62nd minute.

The Beavers kept up the pressure until the final whistle, firing a season-high 12 shots, but La Verne would score the only other goal in the game for the final 4-1 line despite a nine-save effort from Feist, bringing him just seven shy of recording 500 for his career.



"Excuse me, who do you think you are! You don't get to pass me." - Tristan, probably. Photo Courtesy of Michael Wong

Volleyball improves at No. 7 CLU

GOCALTECH.COM
Actual Sports Content Editor

THOUSAND OAKS, Calif. (Oct. 11, 2016) – The Caltech volleyball team showed a quick learning curve in their second match vs. No. 7 Cal Lutheran University in less than a week on Tuesday night.

Just five days after scoring a mere 13 points in the first two sets against the Regals, the Beavers matched that total in the first set alone and gave the hosts a good fight in the second before falling, 25-17. CLU went on to claim the victory with a 25-9 score in the third set.

The Regals built up an early 8-3 lead and continued to extend the margin throughout the first set as the Beavers were unable to score on their own serve even once. That changed in the second set, with Caltech holding steady with CLU

and even leading at 7-6 before CLU rattled off five and six straight points to bookend a single Beavers kill. Caltech responded with a five-point run of its own to cut a 10-point deficit nearly in half, then ran off three consecutive points to pull within six at 23-17 before succumbing. CLU would take control in the third set, building up a 14-3 lead and soon sealing the match.

Freshman Lauren Li notched six kills on a .167 hitting percentage while classmate Alexa Lauinger tallied 10 digs and sophomore Sakthi Vetrivel smacked a team-high seven kills to go with a solo block. Rookie Ellie Walker upped her assist total from last week by five and sophomore Claudia Canamas hit her third kill in as many games, over which she has posted a .600 hitting percentage.



Claudia, exasperated with the score, sends the ball back over with some sass. Photo Courtesy of Michael Wong

ASCIT Minutes

Meetings are every week in SAC 13

ASCIT Board of Directors Meeting

Minutes for 12 October 2016. Taken by Alice Zhai.

Officers Present: Andrew Montequin, Tim Liu, Bobby Sanchez, Sakthi Vetrivel, Kalyn Chang, Robin Brown, Alice Zhai

Guests: Jinglin Huang

Call to Order: 12:05 pm

President's Report (Andrew):

- Just joined ASCIT

Officer's Reports:

V.P. of Academic Affairs (ARC Chair: Tim):

- Went to faculty board meeting Monday - midterm survey of 2015-16 school year brought up to faculty board
- Decided option chairs
- About to appoint chairs of special topics committees (Committees are Industry Opportunities, Computing Education, and Core Curriculum)
- Sign ups for ARC frosh are posted

V.P. of Non-Academic Affairs (IHC Chair: Bobby):

- Survey for Big I will be sent out

Director of Operations (Sakthi):

- Club applications are getting turned in - will get approved by club steering committee
- Club Funding Day is on Sunday, October 30th from 11AM-5PM

Treasurer (Kalyn):

- Caltech Chinese Association asked for funding for the 2016 Mid-Autumn Festival

Social Director (Robin):

- Looking for venue for spring formal
- Considering to plan a Rath Party before winter break
- Working with house social directors to schedule events

Secretary (Alice):

- Future meetings will be Wednesdays at 12:30PM at SAC 15

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: 12:34pm

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."

JOIN THE CALIFORNIA TECH STAFF!

Looking for something exciting to get involved in this new year?

We are looking for more contributors!

We accept reviews, opinion pieces, research, news stories, comics and more!

Email tech@caltech.edu with questions.

Join the Meditation Mob!

Tuesdays, 12:00 - 12:50

Want to learn more about mindfulness meditation? It's a great way to improve your attention and to become more grounded in the present moment.

There's no religious component. We use secular, evidence-based meditation techniques.

We meet in the small room just off the lounge in Winnett. All students are welcome, from total beginners to more experienced meditators.

Mailing list and MP3 archive:
counseling.caltech.edu/students/meditation



Don't Stop Rotating (Hold on to that Feeling)

ANDREW MONTEQUIN
ASCIT President

Rotation has been over for two weeks now, and with midterms looming ahead it's about time to settle back into our usual routines. As you may or may not know, my routine was changed last Monday when I was elected ASCIT President. Typically the campaign process for that job is centered on the candidates eating dinner in every house so that they can introduce themselves, give a stump speech, answer questions and eat the occasional crayon. While I didn't come close to completing this house tour myself,

I do plan on coming around to all of your dinners over the next few weeks and continuing to stop by throughout the year so I can get to know all the houses better.

As far as I know, no house excludes non-members from dinner, but admittedly before this year I had eaten dinner in a house other than Ricketts just one time since rotating into the house. These next few weeks will mark a return to my prefrash days as I venture to foreign houses to find sustenance, even daring to cross the treacherous Olive Walk on some nights. While I can't tell you what I'll learn on these journeys, I can say one thing: it probably won't

be that bad. Now I could challenge you to prove me wrong and ask you to actually make my experience that bad, but instead I'll just suggest that you try breaking out of your routine yourself. Even if you just eat dinner in a different house once per month, you can make it to every house within the course of a year and get a better understanding of how the other houses function. I won't make outlandish promises like "you will meet your new best friend" or "you'll lose fifteen pounds and improve your productivity," but again, I can assure you that it probably won't be that bad, so get out there and try it.

No Rest for a Nobelist

LORI OLIWENSTEIN
Caltech Media Relations

This article is adapted from a story that was originally published online at caltech.edu.

If you were to write the life story of a Nobel laureate, you might be forgiven for wanting to make the early morning call and its immediate aftermath the zenith of the story's arc, followed by little more than a tuxedo, a speech presented before Swedish royalty, and several bottles of champagne.

You'd be wrong, but you'd be forgiven.

For the vast majority of the 34 Caltech faculty and alumni who have together won 35 Nobels—Linus Pauling (PhD '25) being the Institute's dual laureate, with a 1954 prize in chemistry and a 1962 peace prize—the award is just the beginning, an avenue-opening, support-generating,

idea-spawning opportunity for a second, and sometimes a third or fourth, act. Caltech's Nobelists have picked up prizes only to switch fields, revisit dead-end questions, or dig deeper into the work that garnered them the award in the first place. They've gone birdwatching, fought for recognition of the dangers of radiation to the human body, worked to revamp education, and been named president of the California Institute of Technology.

In other words, they've taken the Nobel Prize, and the opportunities and possibilities it affords, and made the very most of them.

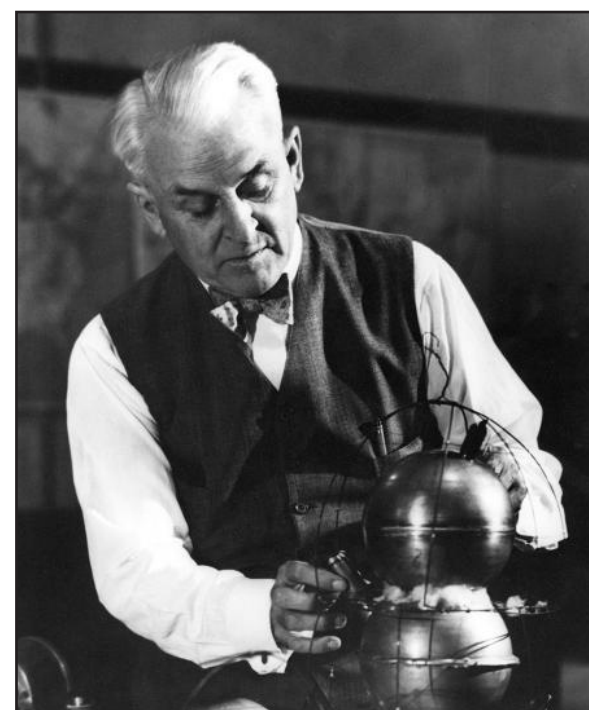


Photo Courtesy of Caltech Archives

VICE PROVOST'S OFFICE HOURS

Vice Provost, Chief Diversity Officer, and Professor of English, Cindy Weinstein, offers weekly office hours. This is an opportunity for undergraduate, graduate students, and postdocs to meet and discuss topics 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 15-minute appointments available per hour. Please sign up in Parsons-Gates room 104, or call the Vice Provost's Office at ext. 6339.

*Fall term hours: 12:00-1:00 p.m.
Tuesday, Oct. 18*

Crossword

Across

- 1. Bring ashore
- 5. Region
- 9. Track
- 13. Woodwind instrument
- 14. Tether
- 16. Pronunciation mark
- 17. Transmitted
- 18. Out of fashion
- 19. Loose flowing garment
- 20. Set at a high angle
- 22. Spool
- 23. Elderly
- 24. Weep
- 26. Accepted something given
- 28. A state of adversity
- 33. Grooved tire surface
- 36. Colony insect
- 37. Impart knowledge
- 39. Sloping edge on a cutting tool
- 41. Smack
- 43. A lower limit
- 45. Brass instrument
- 46. Hirsute
- 48. Mistake
- 50. Relieve from
- 51. Inflict
- 53. Totality
- 55. Soot
- 57. The night before

- 58. Aromatic leaves used as seasoning
- 61. Skilful in physical movements
- 64. Planet
- 68. Golf club
- 69. Edible bulb
- 71. Painful
- 72. Metallic element
- 73. Meaning of a word or expression
- 74. Finished
- 75. Brink
- 76. Trial
- 77. Requirement

Down

- 1. The result of costs exceeding revenue
- 2. Assist
- 3. Not any
- 4. Hate
- 5. Any high mountain
- 6. Raise
- 7. Facilitate
- 8. A useful or valuable quality
- 9. Small long-tailed bird
- 10. Highly excited
- 11. Hollow cylindrical shape
- 12. Pay close attention to
- 15. Serf (Middle Ages)
- 21. Dessert wine
- 25. Cattle reared for their meat
- 27. Globe
- 28. Punctuation mark
- 29. A relative by marriage
- 30. One of a flight of steps
- 31. Involves a vendor and buyer
- 32. Gain points in a game
- 34. A light shade of blue
- 35. An accounting entry
- 38. Tusk
- 40. Polite name for a woman
- 42. Mien
- 44. Memorization by repetition
- 47. Edible tuber
- 49. Tear violently
- 52. Acclaim or praise
- 54. Rationality
- 56. Religious doctrine
- 58. Magnitude
- 59. Desiccated
- 60. Percussion instrument
- 62. Amercement
- 63. Flip of a coin
- 65. Wander
- 66. Diagram often used in genealogy
- 67. Group of animals of the same kind
- 70. Fish trap

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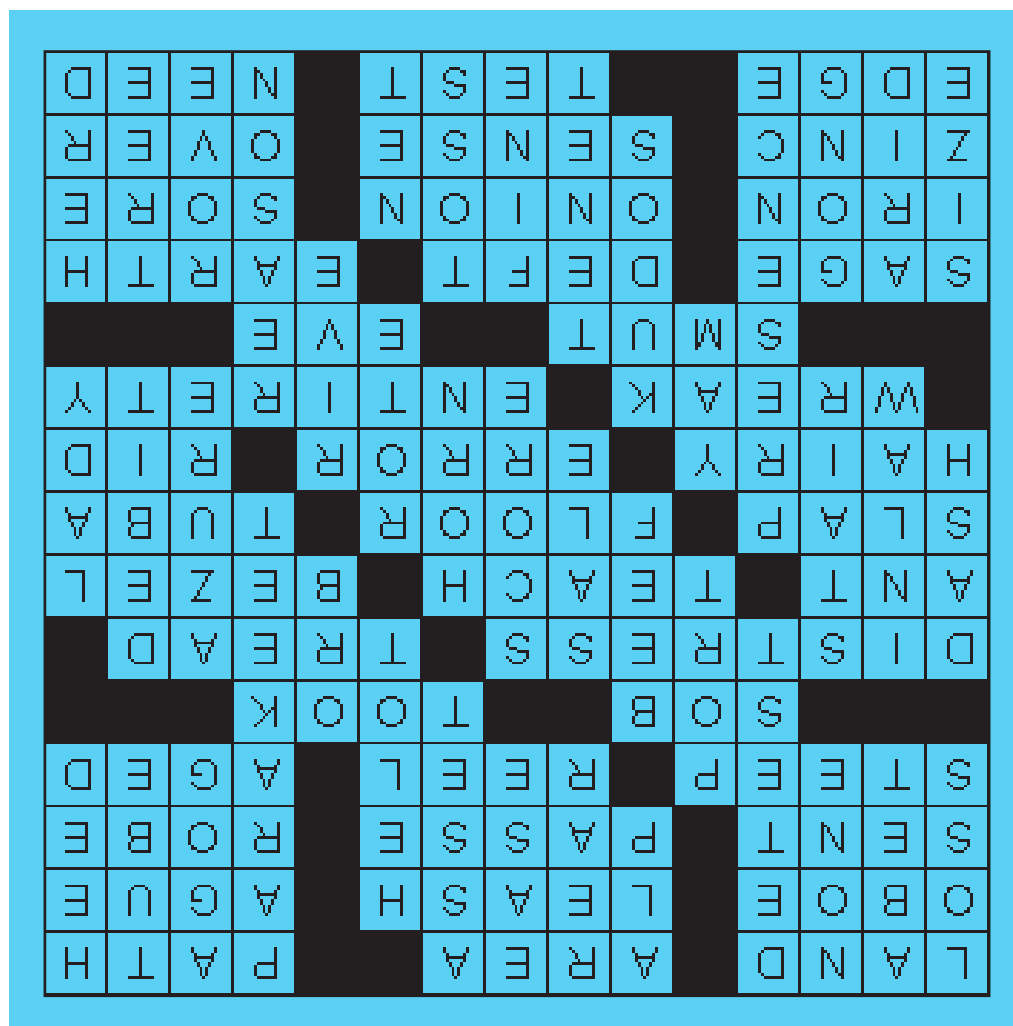
Monday Punday



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

Think you know the answer? Take a guess at mondypunday.com/211

Answers to current crossword (pg 7)



-<http://puzzlechoice.com>

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