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A Letter

FROM THE PRESIDENT

LUCAS TANG

To All of Our Alumni, Faculty, Sponsors, and Students,

Howdy! It is my pleasure to present the ASCE at UCLA 2021 Summer/Fall Newsletter. This past year marked unprecedented times for our club as we navigated the challenge of transitioning all that we do into a virtual setting. Despite these changes, we were able to achieve so much—we received the ASCE LA YMF Outstanding Student Chapter Award, the ASCE Certificate of Commendation, and the UCLA Engineering Community Connections Award.

Our chapter also had the privilege of hosting the annual Pacific Southwest Conference (PSWC 2021) this past spring. Although it was a challenge to adjust all of the technical and non-technical events to be suitable for the virtual setting, our conference-planning team did a great job thinking of creative solutions such as virtual-friendly games for the non-technical events, streaming all of the project presentations on Facebook, and using our sponsorship award money to give scholarship opportunities for all attendees.

Our project teams competed at PSWC, and we had great success. Almost every single one of our projects placed within the top three, and we earned first place overall amongst 18 universities—a feat that we had not accomplished since over five years ago. We are very proud of all of our project managers, directors, and members who put in countless hours into these competitions and we are so happy to see their hard work pay off.

Apart from PSWC, our Seismic Design team was awarded for their structural innovation at the annual EERI competition and our Steel Bridge team earned second place at their AISC competition. Our Construction Management project teams competed at the ASC 67 competition, and our Sustainability team earned first place, while our Mixed Use team earned second in their respective competitions.

With the exception of PSWC, the largest event our chapter typically hosts in the spring is our end-of-the-year banquet. We held it virtually through zoom and recapped all of our accomplishments and major events throughout the year. It was also a moment for us to say goodbye to our graduating senior class. Although we are sad to see them leave, we are grateful for all that they contributed to our club. Their friendships, mentorship, and leadership helped pave the way for our officers and members today, and we will miss them dearly. We wish them the best of luck on their journeys and look forward to seeing all the amazing work they are a part of in the future.
While all our accomplishments are important to us, I find that the most important achievement is that we were able to continue fostering a community of students passionate about the field of civil engineering despite the pandemic. Of course, none of our success would have been possible without the hard work from our bright and motivated officer board, guidance from alumni and faculty, and support from our sponsors. From the bottom of my heart, I would like to thank everyone who supported and uplifted our student chapter this past year.

It was a difficult year for many of us, but the resilience that this club showed served as a positive and encouraging presence throughout the school year.

The rest of this newsletter will cover the highlights of our spring quarter and introduce the outlook of this upcoming school year. This year is all about our return to campus—we want to focus on catching our underclassmen who have never experienced in-person ASCE up to speed, as well as simply enjoying the moments we have to spend with one another. This is all wrapped up in our mission statement this year: “break ground, bridge the gap, bring people together.”

As always, feel free to reach out to me at lucastang2187@gmail.com or any other officers with any questions, comments, concerns, or suggestions. This chapter continues to grow due to its ability to improve upon its success and we appreciate any and all feedback. This year is going to be one for the books and we welcome anyone who wishes to hop along for the ride.

Onwards!

Lucas Tang, President
ASCE at UCLA, 2021-2022
OFFICER INTERNSHIP PROGRAM

JACKIE LIM

Hi everyone! I’m Jackie and I serve as the Vice President of ASCE. As VP, I have the privilege of running our Intern Program that helps integrate some of our younger and/or newer members into the ASCE General Board.

This quarter, we had an overwhelming interest in the Intern Program both from applicants and our board members. With over half of the General Board serving as an intern last year, myself included, I know many of them were eager to participate in this program because they had seen how beneficial it was for them. We had an unprecedented amount of candidates apply this quarter, with 13 interns being matched with nine of our General Board members. The goal of this quarter was to continue to have an outlet for newer members to get involved in ASCE and find their own community within this organization as we transition back to being in-person. Already, our interns have had huge impacts on ASCE such as helping our Career Fair Coordinator execute one of the most successful Career Fairs ASCE has seen thus far and introducing new interactive social media segments that I have personally very much enjoyed.

So to our wonderful interns!! Thank you for all of your hard work, dedication and positive attitude through the ebbs and flows of helping out an officer. You are all an invaluable asset to this organization and we are so grateful for all that you have done. I love that each one of you brings such a bright light to our meetings and events and encounters every task with an open mind and willingness to learn. I can’t wait to see what the future holds with all of you both in ASCE and at UCLA!

SETTING UP SHOP Cassidi Harada and her devoted interns helping out with checking in companies to the Fall Career Fair.

TEAM BONDING Dominick and his wonderful intern Lauren attending the Myers and Sons info session.

CHILL SESH Elena and her interns Ashe and Theo taking a break after reviewing study spots provided by ASCE Instagram followers.
Hi ASCE family! My name is Natalie, and I’m the 2021-2022 Membership Chair. This year, I’ve had the rewarding challenge of shifting the membership responsibilities back to in-person ways to connect. Both membership and our events have increased in size and scope, creating a vibrant, welcoming atmosphere for ASCE as a whole.

With the large body of new ASCE members including first-years, second-years like myself, and transfers, it was more important than ever for welcoming events to engage new members and reestablish connections between the continuing ASCE community. From the Fall General Meeting to the first Ice Cream Social, members have had long-awaited opportunities to connect or reconnect in person. By collaborating with continuing officers like Justin Sautter, the Mentorship Chair, membership events have been even more successful.

In another effort to involve new members in leadership, the internship program has continued to expand. The ASCE officer board added 13 interns this fall under nine officers, expanding the diverse talents of the officer board and including new members.

Looking forward to winter and spring quarters, membership events will continue to grow. From fun socials like Ice Blocking on Janss Steps to collaborative events like hiking with other ASCE chapters, members can be excited for the coming quarters. Be sure to come out to the Winter General Meeting to learn more about what ASCE and Membership have planned!

FULL HOUSE! New and continuing ASCE members pack the seats of Young Hall CS 50 for the Fall General Meeting.

WELCOME TO THE FAMILY! (Left to right) President Lucas Tang, Vice President Jackie Lim, and Treasurer Tiffany Choi prepare to kick off the first ASCE general meeting of the year.

OFFICERS IN THEIR NATURAL HABITAT
Membership Chair Justin Sautter and Concrete Canoe Project Manager Ayla Dvoretzky pose for a quick pic in their costumes before the Ice Cream Social.
SOCIAL
KRISTIDA CHHOUR & NICK BOROV

This year we have two co-social chairs, Nick Borov and Kristida Chhour, for double the fun! We are very excited to be returning to in-person activities this fall with events like the annual Civil and Environmental Engineering Alumni Tailgate and Student-Professor Barbecue.

This year’s C&EE Alumni Tailgate was held for the homecoming game against the Oregon Ducks. We were able to reunite with many alumni, munch on delicious breakfast burritos from the famous Lucky Boy Burgers, and celebrate the upcoming game! At the Student-Professor Barbecue, we were able to bring students, staff, and faculty together for valuable bonding time. Professor Stewart warmly welcomed us into his home where we got to know each other over some mouth-watering Hawaiian Barbecue. We hope to continue bringing people together and building community in the coming year.

Next quarter, we look forward to hosting events like our Annual Big Bear Ski Trip, Succulent Social, Bruins Basketball Watch Parties, and more!

MENTORSHIP
JUSTIN SAUTTER

A new year means it’s time for new mentorship families and pairings! What a better way to kick off the new year than our first in-person mentorship reveal in two years! Weeks before the event began, we had eight very kind individuals from ASCE take up the leadership of mentorship family heads for the 2021-2022 school year.

They are as follows: Shaun Howard and Winnie Quock (SoupWintaShaun), Emma Golub and Jose Alberola (BFFfff,F: Bauchy's French Frogs feeling funky fresh, Fergalicious), Tiffany Choi and Catherine Mailloux (4GLTE: gaslight, gatekeep, GOPISS GiRLboss), and lastly Tori Mok and Nathan Sharafian (Swampy Seconds).

The mentorship reveal was a great way for participating members to get to know the basics of mentorship, their families, and most importantly, their mentor/mentee pairings for the year. Just as all previous years, mentorship had to have an overarching theme for which the mentors and mentees could strive and relate to; this year, that was found in the form of SOUP. Our mentorship families, members, and heads have already held loads of fun events for their families.

One was the International Soup Social held by BFFfffF in which Emma Golub hosted mentorship members to a fun night of soup eating and socializing. Another was a wonderful Getty Trip set up by the heads of Swampy Seconds, where students got a bite to eat in Westwood then bussed to the Getty Center to critique some paintings, absorb the views, and just have fun. To end the fall 2021 quarter, a talent show is planned where students will have the opportunity to show off their unique skills or ones that are thrust upon them for the opportunity to earn more family points! Overall, I’m so happy we’ve had such an exciting beginning to this quarter for mentorship and I can’t wait to see what the rest of the year holds!
HOMECOMING GAME
(To the right) ASCE members and alumni pose together at the C&EE Department Tailgate before heading over to cheer on the UCLA Bruins football team against the Oregon Ducks.

WARM BONDS (Below) At the annual Student-Professor Barbecue, students and faculty gather to eat great food and have greater conversations. And we can’t forget about Violet, Dr. Stewart’s adorable dog.

CHEESING FOR S.O.U.P. (Above) Mentorship families earn points by taking pictures together. Tori Mok (family head of Swampy Seconds) takes a selfie with the rest of the family on their picnic!

MENTORSHIP REVEAL! (To the left) Mentorship families take a big family photo after working together to complete a scavenger hunt throughout Boelter Hall.
INFORMATION SESSIONS

DOMINICK ROSENTHAL

This fall quarter, ASCE at UCLA hosted 10 information sessions with a handful of incredible civil engineering consulting firms and general contractors. Being our first quarter back on campus, we offered both virtual and in-person opportunities to accommodate companies’ preferences around COVID. Turnout was high throughout the quarter, whether online or in-person; however, in-person sessions tended to garner more students, especially those eager for a free meal. This quarter, we branched out and got catering from restaurants including Gogobop, Falafel Inc., and Chick-fil-A!

In addition to awesome free meals, I was blessed with a phenomenal intern, Lauren Lee. Over the quarter, Lauren assisted me with scheduling, organization, set-up, food delivery, and documenting our events. She is an exceptional teammate and I am so pleased to be working with her again next quarter. As for the rest of our 2021-2022 school year, I am excited to continue hosting information sessions and hopefully foster some more internship/job opportunities for our members!

OK NOW LET’S GET IN-FORMATION For in-person sessions, students gather in the Boelter Penthouse to hear civil engineers and recruiters from many companies speak on the industry and practices within their respective companies! Pictured companies are Morley Builders (left) and Kimley-Horn (right).
PROFESSIONAL OUTREACH

RUBEN LUGO

Hi! My name is Ruben Lugo, and I'm this year's Professional Outreach Chair! I plan all sorts of events to bring students in contact with the professional engineering world. This quarter, we ran two Industry Shadow Programs with Black & Veatch and Morley Builders. During these events, students were able to directly speak with professional engineers and find out about careers all across the civil engineering spectrum. The former was conducted virtually with the latter in-person, and I believe a healthy mix of the two will be the best way forward to allow students the flexibility they need this year.

We also hosted a workshop by Timberlab on the growing mass timber industry, an exciting new facet of the structural and construction space that our students were eager to learn about. Finally, we were able to work with some of our amazing alumni—Gurjot Kohli, Sam Zabb-Parmley, Honor Fisher, Cade Luongo, and Robert Campbell—to run a Post-Undergrad Workshop. Students received advice on selecting their first jobs in the industry and learned about every step of the grad school process. The successes of this event reinforced just how important it is for our students to hear from those who have been in their shoes before.

This quarter has been overwhelming to say the least, and I couldn't thank my fellow officers enough (especially Dominick, Cassidi and Pooya!) for their support through all of it! I also want to thank my intern Matt for all of his help, and I hope to bring even bigger and better events to our members in the year to come!
CAREER FAIR
CASSIDI HARADA

After 18 months of being online, ASCE at UCLA’s Fall Career Fair was back in full effect at the Ackerman Grand Ballroom on campus. Being back in person brought more than 180 undergraduate and graduate students from UCLA, alongside 45 different companies in a variety of fields (structural, transportation, environmental, surveying, etc.)! It is safe to say that this year’s career fair was a success, but it was not without hardships.

One of the many challenges that I faced during the coordination of this career fair was the logistical planning of the event. Many of the processes had changed from the pre-COVID-19 time, which made it difficult to navigate the logistical details. However, my four interns were a huge help, and I am extremely proud of them for their incredible job. They contacted companies, helped order meals, created the resume book, and completed many other tasks.

The next significant challenge I faced was traversing not only UCLA’s but the LA County’s COVID-19 restrictions and guidelines and ensuring the safety of everyone in attendance. The guidelines were constantly changing, which meant I was constantly communicating with companies about the changing policies. I was able to combat this by reminding company representatives and students to wear a mask, asking company representatives to be fully vaccinated and to fill out a COVID-19 symptom survey designed for them by fellow ASCE officers and myself.

So, what is next for the Winter Career Fair? The Winter Fair is planned to be held in person again with either a similar or even larger student turnout. Alongside this turnout, we hope to bring back companies from this fall’s fair and bring in new companies to join us! I am currently planning the Winter Career Fair and already have new ideas and plans that will improve it!

MAKING CONNECTIONS A representative from Turner Construction conversing with a student.

DRESS TO IMPRESS Members in their business-formal attire pose with Dr. William Goodin before making their first impressions with company representatives.
Hi everyone, my name is Ashley Kuwahara and I am your 2021-2022 Community Service Chair! Last year I interned under the previous chair Kat Tsai, and she showed me the ropes for planning virtual events. As we transitioned offline, I had the amazing opportunity to start organizing in-person events!

The year started off a little rocky with our first event occurring at the time of the flu that was going around campus, causing many members to drop out due to health concerns. However, the TreePeople Park Restoration was a success and volunteers helped the community by beautifying and caring for the park’s hiking trails. Digging and mulching was a lot of work, but we ended the afternoon with a nice meal at Denny’s.

By popular demand, we brought back the monthly visits to the Kindred Spirits Care Farm! Since we had such a great turnout for the event, Karen, our Kindred Spirits contact didn’t want the large group to overwhelm the animals so we helped with the upkeep of the ranch. We split up to organize the ranch’s compost pile and level out the parking lot for visitors and our labor was rewarded with a delicious vegan lunch!

Next quarter, I plan to collaborate with the Athletics Director, Aaron, to create new incentives to get members excited about volunteering! With the help of my lovely intern, Henry Nagle, I will be hosting more events throughout the year and look forward to opening up opportunities for ASCE to serve the community.
ATHLETICS

AARON NG

Hey everybody, my name is Aaron and I’m your Athletics Director for the 2021-2022 school year! I’m a second year from the small town of San Francisco. During the summer, we kicked off our annual tradition of a fantasy football league with the UCLA ASCE Fantasy Football Draft. With just a couple more weeks till fall quarter finals, it’s still anyone’s game. This quarter also marked the return of in-person IM sports after students returned to campus.

During the fall quarter, ASCE participated in 3-on-3 basketball and volleyball. Both teams put their fair amount of sweat and bold plays into their respective games. Their teamwork and determination certainly paid off as both teams made the cut for playoffs. This year, our basketball team is flaming hot and could very well be the #1 team in the nation. I’m hoping to set up watch parties and gather groups to go wait in the Pauley lines together before the games. With the amount of time spent waiting in those lines, I’m sure everyone will have plenty of time to get to know one another.

Looking towards the future, plans for hikes and kayaking are in the works, as well as a March Madness Bracket. Additionally, ASCE will be participating in PSWS at UCSD in March and my intern, Ashley, will be helping to create the sports teams for the symposium. Big shout out to everyone who has participated so far and I look forward to seeing all your friendly faces out there on campus and the fields!

THE START OF SOMETHING GREAT ASCE Civs Volleyball pose together after their first playoff game.

W IS FOR WIN ASCE Civs are all smiles after winning their first game of IM Volleyball!
PSWS 2022

AMY ZHOU

This past March, UCLA hosted the first-ever virtual PSWC to adapt to the challenging times of the COVID-19 pandemic. 2021 Conference Chair Tori Mok, 2020-21 Conference Coordinator Nick Borov, and the 2021 Planning Committee did a tremendous job transitioning the conference to an online setting while maintaining the mission of PSWC. UCLA students were not deterred by the virtual format, instead we took the lead and placed first overall for PSWC 2021. Along the way, students not only tested their technical knowledge, but also formed long-lasting friendships. Go Bruins!

For 2022, PSWC has been formally renamed to PSWS—Pacific Southwest Symposium—to reflect changes within the regions of ASCE. The 2022 symposium will be hosted by UC San Diego from March 31st to April 2nd. Students are excited for the first in-person student symposium in two years as projects gear up to tackle this year’s problem statements.

This year’s conference coordinator, Amy Zhou, looks forward to bringing the Bruins to PSWS at UC San Diego and hopes that she can make the coveted in-person experience memorable for everyone.

AND THE WINNER IS... UCLA won overall first place at PSWC 2021! Well done!!

IT’S GOOD TO BE BACK This year’s student symposium will be hosted in the spring by UC San Diego. It will be the first in-person student gathering in two years!

OPEN (PENT)HOUSE! In preparation for the year and PSWS 2022, project managers and directors show off their projects at Boelter Penthouse in order to recruit new members in the beginning of the year! Pictured above are Environmental Design (left and front cover) and Steel Bridge (right).
CONCRETE CANOE
AYLA DVORETZKY & WENDY CHAU

Members of the Concrete Canoe Project at UCLA design, construct, test, and race a 19-foot canoe made of concrete. During fall quarter, the team has been busy preparing for the cast of the canoe by developing and testing mix designs, developing the construction methods, and more.

We had a successful 2020-2021 school year, winning our regional competition, PSWC, and advancing to Nationals where our technical proposal won first place. As we return to in-person work, our directors are connecting and collaborating more with each other and with general members. In total, we have completed over 300 hours of hands-on work!

One of our goals this year is to provide new members with technical background on the project to supplement our hands-on workdays. We have established an intern program that allows new members to engage in the decision-making process, developing both technical and soft skills. We spent the start of the quarter taking inventory and organizing our workspace, which improved our efficiency and understanding of our resources. The next large task was creating a partial practice cast: members learned about mold construction and preparation, mix development, and finally the casting process. Throughout this, project leadership explained each step to provide members with a practical understanding of the general technical aspects of this project.

Our aesthetics team established a striking, bright theme for the canoe: Fiat Lux, focusing on vibrant colors contrasting with a night sky. Our mix directors incorporated more sustainable materials such as supplementing the Type 1L cement with fly ash and hydrated lime. Our structural/hull design team finalized a shallow-arched hull shape, using 3-D and flow modeling to test stability, stresses, and hydrodynamics.

For the Winter Quarter, we look forward to our annual Casting Day and the continued creation of our technical proposal and display elements.
ASCE at UCLA’s EngineeringX project is tasked with the design, analysis, and construction of a 60-foot obstacle course with a multitude of challenging and creative obstacles for our project members to create and then build. Although our first year as a project was cut short due to COVID-19, and our second year was entirely virtual, we are excited to be back on campus and watch this project grow.

This year’s project team will feature returning project manager, Heather Kurtzman, along with her newly appointed project manager, Michael Nishikawa. They will be aided with the help of their project directors Logan McDevitt and Justin Sautter. The project team is extremely diverse, with members encompassing all grade levels and an almost 40% female membership rate. In addition, the project team is incredibly eager to make this project a success and push the bounds of what we are capable of.

For fall quarter we were able to analyze our course and technical report from last year, provide Bluebeam and AutoCAD tutorials for our project members, complete our AutoCAD designs for each obstacle, begin our calculation and analysis process, and start our material takeoff and procurement process. As we look forward to the rest of the year, we are right on track with our project schedule and will start the fabrication process when we return back to school in January after winter quarter.

EngineeringX’s debut at PSWC 2021 was a huge success, with the project placing second at the conference. Although EngineeringX will not be a part of PSWS 2022, we are utilizing the momentum of our success in 2021 to build a strong reputation and grow into a staple PSWS project for future years. We are optimistic that EngineeringX has a strong and healthy future at PSWS-competing schools and we are looking forward to seeing what the rest of this year holds for us.
ENVIRONMENTAL DESIGN

EMILY STORY & KATHERINE TSAI

After spending the past four quarters online, ASCE’s Environmental Design project has had a great start to our first year back in person. Our team is very excited to announce that this year’s PSWS prompt once again follows the traditional format. Our team is tasked to design and construct a small scale water treatment system that will treat wastewater from restaurants in San Diego with specifically 7 different contaminants. These contaminants include: garlic powder, gatorade, oyster sauce, salt, apple cider vinegar, potting mix, and vegetable oil.

We began fall quarter by hosting a series of workshops to educate members about water treatment topics relevant to our project. Topics included coagulation and flocculation, adsorption and filtration, and past PSWS designs. These workshops were particularly helpful to first and second-year members of our project, who have not experienced Environmental Design in its traditional format.

During the second half of this quarter, our project began researching removal and treatment techniques which target the contaminants listed in our competition prompt. Once we had enough data, we began running tests on samples of contaminated influent and effluent treated by a series of media including sand and granular activated carbon. On typical workdays, we conduct preliminary testing using the equipment we have available in the ASCE lounge, but at the end of the week, our members have the opportunity to go into the environmental engineering labs in Boelter Hall and use real testing equipment. Our members, especially the first years, were very interested in this opportunity!

Our project now has approximately 30 members with over 15 of them being underclassmen. Since last year’s PSWS prompt was focused on stormwater capture in Los Angeles, this year’s prompt is different to both new and old members. It has been very exciting to educate our members on the physical and chemical processes of water treatment as well as guiding them through the design process. We are looking forward to their continued participation and growth throughout the following quarters. Winter quarter will also consist of research, but will mostly focus on testing different combinations of treatment techniques as well as developing a design for the structure of our treatment system. To further our education on environmental engineering in the industry, we plan on hosting several field trips to wastewater and water treatment plants during both winter and spring quarter.

Finally, our project has hosted several socials so far this quarter, the most notable being our “CHOPPED: Enviro Social.” At this social, two teams competed by making a series of dishes which had to include secret ingredients that were not disclosed beforehand. These secret ingredients were the contaminants in our water for this year: oyster sauce, garlic powder, salt, vegetable oil, apple cider vinegar, and crushed Oreos (representing potting mix). We had a very fun time cooking together and coming up with creative ideas to incorporate these ingredients into our food. We are all looking forward to hosting more socials throughout the rest of the year so that we can continue to foster a fun environment and create friendships among all our members.

WHO WILL BE THE CHOPPED CHAMP?
Environmental Design hosts a very creative, competitive cooking social using contaminants inspired by this year’s prompt!
Timber-Strong Design Build is a project in which students are challenged to design and construct a light-frame, two-story timber structure that is durable and efficient. While taking on the role as a small design-build firm, our project aims to teach students basic design aspects and engineering practices commonly found in the industry by covering the holistic process of a construction project—from the initial design to the finalized construction.

Last year, we were not able to create a physical structure and were instead required to create a building information model. With the impressive efforts of our team, we placed first at PSWC 2021! Now, as we resume in-person meetings after an entire year of virtual workdays, our members are very excited to construct an actual building with all the cutting, hammering, and painting it entails. This year, in addition to our physical structure, we are still required to create a building information model, so we are very grateful for all our new passionate and dedicated engineers that have decided to join us on the ride for the year—we are going to need as many hands on deck as we can!

As we prepare for our annual competition PSWS, I am more than grateful for my two wonderful directors, Victoria Sanchez and Charlotte Wren, for being willing to lead our team with me this academic year. Since rules were released earlier, we have more time to prepare and train our newer members on the ropes and handles of the project earlier so that once our design is finalized, we can jump straight into framing and hammering. So far, we have successfully helped around 30 students at our AutoCAD joint workshop with Engineering X, with more than half being newly-added freshmen! In addition, as the role of aesthetics in our project has grown throughout the years, we have finally decided upon our theme for this year’s project: Toy Story! As we continue to educate, inform, and work alongside our team members, we hope that this project will inspire a new group of students passionate about engineering who will rise up to take the lead as the pioneers of tomorrow’s engineers.

To infinity and beyond!
SURVEYING
BENJAMIN MOLINA

Whenever civil engineers start the process of design, an essential preliminary step is to determine where exactly the structure will exist. Surveying fulfills this step by establishing the relative positions of critical points in terms of angles, elevations, and distances. As such, surveying is not only a precursory step, it is an essential component of civil engineering and the construction that follows design. Our project strives to introduce the surveying practice through lecture and live equipment demonstration to young engineers so that they learn of and appreciate its relevance and connection to civil engineering.

Thus far, our project has loyally stuck to that mission. As of now, we have covered differential leveling, taping, triangulation, building stakeout, sewer line profile calculation, and topographic mapping. That being said, our fall quarter has had its ups and downs. To say the least, it has been a learning experience for us all. But, we have been blessed with new and familiar faces alike at our workdays who have shown a level of dedication and support that is second to none. Looking ahead, we hope to see even more new faces and look forward to creating a team to compete in PSWS this year.

Shoutout to everyone who has stopped by our workdays this quarter. Thanks for showing your support!

ANGLE-SIDE-ANGLE
At this sunny workday, Project Manager Benjamin Molina demonstrates to members how to use a theodolite to collect angle measurements to calculate the distance between Powell Library and Royce Hall!
GEOWALL

MIA VERDOLIN & MONTSERRAT MENDEZ

After more than a year of virtual learning, GeoWall is excited to be back on campus and hosting in-person workdays once again! For those unaware of what we do, GeoWall is a competitive project in which we build a model soil nail wall out of poster board and kraft paper. Our goal is to design a wall using the least amount of paper necessary to hold back over 500 pounds of sand and additional loading conditions.

Although last year’s planned national competition at Geo-Congress did not take place, we were able to compete virtually in the regional competition held at 2021 Pacific Southwest Conference (PSWC), hosted by our very own ASCE student chapter. Together with past leadership, our team successfully wrote a design report for a three-sided soil nail wall able to withstand the aforementioned 500 pounds of sand, along with a 50-pound vertical surcharge and a 20-pound horizontal surcharge. After presenting our findings and design, we placed second overall—an incredible feat that would not have been possible without the dedication and hard work of both the previous project managers Maan Alhamdan and Peter Lee, and our wonderful project directors Esther Foo, Emily Tran, and Sabrina Luo who are continuing on as this year’s project directors as well.

Now that we have the ability to host in-person workdays again, we have been relearning and improving the build strategies from previous years by performing practice builds of our old walls including our planned one from last year. Additionally, we have been studiously working on our design report for submission in the national competition held at Geo-Congress, which will be taking place in Charlotte, North Carolina, at the end of winter quarter. As the year progresses, we are looking to expand our underclassmen membership and refine our report and building practices as we anticipate competing once again at nationals and regionals. While there are certainly many new challenges ahead of us in this coming year, we are incredibly excited to be back on campus and we look forward to the new experiences and memories that we will make in the process!
SEISMIC DESIGN
VARUN TANKHA & MICHELLE TRUONG

Seismic Design is a structural and earthquake engineering-based project that competes in the annual Earthquake Engineering Research Institute’s Seismic Design Competition (EERI SDC). Every year, teams from universities worldwide work to design, model, and construct a five-foot balsa wood model of a skyscraper subjected to simulated seismic loads from a shake table. In addition to building the structure, teams must also submit a design proposal, informational poster, seismic performance predictions, and give a presentation about the structural design, architecture, and construction process.

Last year, the format was modified to be a virtual competition based around submitting reports from analyzing and retrofitting a hospital in Seattle, Washington, taking into account both earthquakes and the COVID-19 pandemic. Our team took the new challenge in stride, learning geotechnical, structural analysis, and architectural skills and achieved 4th place out of the 37 schools that participated.

This year is introducing a new board: Varun Tankha will be the project manager and Michelle Truong will be the assistant project manager. They both have been with the project for a large part of their time in ASCE, working up from project engineer. Supporting them as project directors will be James Delong, Catherine Mailloux, Matthew Schuy, Henry Kessler, and Amanda Mar. We all have been working together to bridge the gap of knowledge and prepare to return to in-person competition with a strong design.

The competition this school year will take place at the end of June 2022 in Salt Lake City, Utah rather than in March; this is because it will be held alongside the 2022 National Conference of Earthquake Engineering held every four years. This extended timeline allows us to devote the entire fall quarter to train new members through a mini-competition project. This project will allow members to design, model, and construct their own structure and learn all of the necessary skills along the way. Once the rules are released by winter quarter, we will begin working on our design proposal and constructing our first prototype structure. We look forward to this year and the challenges it will bring.
CONSTRUCTION MANAGEMENT

KATRINA BERGE

Construction Management encompasses our teams for the ASC 67 competition in Sparks, NV. Our project is the main avenue for UCLA students to explore and develop their skills in the construction management field, and where they regularly excel despite UCLA’s lack of a formal construction-related program.

After narrowly avoiding competition shut-downs in 2020, 2021 was the first year that ASC 67 held an online competition. Our three teams navigated a two-day competition, a virtual collaborative environment, and restricted access to in-person mentorship. Despite these challenges, our project saw the highest number of team applicants yet and took home two trophies, first place for Sustainability and second place for Mixed Use. We’re proud to say that 50% of the students on our teams were brand new to the construction management field, showing that UCLA students can excel in this field when given a pathway to develop their passion.

Because we’ve seen such continued interest in this project, our leadership team has added on a fourth competition team for 2021-2022. This year, we’ll be competing in Design-Build led by Michael Nishikawa, Mixed Use led by Luca Cordova, Sustainable Building led by Youngbo Shim, and our new team, Concrete Solutions, co-led by Paulina Fisher and Amy Zhou. Overseeing the four teams is Katrina Berge, the overall Project Manager.

Our main focuses for this year are developing strong social and collaborative bonds within and across teams, improving teaching methods through strengthened industry relationships, and engaging members outside of our competition teams in the construction management field. While our last goal will be a larger focus once competition wraps up in Winter, we’ve made strong progress towards our first few goals, with several all-team events kicking off team formations. This quarter, in addition to our six introductory workshops, we held a Welcome to the Teams dinner, a site tour with W. E. O’Neil, and an Intro to CM workshop with alumni Ameya Patel and Soham Gupta. Our team leads have set a fast-paced schedule for the year, but this generation of UCLA students is proving to be engaged, eager, and dedicated towards learning as much as they can about this field. We’re beyond excited to be competing at an in-person competition in just a few months, and can’t wait to see what our teams achieve this year.
SEISMIC OUTREACH

NATHAN SHARAFIAN & MEGAN BRUNING

Outreach is one of two ASCE at UCLA projects based on community service. By guiding sixth graders through an engineering project, we aim to build on the students’ science curriculum, inspire them to go to college, and show them that they possess the problem-solving skills and creativity to pursue a career in STEM. Students build a structure out of K’NEX through trial and error, estimate costs, and brainstorm ways to make their building sustainable. We have three school visits throughout the quarter and a final competition day known as Finale Day.

After Camille and Lucas showed amazing dedication last year recreating Seismic Outreach as a virtual project focused on the engineering model, we’re happy to have been able to bring the project back in person! We worked with Paul Revere Middle School, servicing a total of 127 sixth-grade students. We presented on the engineering model during our first school visit, presented on sustainability and tested the students’ structures during our second visit, and tested the students’ structures with weights and helped them with cost calculations during our third school visit. It’s been challenging and rewarding to bring back the quarterly Sorting Party event, combine last year’s engineering model-oriented project with our traditional K’NEX project, and get everything ready for an in-person Finale Day at Paul Revere. The week before each on-site event, we needed to stick to a strict timeline to make sure every volunteer would be tested for COVID-19.

We’ve just run into one challenge: a couple days before Finale Day, the event was canceled due to high COVID rates on Paul Revere’s campus. We’ll still be able to test, judge, and present awards at a smaller event, but even with this disappointing development we still had a great quarter. We’re especially impressed by the students’ thoughtfulness in explaining how they can improve their designs and their all-around creativity and enthusiasm. Some of their structures have windmills, one has a 7-sided base, and another is a twisted symphony of K’NEX that looks like modern art. We’re very grateful to all the help Mr. Matsu and Ms. Mabashov have given us this quarter.

Next quarter, we are excited to once again work with Emerson Middle School! We’ll continue to learn the ropes of in-person Seismic Outreach, and we’ll brainstorm how we can make our project even better for our volunteers and service recipients. Later this year, we hope to bring Finale Day back to UCLA and once again bring alumni and professionals to the event. Thank you to everyone who volunteered and we look forward to whatever the rest of the year brings!

CHEX MIX? NOPE, K’NEX MIX Volunteers gather for the K’NEX Sorting Party in preparation for the school visits.

FIRST DAY OF SCHOOL! Seismic Outreach volunteers line up for a photo after a successful first day visiting the sixth graders.
ITE-ASCE TRANSPORTATION

NATHAN VARDAS & OLIVE LONG

The ITE-ASCE Transportation Design Project involves submitting a proposal to upgrade transportation facilities. The proposal includes analyzing the potential traffic impacts, designing the proposed infrastructure, and performing cost estimates. We will compete at PSWS by submitting our technical report (typically 60 to 80 pages) and presenting in front of a panel of industry judges. Our project provides students with an opportunity to solve a real-world transportation problem, while learning relevant industry skills, having fun, and meeting other students interested in transportation.

Last year, our proposal detailed a complete redesign of the LAX-it lot at LAX, which is an auxiliary curb space for Uber and Lyft vehicles. We proposed to relocate the lot and incorporate pedestrian-friendly measures such as sawtooth parking stalls and passenger amenities. Our report outlined trip generation, trip distribution, and level of service analysis (LOS) for the site, a thorough cost estimate, environmental impact discussion, and a set of design plans. Much of our design choices were based around incorporating the project with actual LAX projects, such as the Landside Access Modernization Plan and the Airfield and Terminal Modernization Plan as described in their extensive environmental impact reports. This provided useful experience for how transportation engineers in industry often have to incorporate their projects with other developments and plan for future land uses.

We are excited to get started on our prompt for this year, and to help everyone on the team learn and have a great experience being back in person. We’ve hosted workshops once a week to introduce our new members to some basic transportation engineering skills that are used in the project, including hosting a successful hands-on CEE 1 workshop that included traffic counts, street measurements, and pavement analysis. Since we are a joint project with the Institute of Transportation Engineers at UCLA, we’ve also been working on a STEM outreach proposal for the ITE Western District. This year’s ASCE project is expected to be an interchange between a surface street and a freeway, but we’ll have to wait for the RFP to get started.

STEEL BRIDGE

KATHRYN HOANG & SAMUEL LIAO

ASCE at UCLA’s Steel Bridge Team is tasked with designing, fabricating, and constructing a 20’ model steel bridge that takes into account real-world factors such as structural efficiency, cost, and constructibility. Last year, we participated in the virtual competition which involved submitting a design report and video presentation of a bridge with the challenge of offset footings on both ends. Although the virtual format was tough for general member involvement and engagement, project members gained valuable knowledge about the design process by optimizing the bridge through load testing on SAP2000 and calculating shear and moment values by hand to verify the computer models. Our team’s hard work paid off as we placed second overall out of seven schools in Southern California and earned first place in the Video category!
TEAMWORK MAKES THE BRIDGE WORK (Right and above) Project members work together to construct a steel bridge from a previous competition! This activity allowed members to get some hands-on experience before working on this year’s design.

FIELD TRIP! (Left and below) At this C&EE 1 Workshop, first-year civil engineering students gather near the Inverted Fountain to learn about traffic counts, intersection drawings, street & sidewalk measurements, and identifying...
EWB-ASCE NAVAJO PROJECT

RICHARD TRUJEQUE & ERIC SAAVEDRA GARCIA

About 40% of families in the Navajo Nation do not have access to running water. The Navajo Water Project works throughout the year to design and implement an off-grid, solar-powered water system for families on the reservation. During Fall quarter, we’ve focused on teaching the basic concepts that each team uses for design. We held meetings twice a week to teach our members about all aspects of our system, educating them on the basics of electrical design, civil design, drafting using AutoCAD, and also Navajo history. This curriculum based quarter has been quite the success because of our general members’ continued attendance and participation, in addition to the work of our dedicated directors.

During Winter quarter, each team will split up and begin practicing with their respective softwares. Once everyone has a good feel for their softwares, the design process will begin! In Spring Quarter, we will finalize our design, order materials, and construct demos of our design. If safety permits, we will then travel to Arizona for implementation.

Thank you to our directors and everyone who has attended meetings for making fall a wonderful quarter. If you are interested in the project and want to learn more, reach out to Richard (richardtrujeque@ucla.edu) or Eric (ericsaavedra@ucla.edu). Even if you didn’t attend meetings during Fall, we are more than happy to catch you up and give you access to our archived meetings!

BACK TO BASICS Project directors of the Navajo Water Project present on the basics of their water system plan to eager members.
ASCE 2021 GRADS

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