

# ASCE BRUIN

SUMMER/FALL 2019



MEMBERSHIP 07  
PSWC 2019 14  
NAVAJO PROJECT 25

# CONTACT US

## ASCE BRUIN NEWSLETTER

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## *A Letter*

# FROM THE PRESIDENT

**CLAIRE KILLIAN**

Hello Alumni, Faculty, Sponsors, and Students!

It is my absolute pleasure to present the Summer/Fall 2019 ASCE Bruin Newsletter and share ASCE at UCLA's successes throughout this academic year. Encompassing the achievements of our overall chapter, we received the ASCE Region 9 Distinguished Student Chapter award: this recognition is given to the most outstanding ASCE student chapter among all the chapters in California. We also were awarded the UCLA ESUC (Engineering Society at UCLA) Overall Best Student Group award. These awards are truly a tribute to the tireless efforts of our officers and their dedication to creating unique and engaging events for the benefit of all 370 of our members.

At the heart of our chapter are our projects, many of whom have put in countless hours preparing for their spring competitions. To kick off spring quarter, our GeoWall team traveled to Pennsylvania over Spring Break and secured third place at the annual GeoWall National Competition. PSWC (Pacific Southwest Regional Conference), hosted this year by Cal Poly, San Luis Obispo, was a great year for ASCE at UCLA. We placed second overall among 18 other schools; of our nine competing projects, five notched top three finishes including first place in Environmental Design and Sustainable Dam, second place in Transportation, and third place in Concrete Canoe and Timber Design-Build.

Upon our return, we held our Spring General Meeting where we shared our PSWC successes with the rest of the chapter. On our professional development side, we hosted two more info sessions, three technical workshops, and a few more project workdays to keep the momentum going into the upcoming year. To round out our social events, we held a spring roll making social as well as our biannual Student Professor BBQ at Professor ET's home.

Both of our year-long community service projects culminated this year with big events: Seismic Outreach held their Finale Day at Lincoln Middle School and the ASCE-EWB Navajo Project traveled to Arizona to implement their design in Navajo Nation homes. Additionally, our Concrete Canoe team was awarded a wild-card bid to the Concrete Canoe national competition in Melbourne, Florida where they placed 8<sup>th</sup> overall!

Our End of Year Banquet was a great evening of celebrating another prosperous year of ASCE at UCLA with students, faculty, and industry sponsors. We acknowledged standout individuals among both ASCE project leadership and CEE faculty. Furthermore, we provided a historic three scholarships to rising underclassmen involved in ASCE thanks to our generous donors. Following the banquet was our annual bonfire, where members spent a day at the beach playing games and relaxing before finals.

We also held elections for our 2019-2020 Officer Board. A total of 18 officers were elected, and it warms my heart to say that two-thirds of these officers are #womeninSTEM! Our new officer board—consisting of 4 Core Officers, 14 General Officers, 21 Project Managers, 5 Team Leaders, 35 Project Directors, and 4 Advisors—is a team of highly

capable and passionate individuals and we are all excited to continue embodying our mission statement of “Creating Community and Enriching Experiences” as we both improve our current events and work to introduce new ones to our chapter.

This letter is filled with the successes of ASCE at UCLA, all of which would not have been possible without the generous and continuous support of our professors, alumni, and sponsors. We would also like to thank the UCLA Civil and Environmental Engineering Department for their steadfast support in helping our chapter function at the highest level possible.

The end of the year is always bittersweet, because it means saying goodbye to another group of outstanding seniors. These individuals contributed to this chapter in more ways than anyone can count, and their dedication inspires the rest of us. To all graduates, thank you for everything and we wish you the best of luck in your future endeavors.



**ASCE 2018-2019!** This year's annual group photo, featuring our new student-crafted ASCE letters.

We look back upon this year with fondness and pride as we look ahead to all the great possibilities the upcoming year holds. This chapter continues to grow through its ability to improve upon its success, and we welcome any and all feedback. Please don't hesitate to reach out to myself ([ckillian113@gmail.com](mailto:ckillian113@gmail.com)) or any other officer if you have questions, suggestions, or would like to know more about any aspect of our chapter. ASCE is truly a giant family, and we are delighted to welcome anyone who wishes to join us on our journey.

Best wishes,

**Claire Killian**, President  
ASCE at UCLA 2019-2020

# CEE ADMIT MIXER (CAM)

HEATHER WONG

For the first time in ASCE at UCLA history, we kicked off the Civil & Environmental Engineering Admit Mixer (CAM), a welcome program geared towards newly admitted UCLA CEE freshmen. The inception of CAM was inspired by the desire to showcase UCLA's CEE program and the opportunities provided by ASCE at UCLA. As UCLA CEE and ASCE have played significant roles in positively shaping our college careers, the organizers of CAM believed a recruiting event such as CAM would effectively showcase the strength of both institutions, as well as provide an opportunity for admitted students to ask questions and bond with current undergraduate students and amongst themselves. CAM took place after Bruin Day on April 13<sup>th</sup>, one day before the Discover Day hosted by UCLA Engineering. ASCE's recruitment program was established to supplement the school's program, with ours being geared specifically towards an in-depth introduction of student life within our civil engineering club.

CAM included a presentation on ASCE at UCLA, icebreakers, project demonstrations, an ASCE workspace tour, a presentation on autonomous vehicles from Urban Planning lecturer Ryan Snyder, a catered dinner from Westwood's Fresh Corn Grill, and an optional dessert social in Westwood Village. Invitations were sent out to all freshmen admitted to the UCLA CEE program, as well as those admitted as an undeclared engineering major. Most of the 30 registered admits attended CAM, which was entirely run by volunteers from our officer board. Attendees were given a souvenir t-shirt, water bottle, and pen to commemorate this event. ASCE would like to give a special shoutout to UCLA Engineering for their generous donation to the event; Ryan Snyder for his informative, well-received lecture; and the student officers who volunteered for this event and shared how ASCE and UCLA have positively impacted their college experiences. I cannot thank everyone enough for their contributions, whether big or small, in helping make this vision a reality. From feedback surveys and from speaking with the new admits during CAM, I believe that this year was successful in encouraging students to enroll at UCLA, or at the very least, to welcome them into our community. CAM is confirmed to be hosted the following school year. Efforts will be made to push further admit attendance, and a stayover program is being considered.



## ENVIRONMENTAL DESIGN DEMONSTRATION

A CEE Admit getting involved in a hands-on demonstration of our Environmental Design project.

# MEMBERSHIP

YUEN LENH - JOSEPH LEE

ASCE at UCLA proudly ends the spring quarter and the 2018-2019 school year with 333 members. About half of our members were new to ASCE this year. We had an even spread of members going into their 1st, 2nd, 3rd, and 4th year, and even members pursuing their graduate degree. Our membership consisted of more than just Civil Engineers. We also had members majoring in Mechanical Engineering, Environmental Science, Material Science, and much more. Approximately 60% of our members were also national ASCE members.



**ASCE BANQUET 2019** Students, faculty, and sponsors smiling for a picture after a special night celebrating this year's accomplishments at the End of Year Banquet.

A lot of our members were active in both the general and project aspects of ASCE. To acknowledge our most active members from the winter quarter, we recognized six members as our "Members of the Quarter" at our Spring General Meeting. These members were chosen based on the number of general events and project workdays they attended. We chose a "Most Social" member for the member who went to the most social events, a "Most Professional" member for the member who went to the most professional development events, and a "Most Athletic" member for the member who participated in the most intramural sport events. We also chose the top three overall members who went to the most events the previous quarter.

Throughout the year, we have hosted and seen a lot of member involvement in many general events and project workdays. For our professional development events, we have had an average of 27 members in attendance at info sessions, 18 members at field trips, and 24 members at our various workshops. For our general events, we have had an average of nine members at community service events and 35 members at social events. On the projects side, we have had about 5 - 20 members involved in each of our 11 projects.

As ASCE at UCLA wraps up another successful year in membership, we welcome our new membership chair, Joseph Lee. Joseph is a second year Civil Engineering major who loves hanging out with friends, going to the beach, and eating out. He also takes pride in being a tomato connoisseur. Last year, Joseph was a part of the Geowall and Seismic Outreach projects as well as ASCE Mentorship. He is currently interested in the construction and geotechnical aspects of civil engineering. As membership chair, Joseph hopes to increase our membership count to 350 and appeal to more students of majors outside of Civil Engineering. Joseph hopes to show members the various aspects of ASCE they can get involved in such as projects, workshops, and socials. He also plans on collaborating with our mentorship chair to create an event participation competition to encourage members to attend events. With his ambition and friendly nature, ASCE membership will certainly thrive under Joseph's leadership.



**DAM! THAT'S A BIG DAM** Students take a trip to the nearby Sepulveda Dam for a tour from several people in different positions at the Sepulveda Dam.



**W.E. O'NEIL INFO SESSION** Students gather in the Boelter Penthouse to hear a representative from W.E. O'Neil speak on the construction industry, and company practices.



**SIT BACK, RELAX, AND DIG INTO A GOOD BOOK AND SOME SAND** Anna Philipp pulls out a good read during the End of Year Bonfire.



**JOIN THE CLUB... LITERALLY** Newly admitted students join current fourth and second year students to pose with our beautiful club letters during the CEE Admit Mixer Day.

# INFO SESSION

**SOHAM GUPTA - AYLAVORETZKY**

Since its creation, ASCE at UCLA has been forming connections with companies of all sizes and specializations in order to give our members a broad scope to explore. While information sessions themselves don't vary all that much, we do our best to make them helpful and inviting for everyone, from our newest Bruins to our graduate students. In the 2018-2019 school year, we hosted 19 information sessions for a wide variety of companies, and we created several workshops for our members to develop their professional communication skills. Over the past few years, ASCE at UCLA Professional Development board members have also collected information from club members about internship hiring practices and general work experiences with our sponsor companies.

In the upcoming 2019-2020 school year, we are going to highlight each organization's unique combination of professional focus and company culture and we are open to creative information session activities that give students a chance to connect with representatives and peers. This year, we will also work to make the information compiled by former Professional Development board members more accessible. With this resource and the resumé and networking advice from our supportive professionals and alumni, all ASCE at UCLA members will feel prepared to explore their career options and gain valuable work experience.

# PROFESSIONAL OUTREACH

**KERI SCHOLTE - ANJALI SWAMY**

In April, the US Army Corps of Engineers invited us to tour the Sepulveda Dam site with a host of office engineers, dam operators, and different supervisors present to share about their work to keep Los Angeles safe in storm events. This field trip was valuable in that it showed us a glimpse of government opportunities in hydrology and environmental engineering, and the importance of infrastructure to monitor and protect our cities from natural disasters.

The school year wrapped up with groups of students visiting Holmes Structures, KPFF Civil, and Wood in our Industry Shadow Program (ISP). Each student was paired up with an engineer and gained insight on their tasks for the day, asking questions and familiarizing themselves with the company's work along the way. Thank you to these amazing industry partners for hosting our members.

This upcoming school year, 3rd year Anjali Swamy will serve as the Professional Outreach Chair and is looking forward to organizing field trips that represent the variety of Civil Engineering as well as some interesting larger scale construction sites in the LA area. We're planning to visit Smith-Emery Laboratories to see the Materials Testing & Inspection side of Civil Engineering that is crucial to construction. In addition, we plan to visit the projects happening on UCLA's campus including the seismic retrofit of Franz Hall and the new dorms being constructed by PCL Construction. We'll be expanding the Industry Shadow Program to include even more companies that students are interested in gaining a connection to, as well as sustaining connections with previous partners. Our goal is to keep giving students opportunities to see what they have learned in school being applied in the real world!

# COMMUNITY SERVICE

**DOUG CHAMBLISS - ANNA PHILIPP**

Our 2018-2019 year of community service would not have been the same without Doug Chambliss. Without him we would not have had quarterly escapes to the Kindred Spirits Farm to see our favorite pigs, alpacas, and duck. This quarter, we visited the farm in Winnetka to take a tour of the facilities followed by about two hours of volunteering. Activities included weeding the gardens, picking vegetables, and repotting decorative flowers. Volunteers enjoyed the rewarding work they were assigned and liked to be around the various friendly farm animals.

This quarter we also volunteered with TreePeople in Lynwood. When a group of our members arrived, they were first shown a demo by the TreePeople volunteer staff, and then were split into groups to plant along the curb. It took about two hours from start to finish, and volunteers felt rewarded by the end. They appreciated the newfound knowledge of tree planting and TreePeople appreciated our hard work.

Now we would like to introduce our 2019-2020 Community Service Chair, Anna Philipp. Anna is a 3rd year and was the 2018-2019 Social Chair and Lead for Sustainable Dam. Members can look forward to beach clean ups, sustainability activities, and don't worry, we will definitely be back to Kindred Spirits!



**BRUINS SHOW SOME LOVE TO A KINDRED SPIRITS PIG** Nothing puts a smile on the faces of these volunteering students like getting to feed a pig a carrot at Kindred Spirits.



**HARD WORK MAKES YOU HUNGRY** No community service event is complete without a stop for food afterwards. This time, the stop included a few rounds of the Uno card game.

# ATHLETICS

GIANNA FURUMOTO - SHAINA PATEL

We participated in four sports this year at PSWC, including basketball, sand volleyball, soccer, and ultimate frisbee. We did not place in any of the sports but that didn't stop us from having a good time! We also participated in three intramural sports this past spring quarter: co-rec basketball, co-rec sand volleyball, and doubles tennis. All three of these teams made it to the playoffs!



**SWEAT MAKES YOU SHINE** Our intramural volleyball team looking better than ever after playing hard in the last game of the season.

I really enjoyed being Athletics Director this year, I had a lot of fun organizing sports and events. It's time for us to transition leadership; I'd like to introduce Shaina Patel as the new Athletics Director! Shaina is a third year, and a fellow #WomanInStemInSports. Here are a few words from her about her plans for the year.

First off, a big thank you to Gianna for running such an amazing year of athletics for ASCE. I hope to carry on her legacy and have our members do well and have good old team fun playing IM sports every quarter and even more importantly, at PSWC this upcoming year! One of the ideas I want to incorporate next year is inter-project competition, so be on the lookout for that!



**TUG OF WAR TURNS TO TUG OF FRIENDSHIP** After a massive round of Tug of War at PSWC 2019, students from UCLA and CSUN pose for a photo together.

# SOCIAL

**ANNA PHILIPP - JACOB STANLEY**

The 2018-2019 school year closed out with some great end of the year activities. ASCE members gathered together for some last minute bonding at the Spring Roll Making Social, Student-Professor BBQ, and the End of the Year Bonfire.

The Spring Roll Making Social was a new event this year! Members got the chance to test their culinary skills as we made spring rolls from scratch. Our members piled into our Treasurer's apartment, cooked, ate, and even had time to lounge around and watch a movie. For our Student Professor BBQ, Professor ET was kind enough to welcome our members into his home spring quarter. Members had a great time catching up with each other and had a great opportunity to get some one on one time with their favorite professors. The End of the Year Bonfire was a great time to celebrate all of our members and their accomplishments over the year. We roasted marshmallows, hotdogs, and even our old Seismic Design Structure.

We would now like to welcome our new Social Chair, Jacob Stanley! Jacob is a 4th year and was the 2018-2019 Steel Bridge PM. We can expect many great events from him in the coming year like some fun adventures to explore the many cultures that make up Los Angeles.

# MENTORSHIP

**VIVIAN CHONG - KRISTIDA CHHOUR**

For our final mentorship event, the first ever Mentorship Olympics, we wrapped up the year with a bunch of activities, food, and an awards ceremony! With the help of Gianna Furumoto, the Athletics Director, families got to compete in fun games against each other with tons of points on the line. From water balloon tossing to picking up M&Ms with chopsticks, all kinds of skills were put to the test. Huge congratulations to Alphabet Shlurrrp for coming in first place with a total of 4268 points! They were recognized by getting their family name on a brand new trophy that will be passed down in the years to come. In addition, the MVP award went to Reion Domingo for being the most involved, and the best pairing award went to Alyssa Yim, Sarah Ciudad, and Sophia Tan.

Thank you to everyone who made this year's mentorship program incredibly special. We hope you met new people and formed genuine relationships, got guidance with your academic courses, and made lasting memories.

Next year's mentorship program is already in the works by the 2019-2020 Mentorship Chair, Kristida Chhour. There will be new family heads, additions to the family points system, and tons of new faces in the coming fall. Be sure to get involved in mentorship next year for another year of fun!



**SPRING ROLLS FOR SPRING QUARTER** Nick Borov and Vivian Chong show off their hand rolled spring rolls after our first successful Spring Roll Making Social.



**FIRE AND FRIENDSHIP KEEP US WARM** As tradition goes, the End of Year Bonfire provided a perfect opportunity to burn the Seismic Design structure on a chilly night at the beach.



**THE 2028 OLYMPICS ARRIVE NINE YEARS EARLY** This new addition to the ASCE Mentorship program proved to be a memorable and fun event. To the left, Doug Chambliss, Youngbo Shim, Jacob Stanley, Francis Paras, and Eliot Yang get enthusiastic about the competition. Above, Alyssa Yim, Sophia Tan, and Sarah Ciudad show their winning smiles after earning the Best Pairing award. And above to the left, the four different families begin racing during a relay race.

# PSWC 2019

JOHNNY SCHMIDT - VIVIAN CHONG

U - C - L - A FIGHT FIGHT FIGHT!

This year in April we headed over to Cal Poly SLO to compete and showcase the work we have done the past school year with a record breaking 104 UCLA students in attendance. From concrete canoe races, to family feud, to volleyball games, the UCLA Bruins gave their all to show the rest of the Pacific Southwest what we had.

Our hard work and team spirit paid off, as UCLA finished off with 2nd place overall, and 1st place finishes in Environmental Design and Sustainable Dam.

Next year, Vivian Chong will be serving as the conference coordinator, and she is excited to take the Bruins to Cal State Fullerton in 2020. In addition, Tori Mok will be spearheading the conference held at UCLA in 2021, and planning for the conference is well underway.

Here's to more chanting the 8 clap at the top of our lungs!



**FUTURE CONFERENCES LOOK BRIGHT** Tori Mok (PSWC 2021 Chair) and Vivian Chong (PSWC 2020 Coordinator) smile after winning medals for their performances in the Collaboration event at PSWC 2019.



## WINNER WINNER CATERED DINNER

Following a delicious meal at the Awards Banquet, ASCE at UCLA proudly poses for a picture while holding our newly received trophies and plaques.

# CONCRETE CANOE

COLIN BURROWES - CATHERINE NGUYEN

UCLA Concrete Canoe had a busy and exciting year, building off of successes at the regional level to attend Nationals for the first time in three years. Entering the 2018-2019 academic year with an exceptionally young leadership featuring all-new directors posed concerns regarding inexperience, but hard-working project managers Colin Burrowes and Lizzy Robinet were able to successfully guide the team.

Months of hard work spent designing and casting the canoe paid off when we finally presented the desert-themed Sugar Rush at the 2019 Pacific Southwest Conference (PSWC) hosted by Cal Poly San Luis Obispo early Spring Quarter. This conference serves as UCLA Concrete Canoe's regional competition, and akin to the national competition+, involves four individual categories: Design Report, Oral Presentation, Final Product, and Races.

The team performed well, taking 3<sup>rd</sup> in Design Report, 3<sup>rd</sup> in Oral Presentation, 5<sup>th</sup> in Final Product, and 3<sup>rd</sup> in Races to secure a 3<sup>rd</sup> place finish out of 18 teams.

PSWC commenced early Thursday morning with Canoe Display Day at CPSLO's Dexter Lawn. Directors and project engineers arrived to mount the canoe on cake-esque stands and assemble a baking themed display table featuring concrete mix components, technical documents, cylinder samples, and picture documentation over the year. Students were free to observe other schools' canoes and learn of innovative practices from each other as judges performed preliminary judging of deliverables and checked for rule infractions. Then it was on to Oral Presentations, where many of UCLA's conference attendees cheered on from the audience as our project managers expertly delivered their own presentation and answered questions from a panel of judges. The next day brought the team to beautiful Lake Nacimiento for Race Day. Wind and chilly temperatures proved to be unideal race conditions, but nevertheless paddlers persevered to take 3<sup>rd</sup> in Women's Sprints, 5<sup>th</sup> in Men's Sprints, 3<sup>rd</sup> in Coed Sprints, and 4<sup>th</sup> in Women's and Men's Slalom, one of the better performances in recent UCLA history.

Our strong showing at the regional level made us eligible to attend the National Concrete Canoe Competition (NCCC) on a Wildcard bid. Preparations were made accordingly to send the canoe and 18 team members to sunny Melbourne, Florida during Week 10 of Spring Quarter. There were many obstacles in getting there, most notably transportation difficulties which led seniors Ada Chang, Johnny Schmidt, and Joshua Widjaja to sacrifice their last week of classes at UCLA to nobly drive the canoe to the other side of the country. There, the events of PSWC were repeated on the national stage, albeit in sweltering heat and humidity. This didn't dampen the team's high spirits though, as we bonded over the good (Race Day at a swamp with alligators, a field trip to NASA's Kennedy Space Center) and the ugly (sunburns, bug bites, the weather). UCLA Concrete Canoe ended up taking 5<sup>th</sup> in Oral Presentation and 8<sup>th</sup> in Design Report to finish 8<sup>th</sup> overall. Although we didn't have a podium finish, it was an experience we will never forget, competing with the best of the best and getting to meet like-minded concrete enthusiasts from all over the nation, and even from China and India.

Following UCLA Concrete Canoe's admirable performance, next year's leadership has already begun preparations for next year. The new leadership consists of project managers Catherine Nguyen and Rachel Tam, along with directors Anjali Swamy, Anne Mast, Ayla Dvoretzky, Jenna Shigeta, Ki Ja Ourdoun, Kristine Ocampo, Matthew Saiki, Megan Magorka, and Yousef Almalla. This team features a great blend of highly motivated underclassmen and upperclassmen, all of whom have a common goal of having fun while working to take UCLA back to the national stage next year!

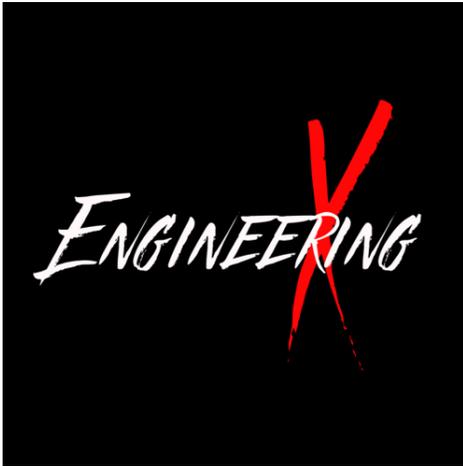


**BUG BITES, HUMIDITY, ALLIGATORS, OH MY!** The Concrete Canoe team poses with the Canoe at Nationals in Melbourne, Florida.

# CONCRETE SPORTS/ENGINEERING X

JASON HEADINGTON - TREVOR DAVIS

This year, Concrete Sport was thrust into uncharted territory when it was cut from the PSWC event lineup at SLO. But this year's team showed resilience and dedication to improving our craft as well as creating something Cal Poly couldn't take away, UCLA Concrete Sports Finale Day. Using newly mixed, dynamic frisbees, Concrete Sports broke ground with the first ever Finale Day competition. This competition pitted eight teams against each other in a head to head winner takes all competition. This competition had teams of engineers as well as people from other majors. We pulled out all the stops and brought together events from many former competitions, including frisbee, bowling, and horseshoe. The day was a lot of fun and was great for showcasing what Concrete Sports is all about.



**NEW NAME NEW LOGO** As Concrete Sports transitions to Engineering X, a redesign of the program prompted a redesign of the logo.

As with all things, Concrete Sports is constantly evolving and growing. Seeing that Cal Poly cut our event from their PSWC, our team realized that it was time to expand the idea behind Concrete Sports to a broader, more encompassing, more epic event. We were looking to make something that was exciting and inspiring all while keeping the core fundamental aspects that made Concrete Sports a great event.

Thus, we present Engineering X. This is a brand-new event being founded at UCLA. Taking the passion for combining athletic competition with engineering, Engineering X is an event where two teams will go head to head designing and building obstacles to be placed on an obstacle course that will be completed by the other team. Whichever team can scale the other teams obstacles and finish their course first, wins. Both teams will have the same set physical boundaries and budgets to work with, leading to a challenge in resource allocation as well as the engineering aspect. In the upcoming year, the former Concrete Sports team will focus on prepping this event for a finale event this year and ultimately for PSWC 2021. This will be an event that you do not want to miss.

**THROWING A CONCRETE FRISBEE IS AS HARD AS IT SOUNDS** An action shot of Adam Wong moments after he used his arm to launch a concrete frisbee as far as he could in the distance portion of the Concrete Sports Finale Day competition.



# ENVIRONMENTAL DESIGN

**PAULINE NGUYEN - INGRID SPIELBAUER & VICKI FRIESEN**

Kicking off spring quarter, Environmental Design project members approached PSWC excited to put our hard work over the past two quarters to the test and left with our spirits high from our first place finish. After a challenging fall and winter quarter that involved ample research, design, and testing of our small-scale, non-potable water treatment system, we were able to gain a whole new appreciation for water treatment processes.

This year's competition challenged us to build a system on-site and treat 9 gallons of water in less than 60 total minutes. Pollutants in the wastewater included olive oil, potting soil, vinegar, ferrous sulfate, and salt. In order to effectively, sustainably, and economically treat these pollutants, our system implemented several unconventional treatment methods; these included using peanut shells to remove iron, polystyrene beads to remove oil, and DI resin to reduce conductivity. During the 2019-2020 school year, we hope to continue this practice of creative brainstorming, thorough research and testing, and triweekly workdays to yield similar results at this upcoming year's PSWC competition!

Post-conference, the Environmental Design project continued to both grow as environmental engineers and as a team through several socials, including one beach day at Dockweiler State Beach and several rooftop potlucks; an informative and interesting field trip to the Hyperion Treatment Plant; and even a (vegan-friendly) cookie fundraiser on Bruin Walk. This upcoming fall quarter, come meet our new Co-Project Managers: Vicki Friesen and Ingrid Spielbauer, as well as our four Project Directors: Allison Lee, Mathew Gutierrez, Justin Duong, and Patience Olsen, at workdays and socials (TBA), and join us as we continue bonding through our mutual appreciation of both water treatment and food!

# SURVEYING

**JOSHUA WIDJAJA - KAT ACERO**

Hello, welcome to Surveying!

In this project, we learn the basics of surveying and send a team for the surveying competition at PSWC each year. What is surveying? It is the skill of determining the position of points on the land that can be used for maps and layouts. We use professional surveying equipment such as the automatic level, Philadelphia rod, tape measure, plumb bob, reflector rod, and total station to conduct surveys to gather data on the elevations, distances, and angles of points around the UCLA campus. With its own section on the PE exam, surveying is important for any civil engineer.

Our competition team placed 5<sup>th</sup> at PSWC 2019 in San Luis Obispo in another great year of competing. The competition consisted of three timed events and a bonus event. In Event 1, we found the internal angles between points using a total station and reflector rod. In Event 2, we measured an extended distance through a meadow using a 100-foot steel tape and chaining methods. In Event 3, we set up the tripod and theodolite over a point as fast and as accurately as we could. In this year's geocaching bonus event, we followed a set of directions to find an object. Our thorough practices and preparation readied us to come in headstrong and adapt to each event with no difficulties.

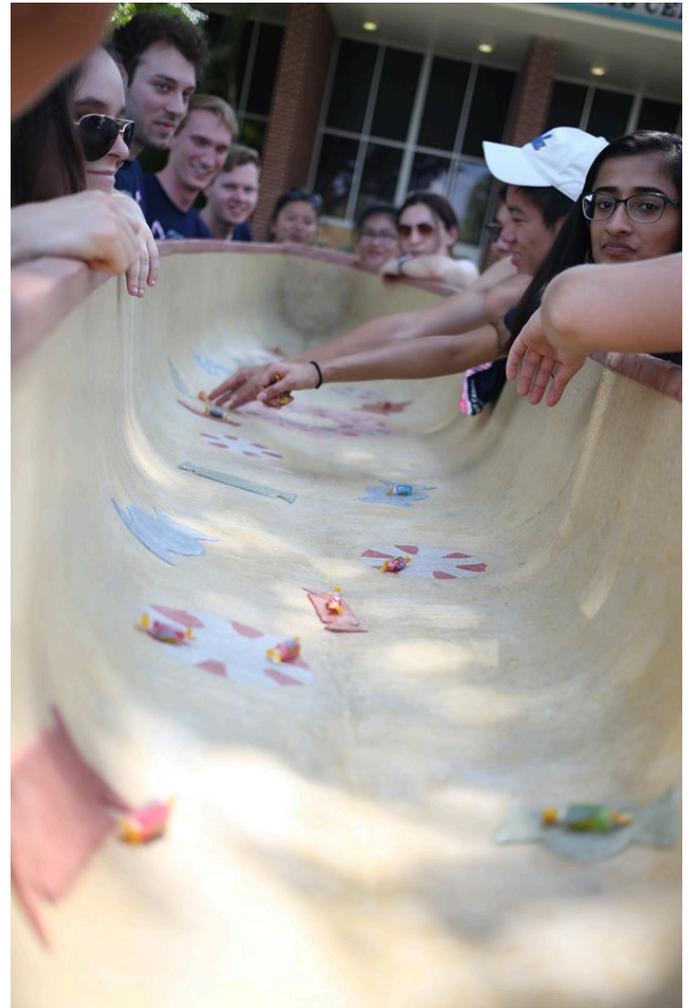
During Spring quarter, we held a competition workshop that replicated the events of PSWC on our own campus to give other members a chance to experience competition events. Other workdays provided opportunities to practice using equipment and calculations. For the 2019-2020 school year, the Project Manager will be Katherine Acero and the Project Director will be Milton Mak. We hope to continue teaching skills to other prospective members and look for potential team members to compete at PSWC 2020. Look out for workdays in the fall, where we will teach basic skills in surveying, survey the UCLA campus, and have fun. Hope to see you there!



**SURVEY SAYS...** To the left the surveying team smiles prior to competing in the PSWC competition. To the right, a Surveying workday takes place in nowhere other than Boelter courtyard.



**NON-POTABLE WATER TASTES LIKE VICTORY** Above, an Environmental Design workday takes place in which they are test their non-potable water treatment system. Below, the team gleams after a first place finish.



**SUGAR RUSH CANOE LOOKIN' SWEET** An up close view of this year's canoe, and its offerings of concrete candy and real candy.



# GEOWALL

CAILEEN YU & RACHEL LIEN - MAAN ALHAMDAN

We're just starting the new academic year and excited for what's to come! We would like to take this opportunity to update you on all things GeoWall. For a quick recap, Geowall is a competitive project in which we design and build a small-scale, Mechanically Stabilized Earth (M.S.E.) retaining wall made from kraft paper. We aim to use the least amount of paper to support 500 pounds of backfill and various design loads.

Last Spring, we competed at the national competition hosted by the ASCE Geo-Institute in Philadelphia, Pennsylvania. Our hard work paid off with 3<sup>rd</sup> place overall and 1<sup>st</sup> place in design report. Shortly after, we competed at the regional competition in the Pacific Southwest Conference (PSWC) hosted by California Polytechnic State University, San Luis Obispo. The team had an outstanding performance followed by another strong finish, placing 4<sup>th</sup> overall. We are proud to have designed a kraft paper wall weighing only 45 pounds and all within the time constraints. It successfully held up 500 pounds of sand, 50 pounds of vertical surcharge, 20 pounds of horizontal surcharge, and a 5 pounds of dynamic load.

The end of the PSWC also marked the end of the competition season. We spent the rest of Spring Quarter transitioning the 2019-2020 project leadership: Project Manager Maan AlhAMDAN and Assistant Project Manager Kyle Hu. Also a part of the transitions were our wonderful and bright project directors: Sarah Ciudad, Peter Lee, Craig Sugiyama, Alan Truong and Tiffany Vuong. Roles were assigned and outgoing project directors helped ease these incoming project directors into the tasks they were assigned.

Since then, our brilliant team has spent the summer preparing for the new design criteria and planning for future project events. We strive to further empower the community of undergraduate geotechnical engineers through GeoWall. We anticipate competing again this year at nationals in Minneapolis, Minnesota and regionals in California State University, Fullerton. We're excited for the coming year and look forward to the challenges and experiences that await us.



## ONLY SMILES WITH GEOWALL

The Geowall team beaming at the PSWC Banquet, knowing that they have successfully completed a year's worth of work on their project.

# SEISMIC DESIGN

LENN KUSHIGEMACHI & BRYAN ONG - SOHAM GUPTA

Seismic Design is a structural and earthquake engineering project focused on competing in the annual Earthquake Engineering Research Institute's Seismic Design Competition (EERI SDC). The goal is to design, model, and construct a 5-foot tall balsa wood structure to be tested on a shake table to determine seismic resilience. In addition to the physical structure, competitors must also submit a design proposal, informational poster, and seismic performance prediction as well as give a short presentation on the construction process, architecture, and structural design.

This past spring, 38 schools from around the world competed in Vancouver, Canada and our team finished at an astounding 2nd place. Throughout the school year we made many improvements to our processes to make this possible. We greatly increased our construction efficiency by switching from a ground-up construction method to a pre-fabrication method. We also increased precision by implementing the use of 3D printed construction templates. We will take these advancements as well as many lessons learned with us to continue improving for the next competition.

In the upcoming school year, new team members will be taking charge of the project. Soham Gupta will be the Project Manager supported by the Assistant Project Managers, Rodger Lee and Honor Fisher. All three have shown incredible dedication to the project's success as well as a commitment to providing a positive, hands-on learning environment for other students. They have brought together a strong team of other undergraduates; Jonathan Tai will serve as Director of Structural Design, and Varun Tankha and Nick Borov will serve as Directors of Construction. Everyone will work collaboratively to come up with and implement a design that is both structurally sound and architecturally pleasing.

The next competition will be held in March of 2020 in San Diego, California. We have already started preparing by spending the summer reading structural engineering research articles and creating ideas for potential prototype designs. In the fall, we will begin by welcoming new members to the team and introducing them to structural and earthquake engineering concepts through a preparatory project. Once the rules and specifications for next year's competition are available, we will begin our design proposal and start constructing a prototype structure. Each year presents a set of unique challenges and we look forward to exploring them with our new team.



**SEISMIC DESIGN SHAKES UP THE COMPETITION** The Seismic Design team smiling with their finished product of balsa wood and glue.

# CONSTRUCTION MANAGEMENT

ALEX LEE - ALYSSA YIM



**SUSTAINABLE DAMS AND SUSTAINABLE T-SHIRTS** The Sustainable Dam team during competition at PSWC, sporting old ASCE shirts turned fresh with the help of tie dye.

leadership, an aggressive recruitment effort, and the devotion of constant effort up until the night before the competitions resulted in UCLA bringing home the 3rd place trophy in Timber and the 1st place trophy in Sustainable Dam.

Following up Construction Management's great performances at ASC 67 and PSWC consisted of preparing members for whatever they had planned for summer and the following year. Whether it was a construction internship crash course or purchasing sorely needed supplies, the Construction Management projects are set to continue their trend of improvement since their conception.

Going into next year, we hope to continue showing steady growth as we refine our methods of approach. Leading Construction Management during the 2019-2020 academic year will be Alyssa Yim (Project Manager), Ameya Patel (ASC 67 Design Build Team Leader), Nick Borov (ASC 67 Mixed Use Team Leader), Mathew Gutierrez (ASC 67 Sustainability Team Leader), Gianna Furumoto (PSWC Design Build Team Leader), and Anna Philipp (PSWC Sustainability Team Leader). The PSWC teams will also have Project Directors Jonathan Tai and Emily Story for Design Build and Sustainability respectively.

We plan to build upon last year's successes by analyzing what went well and what didn't this past year. As always, we will try to put learning at the forefront of our project. Additionally, an emphasis will be placed on developing teamwork as we have found that teams perform best when there is a sense of camaraderie between project members. In this coming year, we anticipate improvement in all aspects of what we do.

Construction Management encompasses several projects that ASCE at UCLA participates in. From the ASC 67 competition in Sparks, NV, to the multiple PSWC projects that have started to appear, Construction Management provides the preparation and support needed to excel in these areas despite UCLA's lack of a formal construction-related program.

PSWC 2019 saw the second appearance of the Timber-Strong Design Build competition and the first appearance of the Sustainable Dam competition. UCLA performed well in the previous Timber competition, but there was significant room for improvement. New project

# SEISMIC OUTREACH

TYLER PENN & BRANDON DUONG - ELIOT YANG

Spring Quarter was a huge success to all Outreachers, teachers, and students! Seismic Outreach at UCLA helped and taught over 350 students at Lincoln Middle School in Santa Monica the fundamental principles of civil and environmental engineering. Yes, you read this correctly: “environmental engineering,” a new addition to the Seismic Outreach program.

Helping Lincoln Middle School students was different from previous years and even different from Emerson Middle School and Paul Revere Middle School whom we helped in the fall and winter quarters, respectively. Lincoln students were the first to be introduced to our environmental engineering and sustainability components of our program, which paired well with the new seventh grade curriculum. Our new and improved program got students excited to be sustainable and to incorporate green infrastructural features into their building designs. With the help of Dr. Magee, Ms. Sinclair, and Mrs. Qualls and all of our sponsors, we were able to host a successful, organized, and fun-filled Finale Day at Lincoln Middle School for the students and volunteers.

Seismic Outreach also expanded its scope of inspiration by pairing with Women Advancing Technology through Teamwork (WATTS), an organization that strived to teach inner-city students about engineering and technology. We gave a brief presentation about the core ideas of earthquakes and structural engineering and broadened our audience in an attempt to introduce the importance and wonders of engineering to younger crowds.

To end the successful year, Seismic Outreach hosted its second annual food challenge social to celebrate the accomplishments we saw. Some of the featured foods included spicy ramen, Nashville hot chicken from Howlin’ Ray’s in Chinatown, durian flavored mochi, and jackfruit. Everyone bonded over the intense heat of the hot chicken and ramen and had a spectacular time celebrating the team’s success over the past year. The torch was passed from Co-Project Managers Tyler Penn and Brandon Duong and Project Directors Claire Killian, Vivian Chong, and Eliot Yang to the new incoming team of Project Manager Eliot Yang and Project Directors Cheston Cheung, Camille Ituralde, and Lucas Tang. Seismic Outreach is excited for the next school year and cannot wait until the next group of young thinkers is inspired.



**SPICY SMILES** The Seismic Outreach team smiles for a photo after a memorable food social with some very spicy food. Luckily, there were gallons of milk on hand!

# ITE-ASCE TRANSPORTATION

**SCOTT KAWAKAMI - WALKER DAI**

The Transportation Design Project is an ASCE project that focuses on the transportation engineering field of civil engineering. In April, we compete in PSWC against other universities on a project that asked us to redesign the intersection of US 101 Freeway and Santa Rosa Street, a highway intersection in the city of San Luis Obispo. Currently, the on and off ramps at the intersection have various safety hazards that need to be improved. To improve safety without worsen traffic congestion, we proposed a plan that changed the current intersection to a Single Point Urban Interchange, where existing ramps are modified to converge at a signalized intersection.

We presented our project in front of the judges and the audience during PSWC. Our presentation team comprised of Scott Kawakami, Brandon Duong, Dario Qiu, Sophia Tan and Walker Dai. With huge support from our ASCE student members, we obtained second place among all universities. This is our all-time best result. With more and more students interested in Transportation Engineering, the Transportation Design Project involves more members. With more ideas and commitment from students, we keep achieve better and better result.

After PSWC, we have interviewed and selected our new leadership for next year's Transportation Design Project. Walker Dai (Junior) will be our new project manager, and Sophia Tan, Nathan Sharafian and Nathan Vardas (all Sophomores) will be our new project directors. With their experience and dedication, we believe that they can bring the project to a new height. Next year, we want to introduce transportation engineering to more students, thereby introducing more career options for civil engineering students. More specifically, we want to involve more members in our projects and bring more members to the site visit, where we have a field trip to the actual site to discover real problems and deal with them when we come back. We are looking forward to returning to school and working on our new project.

# STEEL BRIDGE

**JACOB STANLEY & JOCELINE SUHAIMI - REION DOMINGO**

ASCE at UCLA's Steel Bridge team is tasked with designing, fabricating, and constructing a bridge to meet specifications outlined in each year's ruleset. These include the physical layout of the bridge as well as the placement of the lateral and vertical loads applied in competition, which vary from year to year. The prompt this year led us to design a deck bridge, and this past spring, our team's efforts culminated in a trip to San Luis Obispo for the Pacific Southwest regional of the AISC Student Steel Bridge Competition (SSBC). Last year's design prioritized load resistance over constructability, and our construction time was higher as a result, at 20 minutes. Though a focus on strength led to a low deflection relative to the other schools, we were ultimately unable to place in the competition.

After SSBC, we celebrated the retirement of the outgoing bridge project managers: Jacob Stanley and Joceline Suhaimi. After a changing of the guard, the 2019-2020 school year will see Reion Domingo as our project manager, together with assistant project manager Cade Luongo and project directors Alexis Bui, Leo Sum, Pooja Gupta, Reilly Terao, Stacy Kong ready to lead the charge. Our first focus this summer is to develop our team's design skills through a project featuring tasks in AutoCAD and SketchUp. From late summer through the end of the Fall quarter, we will set to work on developing and refining a design based on the new set of rules released by AISC.

Next year, in addition to offering an AutoCAD workshop geared toward freshmen in the CEE 1 seminar, we aim to implement a new introductory project to better familiarize members with the fabrication process that ensues once winter quarter starts. We also plan to spice things up at workdays with a new Bridge Selfie of the Month program to promote inclusivity and encourage interaction between old and new members alike. By the same token, this year we want to coordinate with other ASCE project more often for socials and other activities.



**STEEL BRIDGE STILL STANDING** Above on the left, after competing and constructing their bridge, Steel Bridge members sit atop their structure. Above on the right, next year's leadership bond over a plate of food and good company.



**TRANSPORTATION PROJECT FACES NO ROADBLOCKS** Above on the left, the Transportation members who participated in the presentation proudly gleam with their new 2nd place plaque. Above on the right, the team presents to a few judges, as well as all of the UCLA students sitting and watching in support.

**GETTING DOWN IN THE DIRT** The Navajo Project, armed with picks and shovels, puts in work to implement their solar powered water system in Arizona.



# EWB-ASCE NAVAJO PROJECT

RYAN WONG - TREVOR HUFFAKER & NADIA MAHER

The Navajo Water Project works towards designing and implementing an off-grid solar powered water system for families on the Navajo reservation in Northern Arizona who do not have access to the main power and water lines. Each year we find a family to work with and customize a system to best fit their needs. The project started in 2016 as an ASCE - EWB joint project, and we have now implemented three systems for three different families on the reservation. The systems usually consists of a distribution system with a tank, pump, sink and the necessary piping for greywater distribution as well as a power system with a solar panel and wiring to power the pump. Our project is divided into teams that each have their own role in the design of the system. These teams are Distribution System Design , Power Systems, Drafting and Construction, and Marketing and Finance. Students can choose one team, or float between teams and this allows them to learn multiple skills from civil, electrical and mechanical engineering, as

well as gain experience in acquiring funding. Each of these teams put their individual skills to use and contribute toward a successful project that is both functional and sustainable.

This past June our team of 16 students traveled out to the reservation to assemble a system for Louise Benally, a member of the Navajo nation who lives in a hogan (traditional Navajo home) without access to running water. We had been in contact with Louise throughout the year and a team of five students traveled to her hogan for an assessment trip in the winter. After speaking with Louise, a sink system was determined to be the best fit for her given the space she had available. From June 16-20th, we traveled out to Arizona to put the system in place as planned. We spent the first and last day traveling, as her home is about two and a half hours outside of



**GOLDEN HOUR IN THE GRAND CANYON STATE** Students enjoying the sites during their service trip the week after school finished up.

Flagstaff, Arizona. Our first two workdays consisted of digging the hole for our 300 gallon refillable water tank, digging trenches for the piping so they sat below the frost line, setting up the circuitry for the solar panel system, and putting together the piping system to connect the tank, pump, sink and greywater system. The latter half of the second day also consisted of testing the system once the electric and distribution systems were connected. On our last workday, we did final testing of the system and checked for leaks before we filled the hole and trenches we dug for the tank and the greywater system.

For the 2019-2020 school year our project managers will be Trevor Huffaker and Nadia Maher. We are excited to have 7 directors leading our 4 teams. The Distribution System and Design Team will be led by Sam Hwang and Ellie Kim, Power Team led by Aanchal Mehndiratta and Brian Yee, CAD team led by Jared Rivera and Margit Maple, and our first Finance and Marketing Team led by Sriram Kotta. This school year, we plan to reach out to other UCLA clubs that are involved with the Navajo nation in order to make sure our team members are informed and educated about the history and current events of the Navajo. We also plan to reach out to and hopefully work with both UCLA and non-UCLA organizations to maximize our resources and therefore maximize our impact.

# END OF YEAR BANQUET 2018

HEATHER WONG - YUEN LENH

ASCE at UCLA's annual End of the Year Banquet took place on May 31<sup>st</sup> at UCLA's Faculty Center. UCLA Civil & Environmental Engineering faculty and staff, industry sponsors, alumni, and student members gathered together this evening to celebrate the successes of the club during the 2018-2019 school year and to look ahead to the next year. The agenda included a cocktail hour, table trivia, a three-course dinner, incoming and outgoing presidential addresses, project recaps, and award presentations. Our school chapter was once again recognized as the top ASCE Region 9 chapter, which establishes us as the top chapter in all of Region 9, the California Region. This achievement was recognized during Banquet.

The student-voted TA of the Year award went to Michael Weyant and the Lecturer of the Year to Dr. Jonathan Glassman. For the second consecutive year, Dr. Scott Brandenburg was voted as the Professor of the Year. ASCE student members Alexis Bui, Justin Qiu, and Alex Lee were honored as the Project Engineer, Director, and Manager of the Year, respectively. The Rising Star scholarship awards were continued this year to encourage and reward younger members for their contributions to the club and to the civil engineering field. Thanks to the huge generosity of our donors and the impressive number of applicants, ASCE awarded three scholarships this spring to freshmen Nick Borov and Emily Story, and sophomore Soham Gupta. Looking ahead, ASCE hopes to continue these scholarships to give back to our active student body, as well as encourage higher attendance from industry and faculty to build an even more tight-knit community.



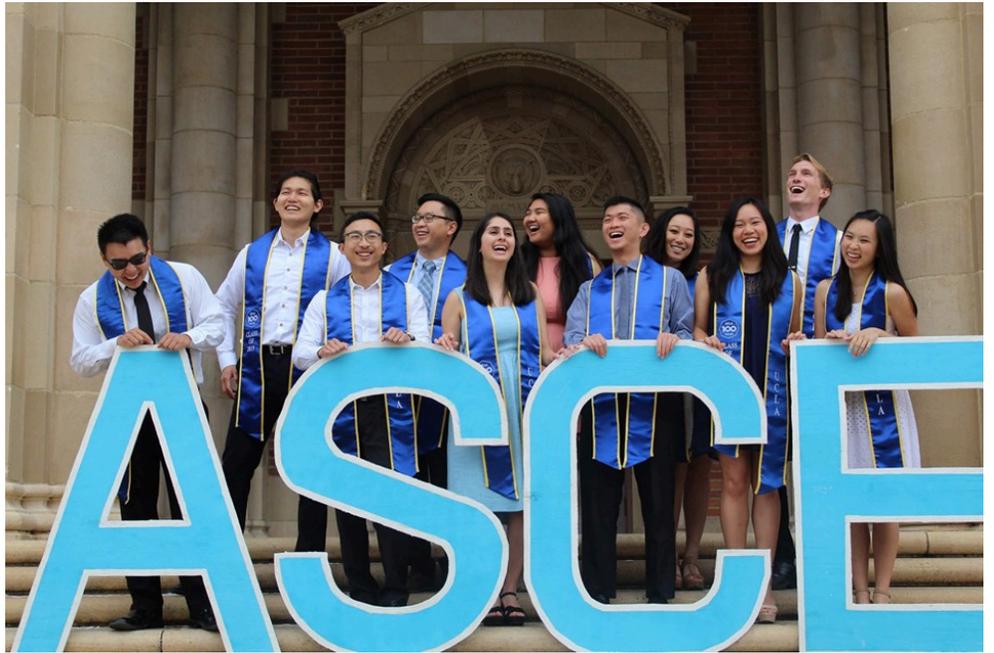
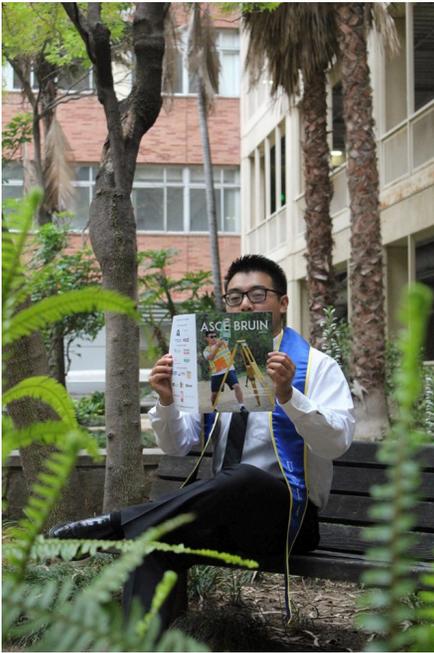
**ALL SMILES FOR FOOD AND FRIENDS** Students at the End of Year Banquet smile in anticipation of the food, fun, and friendship that the night is to bring.



**PROFESSOR OF THE YEAR** Dr. Scott Brandenburg accepts his award of Professor of the Year as voted on by the students of ASCE at UCLA.

# ASCE GRADS

CONGRATULATIONS CLASS OF 2019! YOU WILL BE MISSED.



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