

A close-up photograph of a hand constructing a complex mechanical or structural model using colorful sticks (red, yellow, blue, black) and interlocking gears (blue, yellow, white). The background is blurred, showing a person in a green shirt.

ASCE BRUIN

SPRING 2017

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CONTACT US

ASCE BRUIN NEWSLETTER

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WE'RE SOCIAL!



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A Letter **FROM THE PRESIDENT**

Dear Alumni, Faculty, Sponsors and Members,

We have rounded third base and are heading home. Two quarters of this fantastic school year are complete. Winter Quarter was an affirmation of how far ASCE at UCLA has grown into becoming a more dynamic student chapter. In this newsletter, you will see two things: how varied and uniquely crafted our events have become and how determined our projects worked to achieve their goals. It is our passion for excellence and everlasting pursuit for refinement that make up our DNA. Without further ado, I present to you the ASCE Bruin: Spring Edition.

The Winter Quarter started off with a few traditional events like Ski Trip and the Winter General Meeting. Although they are annual, routine events, our Officer Board found ways to improve them and create unique experiences for the attendees. Ski Trip was an amazing 4-day event that allowed our members to connect. Through creative meal preparations and activities, a memorable time was created for attendees. Meanwhile, at our well-attended General Meeting, our officers came up with great ideas like selling t-shirts during the event and recognizing our Members and Athletes of the Fall Quarter through prizes and awards.

Throughout Winter Quarter, our Officers introduced distinctive events like pairing the LA YMF Popsicle Bridge Volunteering event with a Knott's Berry Farm trip, or hosting a Lunch & Learn event with faculty to inform students of the various civil engineering tracks, and planning an alumni tailgate for the red-hot UCLA Gymnastics team meet. Other events that were a success last year returned, like the Faculty Research Workshop and the We Are Projects Ice Skating Social where all 11 projects' members had the opportunity to interact and meet.

Projects worked persistently throughout the winter to prepare for their respective upcoming competitions. Three of our projects recently attended their national competitions. The ASC 67 teams made the long drive to Sparks, NV. The teams were composed of many new ASCE faces. They all returned with positive experiences and motivated to achieve higher next year. After working hundreds of hours on their immaculate structure and battling unforeseen circumstances, the Seismic Design team had an amazing time with each other in Portland, OR. Furthermore, the GeoWall team travelled to their national conference in Orlando, FL. They returned with great confidence and ideas for their next competition at PSWC. Keep in mind, our members had to overcome the challenge of being away from school during the busiest times of the quarter. While our teams were abroad proudly representing UCLA and our student chapter, we were at UCLA proudly supporting through viewing parties and constant updates on social media.

"Although they [Ski Trip and the Winter General meeting] are annual, routine events, our Officer Board found ways to improve them and create unique experiences for the attendees."

Receiving the LA YMF Most Outstanding Student Chapter Award and watching our members take home more than half of the available scholarships during the LA YMF Student Night Job Fair in February, validated our efforts and showcased the support that we receive from the UCLA CEE Department, Alumni and Sponsors. It revealed the strength of our Officer Board and the passion of our members. However, what does this mean?

It means we, from the officers to members, are on track this school year—to leave ASCE at UCLA, better than how we found it. I only hope that you will be there with us, as an active and involved member, to see it happen.

Sincerely,



Suraj Patel, President
ASCE at UCLA 2016-2017



COOKIES WITH CORE Our CORE officers have a fun time while answering some great questions regarding the present and future of ASCE at UCLA.

MEMBERSHIP

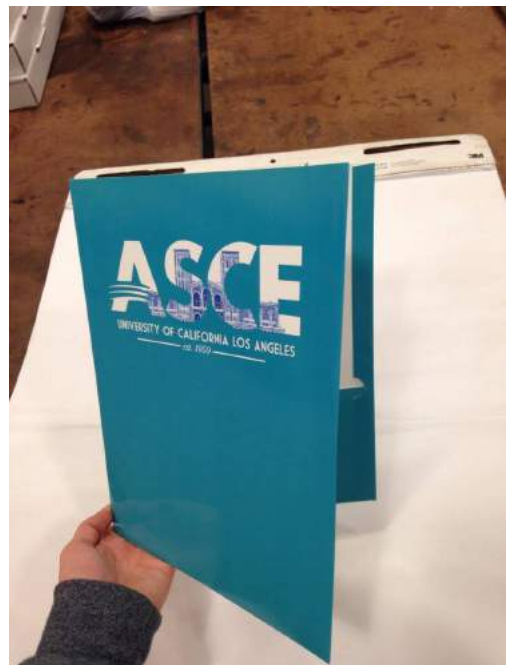
JOHNNY SCHMIDT

ASCE at UCLA continued to have great involvement throughout the quarter, with over 20 new members giving us a total of 296 paying members for the school year. These members are active, too; at our top 20 best-attended events, from the career fair to our Seismic Design Finale Day, we had an average of 37 people in attendance. To recognize our most involved members, we continued our tradition of awarding the “Member of the Quarter” award to the non-officer who attended the most workdays and events. For our first quarter, however, we had to give it to three people (all freshmen) because we’ve had so many new people coming out and getting involved. In addition to being connected with our club, students in ASCE at UCLA have also been plugged in to the outside world of civil engineering – 201 of our members are also signed up with the ASCE national organization, giving them even more opportunities to get career resources and development opportunities.

We’ve continued our efforts to publicize our club with the purchase of 100 custom folders, given out as prizes or incentives to attend events, all with our logo on the front. Efforts have also ramped up to sell our large surplus of old project and member t-shirts from as far back as 2010, with them being sold at the general meeting as well as online. In fact, anyone can visit our Facebook page, “ASCE at UCLA” and check out the “T-Shirts for Sale” album to check out the selection of shirts. With so many members, we should be able to get through them all in no time. It’s looking to be a great year for our members, and we plan to go full steam ahead to give everyone the best possible experience as a member of our organization.



WINTER GENERAL MEETING General meeting at the start of the quarter to recap the fall quarter and inform the members about upcoming events.



CUSTOM ASCE FOLDER Given out as prizes or incentives to attend events.

INFO SESSIONS

DAMIAN GUTIERREZ

Winter quarter was a huge success as we increased overall turnout at info sessions. Students attending these info sessions ranged from freshman to graduate students seeking to network with company representatives. The companies attending covered a wide variety of Civil Engineering disciplines including construction, general civil, water resources, environmental engineering, and structural engineering. Some of the companies included Pankow, Kennedy/Jenks, and KPFF, to name a few. Additionally, W.E. O'neil hosted a Team-Building Workshop teaching students why teamwork is so important and how to be an effective team member. We hope to build on last quarters success as we look forward to hosting a few more info sessions this quarter.



WHITING TURNER INFO-SESSION

Construction company officials interacting with a diverse group of students.

FIELD TRIPS

KASEY MURAKAMI

ASCE at UCLA had a field trip to a new luxury hotel going up in West Hollywood, hosted by Pankow. Members were able to walk around the job site and learn about the concrete being poured and the challenges that the construction company faced during the project. 9 students attended, one of which will be interning at Pankow over the summer. At such an early stage, they were able to see the rebar sticking out of the concrete columns, while still being in the midst of all the activity on Sunset Boulevard. Next quarter, we look forward to doing several joint field trips, with CalGeo and ITE. There will also be a Hoover Dam overnight field trip next quarter, where members will get the opportunity to tour one of the greatest civil engineering accomplishments in history.

PANKOW FIELD TRIP Our members visit the construction site of a new luxury hotel in West Hollywood.



WE ARE PROJECTS SOCIAL Members from different projects go ice-skating together.



HIGH SCHOOL VISIT Volunteers visit a high school to answer questions from younger students about ASCE and engineering in general.



COMMUNITY SERVICE

LEIGHTON PARADIS

This quarter ASCE travelled around southern California to serve the community. We participated in two events in the greater LA area and one in Anaheim. For the first event of the quarter, ASCE collaborated with the Society of Women Engineers (SWE) for the WOW! That's Engineering fair. This fair invited Girl Scouts to come to UCLA and experience different engineering clubs and activities as well as a presentation from women student leaders in UCLA engineering. Later in the quarter ASCE volunteered at LAYMF's Engineer's Week high school day. Volunteers travelled to a local high school to display the UCLA chapter's projects as well as answering questions about engineering. Additionally ASCE travelled to the Anaheim Regional Transportation Intermodal Center for the LAYMF annual Popsicle Stick Bridge Competition. Volunteers judged, timed, and helped with activities for the high school competition teams in attendance. Afterwards ASCE travelled to Knott's Berry Farm for the remainder of the day. We are looking forward to traveling to local elementary schools next quarter for engineering activities!

OUTREACH

JENNY LI

Outreach enjoyed another successful quarter as we organized several faculty workshops and alumni socials this winter. At the beginning of the quarter, professors from the CEE department gave an informative lunchtime presentation about their specific fields of study within civil engineering to better aid students as they begin selecting upper division electives and deciding which tracks to pursue. Several weeks later, some professors returned to speak about their research projects and opportunities for undergraduate students to get involved in labs. The presentations were very helpful and well-received by everyone in attendance, and we appreciate our professors taking time out of their busy schedules to speak with us! In addition to the faculty events, ASCE alumni were invited to attend a BBQ and gymnastics meet viewing on campus in February. The event was a great opportunity for alumni to reconnect with old classmates and meet current students, and we're looking forward to even more fun and informative events in the spring!



FACULTY RESEARCH WORKSHOP Faculty members talk to students about various research opportunities.

ATHLETICS

BRYAN HONG

ASCE Athletics hosted several events throughout last winter quarter, including intramural sports, first ever group kayaking event, and the March Madness tournament bracket challenge.

ASCE organized three intramural sports: spikeball, co-ed soccer, and men's basketball. The co-ed soccer team, which had a diverse group of people, reached the playoffs with a 3-1 record. During their first round of playoff, they played against an aggressive team and several injuries occurred. However, with a 1-3 deficit going into the second half, they fought back and tied the game when the time ran out. They forced the game into extra time/sudden death. Five minutes in, Brandon Duong made an excellent save when the opponent approached the net, but the IM referee called a penalty for the clean save and ended their IM journey. On the other hand, the men's 5 on 5 basketball team was seeded #10 with 2-1-1 record. Heading into the quarterfinals, they beat a higher seeded team with a team high 79 points and upset a #3 ranked team after a 9-point comeback with a pair of free throws to tie the game 3 seconds before regulation, winning 58 – 49 in 2OT. However, they lost by 7 points in the quarterfinals.

Athletes of the Quarter: Brandon Duong, Ellen Key.

Honorable Mentions: Santiago Leal-Berretta, Ahmed Kashri, Kylie Williams.

After all the intramural games, ASCE Athletics organized first ever winter kayaking at UCLA MAC (Marina Aquatic Center). Around 10 people attended the event; surprisingly, a non-ASCE member found out about this event and joined ASCE. Great weather, beautiful scenery, and cute seals were surrounding the kayaks, and all that did not cost everyone anything. An hour later, everyone went to iHop to end the event with a filling brunch. ASCE is looking to host more casual sports in the future.

The March Madness tournament happened during 9th week and over 25 people filled out their brackets to join the ASCE bracket challenge. The bracket challenge prompted members to interact over the major sporting event while making new friends and possibly winning prizes.

Lastly, the captains of each PSWC event are chosen.

Soccer: Maxwell Armenta & Yash Kansal, Volleyball: Troy Arashiro, Mystery Events: Azeb Mallick, Tug of war: Siddhant jain, Impromptu: Bradon Duong, Kan Jam: Leighton & Suraj, Scavenger Hunt: Claire Killian & Ellen Key, Timber Tower: Yash Kansal



ASCE IM SOCCER TEAM The soccer team members pose for a picture after a very intense playoffs game.



ANNUAL POPSICLE STICK BRIDGE COMPETITION ASCE at UCLA volunteers at the event organized by LAYMF.



WINTER KAYAKING 10 members go to UCLA Marina Aquatic Center for kayaking.

SOCIAL

MAXWELL AREMENTA

Winter quarter was another exciting time to be alive for ASCE at UCLA Student Members. To start off the quarter right, the Annual ASCE at UCLA Ski Trip was held over the Martin Luther King Jr. Holiday Weekend. Over 42 students attended #SkiTrip2017, and it was a good time. There was a snowball fight, and several snowmen were created. Members did homework (occasionally), played board games, went snowboarding and skiing, and watched football. Group dinners were led by “head chefs” such as Leighton Paradis, however it was Doug Chambliss that stole MVP of the trip with his legendary homemade garlic bread. Overall, the trip went very well, as no one got a concussion this year and everyone drove up and down the mountain safely.

Due to the variety of off-campus events hosted by other officers, such as the Laser Tag event that Concrete Canoe Project Manager Nathan De Ropp organized with CSUN, or the Mini Golfing event held by Mentorship Chair Ryan Worley, this quarter’s social chair budget was aimed at providing some unique on-campus events. One highlight from this quarter was the “Cookies with Core” event during 10th week. Maxwell Armenta (me) hosted a 40-minute question and answer panel with ASCE’s core officers. This included a lightning round and audience questions. There were some pretty hard-hitting questions that were asked, but the core officers had witty and insightful answers that earned a few laughs from the crowd at times. Cookies and milk were provided, and a little over 20 student members attended. Another well-populated event was the study marathon which was hosted on the Friday of 10th week. Food was provided for student members as they studied for their finals in Boelter Hall.

Overall, this quarter had a handful of “social” events which were not as traditional as events planned by social chairs in the past. However, in spring quarter there will likely be more traditional social events due to PSWC being over. So, buckle up and get ready for another quarter of fun.



SKI TRIP 2017 42 members attended the annual Ski Trip at Big Bear Lake.

MENTORSHIP

RYAN WORLEY

As in year past, ASCE uses winter quarter to prepare for PSWC Conference, the biggest event of the year. However, that doesn't mean that we don't stop having fun! Mentorship continued its program this past quarter with a variety of different socials and collaborations involving the family system.

This winter, we had a variety of ASCE mentorship socials. We had both a mini-golf and Dave and Busters event where members could come together and make new friends! The golf social even had a theme, where members could dress up in golf attire to win a free game of golf. Additionally, each of the 4 families had member socials. These events ranged from Ami Sushi dinners to the Sprinkle's cupcake desert trips. Thank you to all of the family leaders for planning these wonderful events for their members.

We look forward to having another excellent quarter for the ASCE at UCLA mentorship program. See you all around!

"These events [family specific socials] ranged from Ami Sushi dinners to the Sprinkle's cupcake desert trips."

NETWORKING NIGHT

HEATHER WONG

ASCE Winter Networking Night, Sponsored by PCL and W.E. O'Neil, was held on February 1st at WeHo Bistro in West Hollywood, during the evening before the Winter Career Fair. Forty-five students and thirty-one representatives gathered and were served complimentary food and beverages. The companies ranged from all fields of the civil engineering profession, including structural, transportation, geotechnical, water resources, and construction management. Due to high attendance, the entire restaurant was rented out, providing more space for attendees to move around.

As the second event of its kind in ASCE at UCLA history (the first was held in the Fall of this school year), Winter Networking Night, Sponsored by PCL and W.E. O'Neil, boasted a seven percent increase in overall attendance and a thirty-six percent increase in number of participating companies. The latter increase was due to a decreased maximum limit on number of representatives per company, thus providing an ample variety of companies for students to explore. Due to the success of both the Networking Nights this year, these kind of events will likely continue next year and hopefully expand into even larger venues and higher attendance, while preserving the personal level of interaction for students and representatives alike.

Lastly, this event would not have been possible without the generous donations from gold company sponsors PCL and W.E. O'Neil, as well as bronze sponsors David Evans and Associates and Diaz Yourman & Associates. ASCE at UCLA would like to sincerely thank these Winter Networking Night sponsors, and also thank all company representatives who attended the event and donated their time in helping students learn more about the field.

"The companies ranged from all fields of the civil engineering profession, including structural, transportation, geotechnical, water resources, and construction management."



MENTORSHIP MINI GOLF All families were in good attendance at this fun mini-golf social.



NETWORKING NIGHT Company representatives and students enjoy some delicious food.



WINTER CAREER FAIR Student attendees and company representatives take a break and pose for a picture.

CAREER FAIR

ASIA REEVES

ASCE's Winter Career Fair is where many civil engineering related companies come to recruit members of our club! This year it was held in Ackerman Grand Ballroom, right on campus, and we had a whopping 28 companies attend! That's 4 more companies than the last winter career fair! We definitely tried to increase the diversity of the companies in attendance, adding more from the fields of general civil, geotechnical, water, and environmental engineering. We had around 160 students attend our fair. The event was a big hit among both the students and the companies that came. A lot of companies made it a point to let us know how our fair was the most organized fair they had been to! Additionally, a lot of companies who had attended our previous career fairs said this year's fair was a significant improvement. Hooray for progress! The winter career fair marks an end to job fairs for this year, but perhaps there is more in store for professional development next quarter? Only time will tell.

PSWC 2017

MONICA CORBIN

This year PSWC will be at the University of California, Irvine. To increase attendance and to get everyone excited about conference we hosted a PSWC pump up day this quarter. This event was a family competition that consisted of smaller events that take place at PSWC. Pump up day was a lot of fun and a great success as we have 94 students attending PSWC this year which is more than we have ever had! We have also hired a Conference Coordinator Intern, Pauline Nguyen, and she has been doing a wonderful job in making sure that we are all set to go to Irvine the first week of April.

We will head out early Thursday morning on April 7th. This is the day design build and environmental design compete. It is also the day of the concrete canoe presentation and the canoe and bridge aesthetics display. On Friday are the canoe races along with a bunch of sports events. Lastly, on Saturday are the steel bridge, geo wall, concrete sports, and transportation competitions. The projects have been working really hard all year for this competition.

We are so excited to go and can't wait to keep you updated on how we do.



PSWC PUMP UP DAY Members have some fun time while playing with water balloons.

ASC67

HO-SHING CHAU

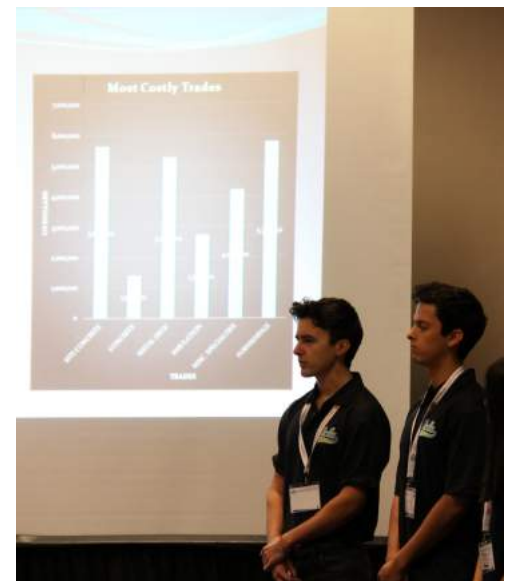
This February, our UCLA construction management team traveled to Sparks, Nevada to attend the annual Associated Schools of Construction Regions 6&7 student competition. Adorned in fresh black colored polos, sponsored by W.E. O'Neil Construction, we competed in three categories: Design Build, Heavy Civil, and Mixed Use. The competition itself lasted one whole day, starting at 5AM in the morning and ending at 11PM at night. During that time, each team received a different problem statement based on real-life construction projects and created a project bid consisting of a cost estimate, project schedule, and BIM design created in AutoCAD Revit. The following day, the teams presented to a panel of judges, who then graded the teams based on the written submittals, project bid, and of course, presentation.

Our UCLA teams did really well in the three aforementioned categories. Our Mixed Use team placed third in presentations, and our Design Build team placed top third in cost estimate predictions! We are very proud of our achievements, but more importantly all the hard work we put in during late fall and early winter quarters. We dedicated extra time to work with professionals from W.E. O'Neil Construction, Pankow Builders, Granite Construction, and DPR Construction, who gave us practice problems and feedback. In addition, we held a mock presentation event, where we presented to and received feedback from our coaches and peers.

This year was our fourth time participating in the competition, and like the years before, we really enjoyed it. Throughout the competition week, we learned a lot about the competition and the construction industry, after speaking to many company representatives and judges of the competition. Also, we were frequently occupied with many fun activities like the all-you-can-eat banquet, networking events, and career fair. Because of this, many of our first-year members are looking forward to return next year, contributing to the growing student interest in construction management at UCLA. With the fun learning experience and all the help we have from our coaches, professors, and sponsors, we are excited for the fifth run!



ASC67 COMPETITION Mixed Use team presents its proposal (**bottom**) and all visiting students pose for a group picture (**left**).



This past quarter has been a busy one with the preparation of the canoe and display for competition. Most notably, we cast the canoe during the first week of winter quarter. Casting day used our hand-designed concrete mixes, extensively tested during fall quarter, to create the entire canoe within one day. This day lasted about 9 hours with approximately 200 person-hours between 57 students. Overall, casting day was a resounding success and resulted in the preliminary creation of *The Jabberwock*, UCLA's 2017 "Alice in Wonderland"-themed canoe.

CONCRETE CANOE

NATE DE ROPP/AMBERLY BARK

On the pale red inside of the canoe, we cast a spiral to mimic the rabbit hole that Alice falls into leading to Wonderland. The sides and tips of the canoe are adorned with delicate concrete daisies like those in the meadow around the rabbit hole. Finally, we cast a concrete gradient for the first time in UCLA history, entailing the use of 6 pigmented concrete mixes ranging from black to pink. Because of this, our canoe fades from black on the bottom to vibrant red on the sides.

Throughout the rest of winter quarter, we have been working hard to finish the canoe and prepare for the 2017 Pacific Southwest Regional Conference. Our paddling teams were finalized and the paddlers have been practicing all quarter long. We wrote and submitted our design report, and we've been constructing other project items that will be judged at competition, such as the cutaway, display, and stands. The cutaway displays a 4-foot section of our canoe, demonstrating the techniques and methods used to cast the actual canoe. Our stands mimic the magical mushrooms of Wonderland on which the canoe will rest. The main display is set up like a tea party that showcases our materials and academic papers.



CASTING DAY 2K17 Members pose for a picture after the 9-hour workday where they completed the casting of the canoe.

CONCRETE SPORTS

FRANCIS PARAS

PSWC 2017 is finally here! Our Concrete Sports team has been working hard to make sure we make the best concrete Frisbee! During winter quarter, we casted our final batches of Frisbees using our new molds, and we chose the best two as our competition Frisbees. Our aesthetics team put in long hours sanding down our Frisbees to make them as nice and smooth as possible. On top of that, we were able to get an awesome kiwi paintjob on these Frisbees to match our Fruit Ninja theme! Winter also saw the finalization our throwing team, which will consist of Suraj Patel, Bryan Hong, Tyler Penn, myself (Francis Paras), and our alternate, Adam Wong. We've been practicing weekly for both the distance and accuracy portions of the competition on the Wilson Plaza grass, IM Field, and Drake Stadium. Save to say we are ready to throw our kiwi discs of awesomeness. It has been awesome seeing everything come together this quarter, and we are very excited to represent ASCE at UCLA at PSWC 2017!

ENVIRONMENTAL DESIGN

JOSEPH WILDMAN



ENVIRONMENTAL DESIGN WORKDAY Students practice building the filtration system before the competition.

Our project focuses on the design of a water treatment system that can produce non-potable water from wastewater sources. In practice, this is an important component of pursuing sustainable water usage. The process of designing an effective filtration system was challenging given the level of contamination in the wastewater, constraints of construction time, and the requirement to write a technical paper detailing the system. Utilizing engineering principles and the scientific method, we designed a system that utilized mechanical and chemical treatments at a flow rate higher than previous years. The opportunity to apply classroom concepts makes this project an excellent foray into environmental engineering. On average, 15 students attended workdays throughout the year, with about half of the attendees underclassman.

GEOWALL

ARIELLE SANGHVI/CHRIS NICAS

GeoWall is a competitive project focusing on designing and constructing an optimized, small-scale mechanically stabilized earth (MSE) retaining wall using lightweight construction paper facing and reinforcement. This year, the competition is focused on "wrapped-face" MSE wall designs. In engineering practice, wrapped walls can be constructed relatively quickly, are lower cost in comparison to other types of retaining walls, and utilize geosynthetic materials. The reinforcement construction, compaction, and loading of the wall are also strictly timed, and designs are scored based on weight and economy.

In fall quarter, our team conducted various laboratory tests to determine relevant engineering properties of the soil, including sieve analysis, direct shear, and triaxial shear tests. Using the data collected from testing, our team developed an optimal design for the wall reinforcements and completed our full design report by the beginning of winter quarter. We also constructed a large box out of plywood to hold over 500 pounds of sand, and to mount our wall for testing and competition. This year the project's theme was chosen to be Geo-Wall-E. The sandbox paint job and presentation poster both feature Pixar's cute and loveable robot, who also serves as a constant inspiration to our team members to achieve excellent compaction during testing and competition.

The GeoWall project is looking forward to competing at the Pacific Southwest regional competition this year, and is anticipating excellent placement after competing at the national competition held this year in Orlando, Florida. While UCLA placed 13th out of 20 competing schools, our team learned some valuable lessons and has already taken steps to improve our design performance.



GEOWALL TEAM Team members pose with the completed sandbox before the National Competition in Orlando, Florida.

SEISMIC OUTREACH

ALYSON KIM

This quarter Seismic Outreach serviced Hale Charter Academy. We worked with 250 sixth grade students and hosted our Finale Competition Day at UCLA again this winter. We were able to successfully partner with multiple industry volunteers from Degenkolb, John A. Martin and Associates, Pankow, W.E. Oneil and Arup who came and judged our student's structures. Additionally, we had staff and faculty from our own Henry Samueli School of Engineering to come and volunteer as well. We are very thankful for the help and support of our volunteers! Next quarter we are looking forward to working with Lincoln Middle School and service 355 students. We hope to only continue to see our program grow!



SEISMIC OUTREACH FINALE DAY A volunteer from one of the partnering companies, judges the student's structures .

SEISMIC DESIGN

ERIC ROBERTS/JUSTINE GEE

Every year, the Earthquake Engineering Research Institute (EERI) hosts a Seismic Design Competition for universities from across the globe. The competition consists of designing, constructing, and analyzing a five-foot tall balsa wood model skyscraper. Included in the competition are also judged portions for architectural design as well as an oral presentation.

This year marked the 14th annual competition and it was held in Portland, Oregon from March 7th to 10th of 2017. In order to freshen the competition this year, the organizers decided to change two key elements. The first change was that the weight loaded onto the highest floor was increased. There was no longer just one rod with weights loaded at the top, but rather three rods with weights. The second change was that ground motion three, the strongest and most violent ground motion, was increased to be even more destructive. Though these proved to cause major design considerations and changes, our team was ready to face the challenge, approaching the year with a very dedicated attitude.

We started working on our project very early on, beginning the design process in the summer. This continued until we received our official rules and were asked to submit a design proposal. It was only after we submitted our design proposal that we learned that we were selected as one of the 35 schools to compete and that our proposal had placed in the top nine. Our team proceeded to construct a full-size prototype and tested it against the new ground motions on UCLA's shake table. Since the competition was being held at a much earlier date than prior years, we did not have time to build a completely new prototype. Instead we made design alterations to our initial prototype in order to ensure that our structure could withstand all the ground motions, while at the same time being as efficient as possible.

Workdays were being held at least three times a week, and often included additional workdays both during the week and on Saturdays. These workdays sometimes had over 20+ people working simultaneously on different components of the structure. The team that was selected to travel to the competition in Portland consisted of the most dedicated members of the students who regularly attended workdays. This year we were able to bring 11 different members, including two of our architects from UCLA's Architecture and Urban Design Department.

Competition itself proved to have its own challenges. For example, after countless hours of working on the structure for several days straight, we brought our structure to the airport only to discover that we would be unable to fly our structure on any airline flying to Portland from Los Angeles. Since we had flown our structure every prior year without problems we never anticipated such an issue. In order to make sure that all of our hard-work did not go to waste, a few brave souls volunteered to drive a total of 16+ hours straight to make sure our structure would still compete. They made it just in time, and the rest of the competition seemed to carry on quite smoothly for our team.

Though our overall results in the competition did not reflect the hard-work and dedication that went into the project, I still believe that our team made major improvements across almost every portion of the competition. One of the highlights was receiving second place in the Analysis Predicted Score, which considers the predicted deflection and acceleration compared to the measured numbers from the model on the shake table, with a total error of only 18%.

Next year the competition will be held in Los Angeles in June of 2018. We have a strong incoming leadership team for next year who we believe will be able to lead UCLA back to the top once again. Since competition will be in the area, we plan on bringing more students to competition next year and hope to see many of our supporters as well!

STEEL BRIDGE

KYLE EVANS/ALLISON WOODWORTH

The goal of our project is to construct a steel bridge that meets a specific set of rules as detailed by the ASCE/AISC Student Steel Bridge Competition. This year, we were tasked with building either a long span bridge or a cantilever bridge – and ultimately decided it was advantageous to build a cantilever bridge. Our finalized design meets all the new design parameters and constraints, which includes spanning a 7-foot river, cantilevering about 4-feet, and sustaining a 2500-lb. vertical load test. In order to design the bridge, we considered many real-world factors in bridge design and construction like spatial constraints, materials, constructability, fabrication, safety, aesthetics, project management, and cost.

At the beginning of winter quarter, our various-sized steel tubing arrived in 20-foot long pieces. We immediately began cutting, chopping, sawing, milling, drilling, and jiggling our steel; our welder got to work as well. We held regular build practices throughout the quarter so members could get a feel for constructing the bridge. We practiced on last year's competition bridge (after cleaning off some of the rust!). Near the end of the quarter we finalized our competition build team for this year which consists of Kyle Evans, Allison Woodworth, Joshua Fidelis Susai Nathen, and Jacob Stanley. After completing fabrication, the build team began practicing construction of this year's bridge. Practices began during spring break and continued into the first week of spring quarter.

On April 8th, we will compete at PSWC hosted by UC Irvine. Should we qualify, we will be traveling to Corvallis, Oregon over Memorial Day Weekend for the national competition hosted by Oregon State University. The rest of spring quarter will be spent transitioning the new project leadership into their respective roles. Go Bruins!

STEEL BRIDGE BUILD TEAM (bottom) The build team practices the construction of the bridge during Spring Break.

SURVEYING (right) Surveying team practicing before the competition in April at PSWC ([more information on Surveying on next page](#)).



SURVEYING

CECILIA VONG

During winter quarter, our project focused on preparing the conference team for the surveying competition at PSWC.

The UCLA Surveying team members were chosen based on their performance and what they have learned from fall quarter. Four individuals and one alternate were chosen to compete, and the final team consists of Cecilia Vong, Glynn Baca, Briana Mercuri, Joshua Widjaja, and Jared Brock (alternate).

The competition is divided into several tasks that must be completed within a 45-minute block. The first task is to determine the distance between two points, the elevations of each of the points, and the bearing of the line connecting them. The second task is to find the elevation of a remote building, and the third task is to use taping to determine a horizontal distance. If all three tasks are completed within the time limit, there is a chance for extra credit in which one member will be timed on instrumental setup.

At our workdays, we practiced taking field measurements and note-taking so that we could perform more efficiently at competition. The points we had to calculate were set up at different locations for each workday to prepare for different situations. Our team is excited to compete at conference this year!

In addition to conference practice this quarter, we also had workdays for general members where they used the total station to take measurements and do calculations. For spring quarter, regular workdays will continue for general members!

ITE-ASCE TRANSPORTATION

MICHAEL WEYANT/SUNGWOO JO

As a new quarter dawned upon us, a fellowship of transportation enthusiasts, young and experienced, were ready to make great strides in order to make our new project competitive.

For this year, our project was tasked with analyzing and designing an intersection for a new housing development in the City of Irvine along Portola Parkway, which is a major road that will experience increased use in the future due to the construction of new residential developments in the surrounding area. Given Irvine's reputation for being a well-planned city, our team challenged ourselves to look for any and every possible flaw, while simultaneously admiring the care that had been taken in creating such a layout.

For the first few weeks of the quarter, new project members were introduced to Transportation Engineering and our project specifically through a series of instructional workdays. During these workdays, we learned how to calculate important analysis elements such as Level of Service and Free-Flow Speed Delay, as well as important guidelines for design by looking at various local design codes. Later in the quarter, we visited the site at Portola Parkway in order to gather important data and, from our observations, we prepared a design report that we believe can be very competitive this year at PSWC! At the time of this writing, we are currently in the process of arranging our poster, which we will present on at PSWC.

As we look forward to PSWC first week of Spring Quarter, we are continuing to assemble our poster for conference, as well as prepare ourselves for questions from judges about our poster and proposal so that we may justify our excellent design. We have high hopes that we can do really well!

Looking further ahead in the future, it is our intention to utilize the rest of spring quarter to help train the project leadership for next year, as it is our firm belief that our student chapter has the resources and the passion necessary for our project to have a very bright future in the coming years!

EWB-ASCE NAVAJO PROJECT

MAXWELL ARMENTA

The Navajo Water Project is a collaborative project between ASCE at UCLA and UCLA-EWB. The goal of this project is to provide a pressurized water system to a family on the Navajo Nation Territory in Arizona. In addition, our team also aims to assist the family in the construction of an interior bathroom. Prior to ASCE at UCLA and UCLA-EWB's involvement, the family was bucketing water into their home for cooking, cleaning, and drinking. Also, elderly members of the family have been injured from tripping while walking to use the outhouse at night. Therefore, our team aims to travel back to the Reservation after spring quarter to complete the installation of a pressurized water system and assist with starting the restroom's construction.

To meet our goals, the Navajo Water Project has been meeting weekly to discuss progress and assign new action items. Last quarter, the team focused on researching products, construction techniques, and environmental conditions. This quarter, the team has been more design-oriented, and a 3.3 GPM pump was used to prototype different design conditions for quality control. During the winter quarter, our team also bonded with a Westwood dinner social, and two software workshops were hosted to teach fellow members how to use GIS and AutoCAD. Our fundraising team organized and executed two successful fundraisers which earned the project over \$450. Finally, to end the quarter, Co-Project Leader Ryan Wong led a group of six student members in workshops to prepare for the team's second site visit to the Navajo Nation.

Over the spring break, our team sent two cars and six members to the Navajo Nation to install Phase One of our pressurized water system. The group departed from UCLA on Saturday morning and stopped in Flagstaff to gather more supplies before continuing to the Reservation. Once there, a member of the family met our group and escorted us to their home – 15 miles from the nearest paved road. Over the spring break, our team tested the family's solar battery system – confirming that their battery bank is dead. The team also cleaned the families water tank, then assembled PVC piping from the tank to the kitchen faucet inside the house. The pump was installed inside the house, underneath the sink, in order to prevent water inside of the pump from freezing, and the exterior piping was insulated. A solar panel and four batteries were used to power the pump. Initial water quality tests were conducted by member Thien Phan, and the results came out looking good. The team also grabbed a gallon of water to test after returning to Westwood.

Next quarter, the team plans to continue designing Phase Two of the pressurized water system which will include hot water and the installation of an additional sink and shower. Plans have already been made to work with the family to raise more money for the restroom addition by selling woven rugs made by master weavers. If you are interested in donating, joining, or mentoring our group, please feel free to contact us by searching for our project leaders' contact information on either the ASCE at UCLA or UCLA-EWB website.



SPRING BREAK TRIP TO NAVAJO NATION One of the six members, who visited Navajo Nation, working on insulation.

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