

Bianca Lepe named Marshall Scholar for study in UK

LORI DAJOSE
Caltech Media Relations

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Senior Bianca Lepe, a bioengineering major from Granada Hills, California, has been named a Marshall Scholar, winning one of the most coveted fellowships for study in the U.K. The Marshall Scholarship is widely considered one of the most prestigious scholarships in the world. Approximately 1,000 Americans, mostly graduating seniors, apply for, at most, 40 fellowships awarded each year. The Marshall Scholarship provides funding for two years of post-bachelor's degree study at any university in the United Kingdom. The Marshall Aid Commemoration Commission, which oversees the fellowship, provides many cultural opportunities for Marshall Scholars



Senior Bianca Lepe received The Marshall Scholarship to travel to the U.K. for two years for biology research and a master's degree in science communication.

Photo Courtesy of Lance Hayashida/Caltech

during their tenure as scholars.

Lepe will spend the 2016–2017 academic year at the University of Edinburgh studying for a master's degree in synthetic biology and the following year at Imperial College London, completing a master's degree in science communication.

The Marshall Scholarship was founded by a 1953 Act of Parliament and named in honor of U.S. Secretary of State George C. Marshall. The scholarships “commemorate the humane ideals of the Marshall Plan and the fellowships express the continuing gratitude of the British people to their American counterparts.”

The British Marshall Commission website said,

“As future leaders, with a lasting understanding of British society, Marshall Scholars strengthen the enduring relationship between the British and American peoples, their governments and their institutions. Marshall Scholars are talented, independent and wide-ranging, and their time as Scholars enhances their intellectual and personal growth. Their direct engagement with Britain through its best academic programmes contributes to their ultimate personal success.”

At Caltech, Lepe has participated in research with James Heath, Elizabeth W. Gilloon Professor and Professor of Chemistry, developing a diagnostic tool to detect a specific protein that causes malaria, and with David Baltimore, president emeritus and the Robert Andrews Millikan Professor of Biology, studying RNA and immunology.

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News briefs from around the globe

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

Adele's 25 breaks single week sales record

3 million copies sold in first six days shatters previous record set by *NSYNC [TIME]

Oakland A's pitcher hosts Thanksgiving dinner for Syrian refugees

17 families living in Chicago were given food to “welcome them to America” [TIME]

“Li-Fi” debuted outside of lab for the first time

100 times faster than Wi-Fi, Li-Fi uses visible light instead of radio waves to access the internet [BBC]

Pirates attack Polish cargo ship

5 abducted, 11 confirmed safe after Nigerian pirates ransack ship; no demands have been made yet [NBC]

Officer, civilians injured by active shooter near Planned Parenthood

3 killed (one police officer, two civilians) after shooting in Colorado [LA Times]

ISIS claims responsibility for attack on Bangladeshi mosque

1 killed, three injured by gunmen attacking Shiite mosque [CNN]

Suicide bomber strikes Nigerian Shia march

21 killed; leaders say Boko Haram is to blame for attack on annual procession [BBC]

Three is not a crowd: Butkovich sisters follow similar paths at Caltech

DAVE ZOBEL
Caltech Media Relations

This article was originally published online at caltech.edu.

The public high school in Blue Springs, Missouri, just outside Kansas City, graduates more than 500 seniors each year. Remarkably, the valedictorian in 2015 was the younger sister of the valedictorian in 2014—who was the younger sister of the valedictorian in 2013.

And all three are now Caltech undergraduates.

These are the Butkovich sisters: junior Slava and sophomore Nina, both majoring in chemical engineering, and freshman

Lazarina (“Laza”), currently deciding between chemical engineering and chemistry.

“In the nearly half-century since Caltech began admitting women to its undergraduate program, 2015 is almost certainly the first year we’ve had three sisters enrolled in three different graduating classes at the same time,” noted Barbara Green, interim dean of undergraduate students. The sisters represent “a three-peat,” said Caltech admissions director Jarrid Whitney, not a package deal. “All our applicants are reviewed independently and without regard to siblings, parents, or other

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(From left) Lazarina (freshman), Slava (junior), and Nina Butkovich (sophomore) are unique in that the three sisters are at Caltech at the same time.

Photo Courtesy of Jenny Somerville/Caltech

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Caltech Y Column

CALTECH Y

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

Founded by students in 1916, the Y was organized to provide extracurricular activities planned and implemented by students as an opportunity to learn leadership skills and discover themselves. More information about the Caltech Y and its programs can be found at <https://caltechy.org>. The office is located at 505 S. Wilson Avenue.

Upcoming Events

1. Caltech Y Centennial T-shirts

Pick your T-shirts up at the Caltech Y

It's the Caltech Y's Centennial Year and we are celebrating with Centennial T-Shirts! The pillars of the Caltech Y are Service (purple), Adventure (green), Civic Engagement (red), Perspective (blue), and Leadership (grey). When you participate in any of our programs you earn that pillar's colored shirt (limit one color per person). Get one or collect all five colors while supplies last.

Here is how you can earn a shirt...

Service: Make-A-Difference Day, Pasadena LEARNS, Hathaway Sycamores, Union Station, Rise Tutoring, and MLK Service Day.

Adventure: Y-Hike Backpacking, Yosemite Camping, Joshua Tree Camping, Day Hikes, Kayaking, Adventure 101 lunches, Wilderness First Aid, and Alternative Spring Break Trips.

Civic Engagement: Washington DC Science Policy Trip, Science Policy Lunches, MLK Week Activities, Social Activism Speaker Series Lectures.

Perspective: World Fest, Explore LA Outings, Life Skills Lunches, Home Cooking Lunches, Community Service and Advocacy Fair, and the India Ki Khoj Trip

Leadership: attend a leadership program or join one of our leadership groups ExComm, Y-Outdoors, the Social Activism Speaker Series Committee, or be a Service Project Leader.

2. Peter Pan and Tinker Bell

Pasadena Playhouse | December 9th-January 3rd | Tickets 20% Off

Tickets can be purchased using your unique 20% discount code, CTY20, from now through 1/3/2016 and 10% will go back to the Caltech Y. For more info visit: <http://www.pasadenaplayhouse.org/box-office/mainstage/peter-pan-and-tinkerbella-pirates-christmas.html>

Peter Pan and Tinker Bell - A Pirates Christmas is the latest Holiday Spectacular presented by Lythgoe Family Productions in the style of the traditional British Panto. Tinkerbell, Wendy and Peter Pan embark on a wild quest to foil the pirates plot to kidnap Peter for Captain Hook's Christmas present in this flying, singing, swashbuckling adventure. Featuring comedy, magic, dancers from So You Think You Can Dance, and contemporary music from Taylor Swift to the Bee Gees, a Panto is interactive holiday fun for all ages.

3. Amazon Smile

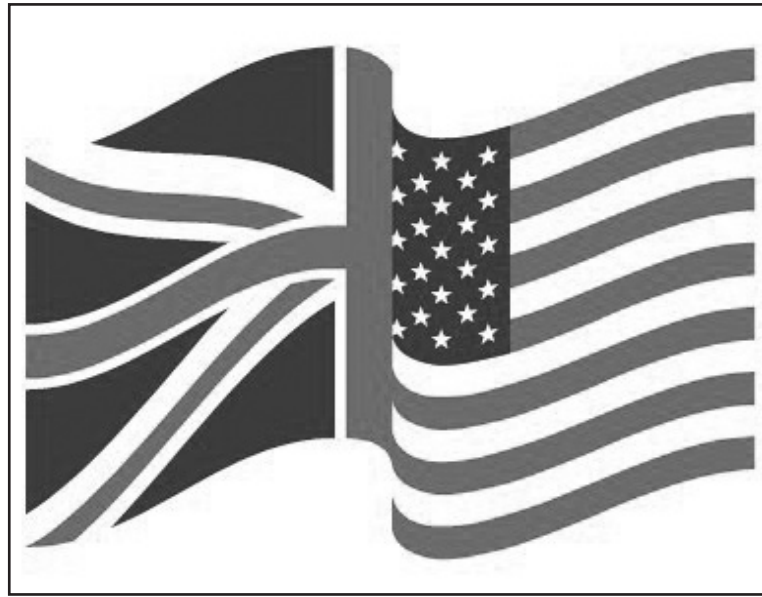
Support the Caltech Y every time you shop on AmazonSmile

Black Friday is fast approaching and you can support the Caltech Y while you do your holiday shopping. When you shop at AmazonSmile, Amazon donates 0.5% of the purchase price to Caltech Y. Bookmark the link <http://smile.amazon.com/ch/95-1684790> and support us every time you shop.

Marshall Scholarship awarded to Bianca Lepe for two-year fellowship in the U.K.

Continued from page 1

In 2014, Lepe was a member of the Caltech's undergraduate iGEM (International Genetically Engineered Machine) team,



The Marshall Scholarship logo contains both the British and American flags, since the award is given to students in the U.S. to pursue research in the U.K. -<http://marshallscholarship.org/>

which participated in an international competition to create artificial biological systems from a kit of standard biological parts. "Our project's goal was to implement a nonnative gene circuit system in *E. coli* to manufacture a biological compound and regulate its concentration outside the cell," Lepe said. "We had the chance to attend the iGEM Jamboree to present our research, for which we received a bronze medal."

Lepe's experiences on the iGEM team spurred her interest in synthetic biology, which she will pursue at the University of Edinburgh during the first year of her Marshall Scholarship. "Edinburgh is unique because it has a research center, called SynthSys, which specializes in translating research into commercial applications — a skill I hope to gain while there," she said.

During the second year of her fellowship, Lepe will delve into the art of communicating science to the public. "When I study science communication at Imperial College, it will be beyond the traditional forms of communication into broader mediums and topics, such as television, ethics, and science policy. The skill sets I will gain at these universities will enable me to be an effective communicator and scientist as I pursue a career in synthetic biology."

"Bianca Lepe has excelled in many areas at Caltech: classes, research, leadership, student government. She has reinvigorated the Caltech Latino Association of Students in Engineering and Sciences, and she chairs the undergraduate student advisory board for Title IX efforts," said Lauren Stolper, director of fellowships advising and study abroad and the Career Development Center. "Bianca's two years in the U.K. will surely be a formative experience as a scientist and as a leader in communicating science to the public. Her Marshall Scholar win is well deserved, and Bianca will take full advantage of the experience."

In May 2015, Lepe received the Caltech Deans' Cup — an award presented to undergraduates "whose concern for their fellow students has been demonstrated by their persistent efforts to improve the quality of undergraduate life and by effective communication with members of the faculty and administration."

"Bianca has been a great student, a real leader with strong values and a wonderful

friend to her peers," said Barbara Green, the interim dean of Undergraduate Students. "I am delighted that she won the Marshall and will miss her next year."

International travel will not be too "foreign" for Lepe — in the autumn of 2014, she studied abroad at University College London. Additionally, she has traveled to India as a part of the Caltech Y's India-Ki-Khoj program in 2013.

Previous Caltech Marshall Scholars include current Marshall Scholar Adam Jermyn (B.S. '15) now studying for a Ph.D. in astronomy at the University of Cambridge, Emma Schmidgall (B.S. '07), Wei Lien Stephen Dang (B.S. '05), Vikram Mittal (B.S. '03), and Eric Tuttle (B.S. '01). Other former Marshall Scholars in the Caltech community include Sterl Phinney (B.S. '80), professor of theoretical astrophysics; Thomas Everhart, President Emeritus; Edward Stolper, the

Carl and Shirley Larson Provostial Chair and William E. Leonhard Professor of Geology; Jonas Peters, the Bren Professor of Chemistry and director of the Resnick Institute; and Thomas Miller, professor of chemistry.



The Marshall Scholarship was created in 1953 and was named after George C. Marshall, an American veteran and the 50th U.S. secretary of state.

-<http://en.wikipedia.org/>

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Techer's perspective: Why we should care about Bernie Sanders

LAKSH BHASIN
Contributing Writer

America's political and economic systems are objectively flawed. Since the early 1980s, worker productivity has continued to increase, while real median family income has remained largely flat. Yet we still see special interests fighting to maintain a starvation-level minimum wage of \$7.25 as wealth inequality continues to grow. Basic healthcare is still not a right for all, and prescription drug prices are much higher than they are in Canada. Yet we still see politicians fighting for overpriced private insurers over universal single-payer healthcare (i.e., "Medicare for all"), and the pharmaceutical industry continues to maintain one of the highest profit margins of any industry. A Princeton University study established that "the preferences of the average American appear to have only a minuscule, near-zero, statistically non-significant impact upon public policy" (see graph). Yet we still proudly call ourselves a democracy, even with the rise of super PACs, unrepresentative lobbying and a broken campaign finance system.

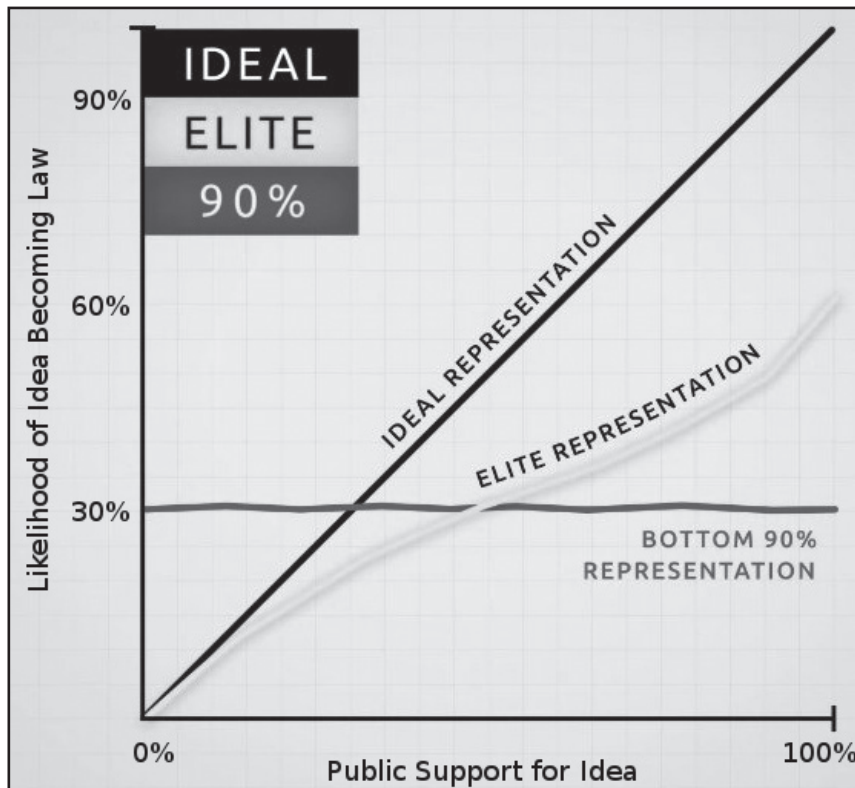
The deck is stacked against average- and low-income Americans, both politically and economically. The obvious question to ask, then, is "Why hasn't anyone fixed this mess?" Shouldn't the system have re-equilibrated at some point over the last 35 years to help out those who have so little?

Unfortunately, the exact opposite has happened. Republicans like Scott Jennings — longtime advisor to Sen. Mitch McConnell, R-KY — have become aware of the fact that "people on Medicaid don't vote." And with this realization, anti-welfare right-wing politicians have turned the middle 20 percent of income earners against the bottom 20 percent, rebranding and demonizing the latter as entitled slackers, without detriment to their electability. As these politicians get elected, low-income voters not only grow more cynical, but also face more obstacles, with recent voting restriction laws (purported to counteract election fraud) further diminishing their voice. The end result is a dystopian feedback loop where the poor get

even less political representation and America grows even more oligarchical.

If you're reading this and

American — who often has less than \$10,000 in savings — isn't crippled by a physical or mental illness. He has introduced legislation to make public colleges tuition-free with



The preferences of the bottom 90 percent of Americans have no impact on public policy, whereas the preferences of the top 10 percent ("Elite") are closer to the ideal diagonal. Figure adapted from "Corruption is Legal in America" video.

-<https://www.youtube.com/user/UnitedRepublicVideo>

thinking, "Enough is enough," independent Sen. and Democratic presidential candidate Bernie Sanders agrees with you. A democratic socialist from Vermont, Sanders has consistently — over the past 24 years he has been in Congress — fought for average- and low-income Americans. He is committed to repealing the Citizens United v. FEC decision, which allows corporations to make unlimited anonymous political donations to organizations like super PACs. He is determined to establish universal single-payer healthcare, so that the average

a minuscule tax on Wall Street speculation, a move that is set to give ordinary Americans the social and economic mobility they desperately need.

In several ways, Sanders is a unique politician. Unlike many of his contemporaries, he refuses to sacrifice his principles for special interests like the fossil fuel industry, the banking industry and the pharmaceutical industry. His campaign's political contributions come from 750,000 donors (almost

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Endless adventures: Fries at Islands

ALEX WHITE
Contributing Writer

Author's note: This is the first in a series of investigative journalism articles in which the author explores an "endless" item.

Islands was fighting an uphill battle from the beginning. At 7:53, before our full party arrived, we asked our waitress Bethany if Islands still had its endless fries deal. It did, and Bethany promptly offered to bring us our first round early.

8:08 — We lost hope in the fries. Morale was down, but we remained optimistic. We ordered six Kilauea burgers and No-Blame Grilled Veggie Tacos.

8:18 — Our food arrived. Order parsing was more difficult than usual due to the extreme homogeneity of our selections.

8:20 — We finished our first round of fries and asked for more. Bethany was compliant. My burger was mediocre. The fries were average, not bad, but not too enjoyable.

8:26 — Our first enormous basket of fries arrived. The fries were getting worse.

8:41 — Our second basket of fries arrived. The fries were just plain bad at this point, but they were free, so...

8:42 — We asked for more fries. Bethany was surprised

this time around. Someone asked for Sriracha.

8:50 — We received the Sriracha. It consisted of a small cup of green leaves, presumably cilantro.

8:57 — Our third basket of fries arrived. Each fry coated my throat and stomach with a thicker layer of oil.

9:00 — Bethany got too excited and asked us if we wanted more fries this time. She may have asked sarcastically, but we accepted.

9:07 — Our fourth basket of fries arrived. I was able to down two without throwing up. Three would have been pushing it. The smell of oil became unbearable.

Overall review: We ate an estimated 15-20 potatoes worth of fries and an estimated 1.12 pounds of oil among the seven of us.

Cost to Islands: \$2.62
Cost to us: French fry PTSD and \$15 each for a mediocre burger and these fries.

Rating: 2 out of 5 fries. But the sad ones that they leave in for too long and turn brown.

Take home message: If you want endless fries, go to 5 Guys. Their food is orders of magnitudes better and their fries are virtually endless.



One order of fries should have had Sriracha on it, but it has something that just looks like cilantro.

Photo Courtesy of Alex White

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Humans of Caltech: Meet Librarian Kristin Buxton

The California Tech brings you stories of Caltech community members

ALEXANDER HSU
Contributing Writer

A master's in?
Library science.

How long have you been at Caltech?
Eight years!

Interesting fact about yourself?
I DJ for swing dances on the side.

What does your job typically consist of?

Anything you'd like to say to the students here?

Lots of different things ... answering questions, answering email questions, finding books, teaching classes, currently maintaining the website, lots of meetings, committees for redoing the library catalog.

Don't be afraid to ask for help!

Why did you choose to come to Caltech?

I actually have undergrad degrees in physics and computer science, and was a software engineer for nine years, and so I figured coming here, I could have some idea about what I was helping people on ... and it doesn't involve doing storytime for kids.

Why did you decide to become a librarian?

I wanted to work with people more ... don't ask me how I actually got the idea of librarianship as the next path... but again, it was the working with people part of it that appealed ... so I had to get a master's and switch careers.



Photo Courtesy of Alexander Hsu

Wong lights it up again in win over Illinois Tech

GOCALTECH.COM
Actual Sports Content Editor

EAGLE ROCK (Nov. 27, 2015) – Senior Stephanie Wong (Palos Verdes Estates, Calif. / Palos Verdes Peninsula) tied her own program record with seven three-pointers in another 24-point performance that fueled the Caltech women's basketball team to a 79-38 win over Illinois Tech in the opening game of the Caltech-Occidental Fall Classic on Friday afternoon.

The Beavers improve to 1-1 overall while the Scarlet Hawks drop to 0-4.

Wong kicked things off three treys over the first two-and-a-half minutes to open up a 9-0 lead, which junior Kate Lewis (San Antonio, Texas / Ronald Reagan) made took to double digits as she went 1-for-2 at the free throw line. Illinois Tech knocked down consecutive threes but Wong hit her fourth in as many minutes to keep Caltech well in front and the rest of the Beavers soon joined in, ending the quarter on a 17-2 run to lead 30-8 at the first break.

A reshuffled Beavers lineup took a few minutes to get on the board in the second quarter, but did manage to limit the Scarlet Hawks to just two points over the first eight minutes while eventually building up a 30-point lead with 2:42 remaining in the half. Illinois Tech continued to enjoy brief spurts of offense but could not keep pace with Wong, who sank another three three-pointers in the first three minutes of the third quarter and hit her seventh three minutes later. Caltech held Illinois Tech scoreless over the final 6:38 to record the 41-point victory.

Wong also hit her only two-

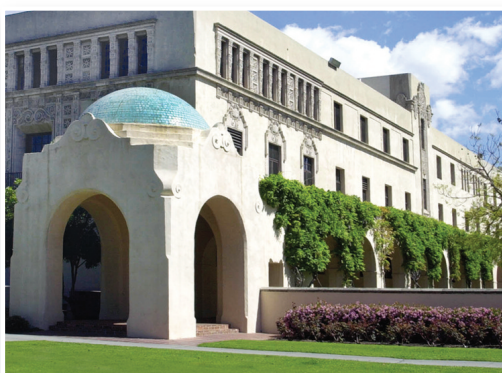
point field goal to go 8-for-12 and added six rebounds and six assists without committing a single turnover. Lewis matched her season-opening score as well with 16 points and completed the double-double with 14 rebounds, in addition to four assists. Junior Michelle Wong (Palos Verdes Estates, Calif. / Palos Verdes Peninsula) and freshman Madeline Schemel (Westport, Conn. / Staples) rounded out the double-figure scorers with 13 and 12 points, respectively. Wong was 3-for-6 from long range, grabbed six rebounds, made three steals and dished out six assists while Schemel pulled down seven boards and shot 6-for-8 from the field. Freshman Nika Haleftiras (San Diego, Calif. / Our Lady of Peace) also impressed with nine rebounds, four assists and four steals and freshman Madelyn Stroder (Springfield, Mo. / Greenwood Laboratory) scored her first career points on her only hot of the day.

Head Coach Sandra Marbut and the Beavers will host UC Merced (0-6) on Saturday, Nov. 28 at 3 p.m. Following the Occidental vs. Illinois Tech matchup at 1 p.m.



Stephanie Wong goes in for the kill. It is speculated that she is a cross between a deadly viper and a ferocious yet cuddly bear. -http://gocaltech.com

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ASCIT Minutes

(from last week; no new meeting)

ASCIT Board of Directors Meeting

Minutes for 17 November 2015. Taken by Phillip.

Officers Present: Nima, Sean McKenna, Phillip An, Cat Jamshidi, Kalyn Chang

Call to Order: 12:04 pm

Guests: Chris Dosen

President's Report (Nima):

- Midnight donuts are Wednesday night
- Registration on Thursday morning
- Dean's advisory council met yesterday
 - Mary Morley will be looking into advanced humanities fill up to look into alternate strategies
 - Nick is working with Math department to finalize the due times initiatives
- Movie is confirmed for Friday at 10:45pm

Officer's Reports:

- **V.P. of Academic Affairs (ARC Chair: Jay):**
 - Absent
- **V.P. of Non-Academic Affairs (IHC Chair: Cat):**
 - The IHC will be meeting with Joe Shepard
- **Director of Operations (Sean):**
 - Nima and Sean went on the ARC retreat discussing various student issues and concerns
- **Treasurer (Kalyn):**
 - None
- **Social Director (Robin):**
 - Absent
- **Secretary (Phillip):**
 - Midnight donuts will be Wednesday

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: 12:31 pm

REMINDER FROM COUNSELING CENTER:

Meditation Mob

(drop-in mindfulness meditation group)

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

Bottom floor of Winnett

VICE PROVOST'S OFFICE HOURS

Vice Provost, Chief Diversity Officer and Professor of English, Cindy Weinstein, offers weekly office hours beginning Thursday, Oct. 15, in Room 104 Parsons Gates. She views these hours as an opportunity for undergraduates, graduate students and postdocs to meet and discuss whatever you'd like to talk about. Professor Weinstein oversees the Council on Undergraduate Education, Caltech accreditation, the Staff and Faculty Consultation Center, Student-Faculty Programs, the Center for Teaching, Learning and Outreach, the Caltech Diversity Center and the libraries.

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

Fall Term Hours:

Tuesday, Dec. 1, 12pm-1pm

Wednesday, Dec. 9, 12pm-1pm

NEW BOOK BY CALTECH ALUM AVAILABLE IN THE BOOKSTORE

From Jupiter to Genesis by Anthony Sneed is now available in the Caltech bookstore. According to the author, the book discusses three heroes (Alex Lidow, Dale Prouty, and Pete Wilzbach) and the Caltech Honor Code.

The Caltech alum and author is also an avid unicyclist and finished first out of 13 competing in the Harvey Mudd Alumni Day 8.7-mile unicycle challenge.

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Caltech 40-58, Pasadena, CA 91125
Contact tech@caltech.edu

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Letters and submissions are welcome; e-mail submissions to tech@caltech.edu as plain-text attachments, including the author's name, by Friday of the week before publication. *The Tech* does accept anonymous contributions under special circumstances. The editors reserve the right to edit and abridge all submissions for any reason. All written work remains property of its author.

The advertising deadline is 5 p.m. Friday; all advertising should be submitted electronically or as camera-ready art, but *The Tech* can also do simple typesetting and arrangement. All advertising inquiries should be directed to the business manager at tech@caltech.edu. For subscription information, please send mail to "Subscriptions."

Butkovich sisters look ahead

Continued from page 1

legacies. For three family members to receive consecutive offers of admission indicates how tremendously talented all three of them must be."

For their part, Slava, Nina, and Laza find their own nearly identical trajectories unsurprising. "We were taught at a young age that science majors can do a lot of good for society," Slava explained. "Anyway," added Nina, "science is more objective than other things, like English and law. It has right answers."

Instead, they give much of the credit for nurturing their talents to their father, who is a lawyer, and their mother, a chemical engineer. They also single out recently retired Blue Springs High chemistry teacher Evan Manuel. "He's the above-and-beyond teacher," said Nina. "His passion for the sciences inspires his students."

Manuel praised the sisters for having "high expectations — not just of themselves but of others around them. I'm sure it's because of how they were brought up. And they've generously shared that perspective with their peers."

For example, the three young women, whose own heritage is Slavic and Filipino, cofounded their school's Association for Cultural and Ethnic Diversity and hosted its monthly world culture celebrations. That willingness to serve, says Manuel, earned them the respect of their peers. "And it's

not a far-removed, no-interaction, pedestal kind of respect," he added. "They like helping people, so people like them. Their college recommendation letters were some of the easiest I've ever been asked to write."

Even before landing in Pasadena, they had completed summer research projects in university chemistry labs: Slava at Baylor and Missouri S&T, her sisters at the University of Iowa. They also tutored classmates in between sitting for a combined total of almost four dozen AP exams, many in subjects not even offered by their school.

At Caltech, all three will be pursuing summer research opportunities. Slava, who is planning a career in anti-cancer research, was named a Howard Hughes Medical Institute Summer Undergraduate Research Fellowships (SURF) fellow last year. They are active in the undergraduate house system (Nina is a member of Ruddock House; Laza and Slava are members of Dabney) and have taken part in yoga, tennis, tai chi, karate and the NERF club. Their course loads are challenging, but none is carrying an overload. "I don't think extreme units is smart," Nina said.

In fact, according to all three, one of the biggest challenges since leaving high school has been learning to rely on something they had honestly never needed before now: study groups.

Sanders is a candidate students should support

Continued from page 3

75 percent of whom donated less than \$200) and organizations that represent ordinary workers, and he does not have a super PAC. These statistics stand out in contrast to his competitor Hillary Clinton, whose top 10 career-long contributors are predominantly banks and media companies, whose campaign's small donors make up less than 20 percent of her donor base (not including two major super PACs), and whose six-figure speeches at Wall Street banks have cast doubts on her ability to regulate them.

All of these reasons and many more — including Sanders' far less interventionist foreign policy record, and his long-standing liberal views on civil rights and LGBT equality — have further distinguished Sanders' political career from the less consistent record of Secretary Clinton. And it is precisely this authentic appeal that comes across in Bernie's call for a "political revolution," one that has inspired thousands of citizens to fight for representation that works for everyone.

But what does all of this have to do with Caltech, a school whose political apathy is so well-known

that the admissions department tacitly describes this as a perk of attending? Call me crazy, but I hope that, as scientists, we can recognize the benefits of a candidate without conflicts of interest, who loudly refuses to be bought by special interests and super PACs. I hope that we can realize the objective

single-payer healthcare. I know I've personally benefitted from Caltech's mental health services, and I feel it would be downright inhumane to let a less-fortunate American succumb to mental illness because of high insurance deductibles or unemployment.

"The test of our progress is not whether we add more to the abundance of those who have much; it is whether we provide enough for those who have too little."

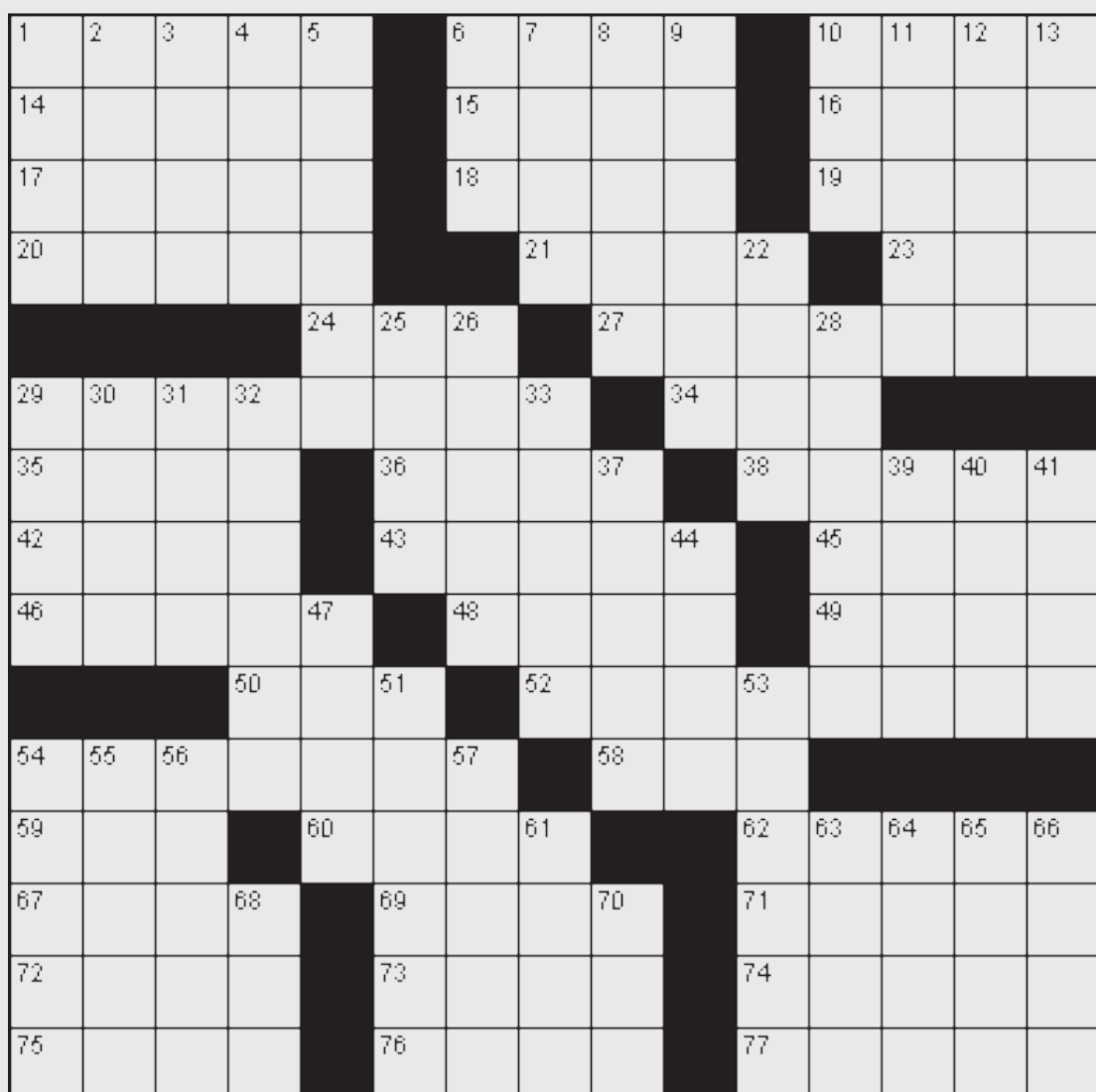
— Franklin D. Roosevelt

I'd like to conclude by inviting you, the reader, to reflect upon the privilege of the Caltech community. Many of us will go on to live prosperous lives in the top quintile, less affected by worries about our healthcare, our children's education, and our political representation. Yet I urge us all to be cognizant of those

whose needs are systematically under-represented in today's society. To quote FDR, and aptly summarize Sanders' career, "The test of our progress is not whether we add more to the abundance of those who have much; it is whether we provide enough for those who have too little."

Laksh Bhasin is the president 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 <http://facebook.com/Caltech4Bernie> to get involved in volunteering.

Crossword



Across

- 1. Smell
- 6. Discharged a debt
- 10. Written leave of absence
- 14. Mature
- 15. Skin condition
- 16. Plant with fleshy spiny leaves
- 17. Spotless
- 18. Small bunch or bundle
- 19. Noisy
- 20. Hair dye
- 21. Distribute playing cards
- 23. Country, initially
- 24. Part of the mouth
- 27. Trampled
- 29. Progenitor
- 34. Also
- 35. Subject or object, can be common or proper
- 36. Talon
- 38. Optical device
- 42. Civil wrong
- 43. Custom
- 45. Unaccompanied
- 46. Neutral
- 48. Rend
- 49. At the summit
- 50. Wonderment
- 52. Barren
- 54. Sobbing
- 58. Pig pen
- 59. An evil spell
- 60. Adhesive

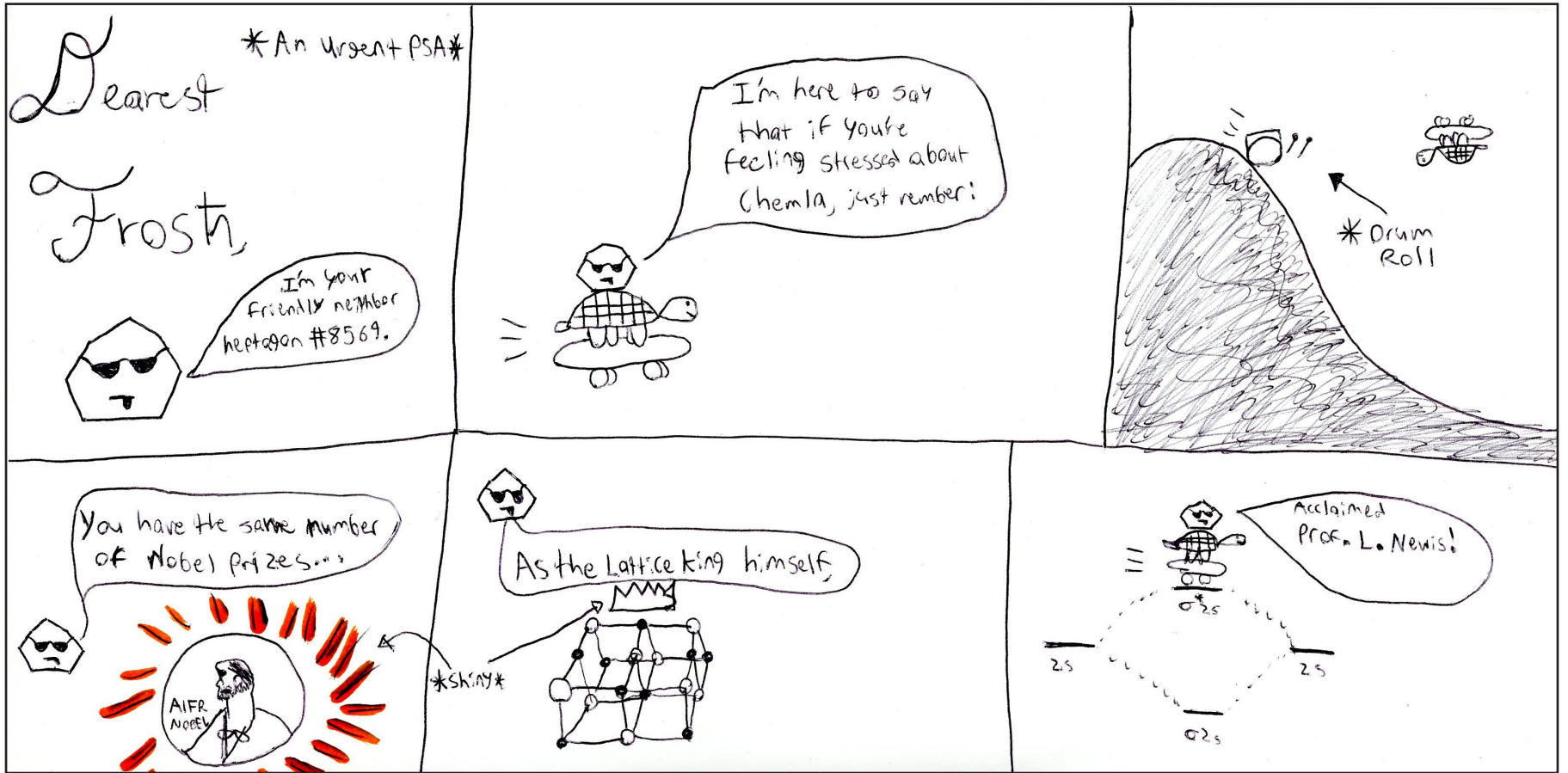
- 62. A roughly built hut
- 67. Part of the eye
- 69. Small island
- 71. Keepsake or souvenir
- 72. Storage tower
- 73. Remain
- 74. Strike out
- 75. Acute or sharp
- 76. Voice quality
- 77. Regenerate

Down

- 1. Curved shape
- 2. Irritate
- 3. Overt
- 4. Miserly
- 5. Chronological account of events
- 6. Animal foot
- 7. Corrosive material
- 8. Gusset
- 9. Leave
- 10. Buddy
- 11. Not silently
- 12. Cook in a marinade
- 13. A closed litter for one passenger
- 22. Closed circuit
- 25. Strong, restless desire
- 26. Arctic or Antarctic regions
- 28. Vertical back fin
- 29. Not in favor of
- 30. Midday
- 31. Remedy
- 32. Ensnare
- 33. Overzealous
- 37. Married women
- 39. Scintilla
- 40. Gambling machine
- 41. Move around slowly and aimlessly
- 44. Evaluate
- 47. Small branch
- 51. Join the military
- 53. Marine mollusk
- 54. Mixer
- 55. Strange and frightening
- 56. Expatriate
- 57. Zest
- 61. Flair
- 63. Opening or perforation
- 64. Similar in quality or character
- 65. Yield
- 66. Had experience of
- 68. Male offspring
- 70. Center of a storm

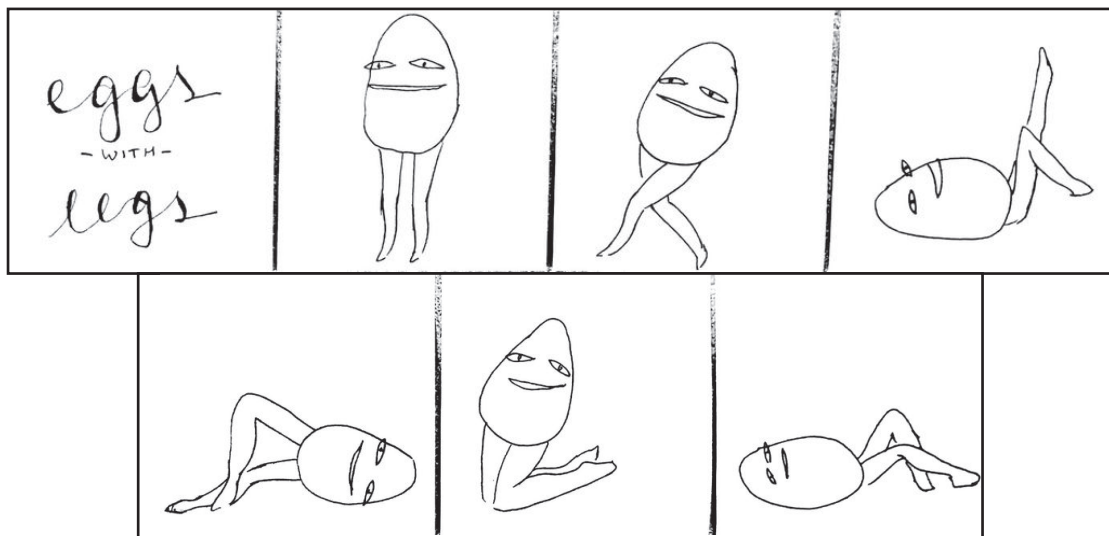
Solace in Numbers

C. Bhad



Goooo

G. Kuo



Answers to the current crossword (page 7)

W	N	E	R	N	E	N	E	N	E	N	E	N	E	N	E	N
E	L	I	D	E	S	T	A	I	S	T	A	I	S	T	A	I
N	E	K	E	N	T	O	K	E	N	S	L	E	S	I	S	T
K	C	H	A	C	K	S	H	A	C	K	S	H	A	C	K	S
W	E	E	P	I	N	G	S	T	Y	W	E	E	P	I	N	G
E	A	T	E	L	A	T	E	S	O	L	A	T	E	S	O	L
P	A	T	O	P	A	T	O	P	A	T	O	P	A	T	O	P
O	L	O	S	O	L	O	S	O	L	O	S	O	L	O	S	O
M	S	M	P	R	I	S	M	P	R	I	S	M	P	R	I	S
N	E	N	D	E	N	T	R	O	D	D	E	N	T	R	O	D
A	U	S	A	U	S	A	U	S	A	U	S	A	U	S	A	U
D	L	O	U	D	L	O	U	D	L	O	U	D	L	O	U	D
E	A	L	O	E	A	L	O	E	A	L	O	E	A	L	O	E
S	P	A	S	S	P	A	S	S	P	A	S	S	P	A	S	S

<http://puzzlechoice.com>

Crippling Anxiety

J

