A LETTER FROM THE PRESIDENT
Yuen Lenh

MEMBERSHIP
Joseph Choi

PROFESSIONAL OUTREACH
Nadia Maher

INFORMATION SESSIONS
Katherine Acero

CAREER FAIR
Emily Story

NETWORKING NIGHT
Michael Nishikawa

SOCIAL
Justin Sautter

COMMUNITY SERVICE
Katherine Tsai

TRANSFER OUTREACH
Erfan Kohyarnejad

ATHLETICS
Logan McDevitt

MENTORSHIP
Youngbo Shim

PSWC 2021
Tori Mok & Nick Borov

CONCRETE CANOE
Matthew Saiki

STEEL BRIDGE
Alexis Bui & Stacy Kong

CONSTRUCTION MANAGEMENT
Ameya Patel

TIMBER-STRONG DESIGN BUILD
Kristida Chhour

SEISMIC DESIGN
Honor Fisher & Anjali Swamy

SEISMIC OUTREACH
Camille Ituralde & Lucas Tang

EWB-ASCE NAVAJO PROJECT
Anna Philipp & Richard Trujeque

SURVEYING
Milton Mak

ENGINEERINGX
Joseph Choi

GEOWALL
Maan Alhamdan & Peter Lee

EXHIBITLAB
Sedef Siddiqi

ENVIRONMENTAL DESIGN
Allison Lee & Patience Olsen

TRANSPORTATION
Nathan Sharafian & Nathan Vardas
A Letter
FROM THE PRESIDENT
YUEN LENH

Dear Alumni, Faculty, Students, and Sponsors,

As another quarter comes to an end, I am delighted to present ASCE at UCLA's Winter 2021 newsletter. Although our Fall 2020 quarter was completely virtual, we still managed to have a great time. Our quarter began with our annual Officer Retreat where our core officer board spent the weekend of zero week helping our officers prepare for the school year with informational presentations, team-building activities, and one-on-one meetings. While we typically go to Big Bear, our Officer Retreat was held virtually this year.

In order to maintain our membership, our officers began recruiting throughout the summer first at every New Student Orientation Activities Fair, and then at Engineering Welcome Day and Enormous Activities Fair. Following our recruitment efforts, we held our Fall General Meeting with over 140 students in attendance. At the General Meeting, our general officers presented on their upcoming events and our project managers gave an overview of their respective projects. A week after our General Meeting, we hosted our Project Open House where interested members had the opportunity to meet our project managers and learn more about each of our 13 projects.

This year, ASCE at UCLA is hosting the Pacific Southwest Conference (PSWC), where many of our projects compete. Our PSWC committee has adjusted its plans to fit a virtual format, but we are certain that it will still be an incredible conference. Our other competitive projects, Construction Management and Seismic Design, will also be competing virtually at ASC67 and the EERI Seismic Design Competition, respectively. Despite the virtual setting, our projects have been working hard all quarter to prepare for their competitions. Our community service-based projects have also been active, with Seismic Outreach organizing virtual middle school visits (including Finale Day), and the Navajo Water Project creating lesson plans with their power, civil, and drafting teams to prepare project members for their upcoming site visit (date TBD).

On our professional side, we organized a total of 19 events. To give our members a chance to learn about various companies in our industry, we hosted many company info sessions. Since we could not have field trips, we began a new Alumni Day in the Life speaker series where we invited our alumni to come and talk about what a day in their job looks like. We also hosted career workshops to give our members resume feedback and networking advice. On
top of that, our annual Networking Night, held through a platform called Gatherly, saw a great turnout of 22 companies and 58 students. Following Networking Night, our Career Fair, also held through Gatherly, had great success, bringing in 30 companies and over 150 students. Additionally, we collaborated with UCLA’s CalGeo, ITE, and EERI-SEAOSC to organize our new “What is Engineering?” series. In this series, we had a few of our upperclassmen students and alumni present on the basics of environmental, water resources, geotechnical, structural, and transportation engineering to help our underclassmen members get a better understanding of the different civil engineering tracks.

On the more social side, we hosted a few game nights and kickstarted our yearly mentorship program. With over 100 sign-ups for our mentorship program, mentors and mentees were paired with each other and placed in one of four families to compete all year long to see which family is the most active. Combining mentorship, athletics, and community service, for the month of November, our mentorship families competed with each other in a friendly exercise challenge through an app called Active for Good, a donation-based company which provides food for malnourished communities through the user’s exercise.

Overall, regardless of the virtual challenge, ASCE at UCLA had an amazing fall quarter. None of our achievements would be possible without the support of our alumni, advisors, sponsors, and the UCLA Civil and Environmental Engineering Department. We would like to thank you all for your constant generosity and look forward to continuing to work with you.

If you have any questions, comments, or suggestions about our chapter or would like to learn about how to get more involved, please feel free to reach out to me.

Best wishes,

_Yuen Lenh, President_
ASCE at UCLA 2020-2021_
ASCE at UCLA continues to have strong membership numbers as we end the fall quarter with 202 members, 87 of which are new members. Similar to previous years, we hope to see an increase in membership as the year progresses and we continue to hold virtual club events. Our membership also includes students outside of civil engineering, such as mechanical engineering, chemical engineering, environmental science, and more.

This year we were able to connect with and recruit a lot of 1st-year and 1st-year transfer students through (virtual) tabling during New Student Orientation sessions. Every week throughout summer, officers had the chance to speak to future students that were interested in ASCE and helped them learn more about the club’s various projects, professional opportunities, and social connections ASCE provides for its members. The attendance of 156 people at the Fall General Meeting shows the success of our recruitment efforts.

This year we saw a great opportunity for us to bring back our “Officers of the Week” program so that general members can get to more about our officers. Each week, members got to learn more about one to three officers personally and what they do for ASCE with their respective positions.

Despite going virtual, we had strong membership participation in our events and projects. This quarter, we had an average of 18 students across 9 info sessions (with a peak attendance of 47 for one info session) and an average of 20 active students across our 11 projects. As a club we are happy to continue providing fun and interactive social nights where students can still connect with one another despite not being together physically. As we go into the winter quarter and the rest of the year, ASCE is looking to overcome challenges a virtual format brings and to keep providing fun events for our members.
INFORMATION SESSIONS

KATHERINE ACERO

ASCE at UCLA had a successful fall quarter for info sessions. We hosted nine info sessions with companies who specialized in heavy civil, general civil, structural engineering, and construction. Due to COVID-19, all info sessions were virtual, however, we did the most to make them resemble in person info sessions by implementing breakout rooms at the end of each meeting for students to mingle with reps the way they normally would. Attendance for info sessions was at an average of 20 students, with a maximum of 48. Many of the companies gave in depth presentations on intern/engineer roles, company culture, and project overviews. In addition to these presentations, a few companies also organized interactive company trivia games which were highly enjoyed by all participants.

We look forward to hosting more virtual info sessions this winter and providing a networking platform that can reach out to students wherever they may be.

PROFESSIONAL OUTREACH

NADIA MAHER

This fall, students were able to learn about the different sides of professional life in civil engineering through virtual industry shadow opportunities and our Day in the Life Alumni Workshop Series. Unfortunately, we were unable to host any field trips due to safety concerns but were able to host the industry shadows and Day in the Life Workshops virtually via Zoom.

We had virtual shadow opportunities at 3 different companies: CDM Smith, Black & Veatch, and KPFF. Three students attended CDM Smith, four attended Black & Veatch and KPFF hosted seven students, pairing each with an engineer at their company. Students had the opportunity to hear from engineers at these companies, see what they do at work, and were able to ask questions from their engineers.

We also started a Day in the Life Alumni Workshop series this quarter, where alumni from UCLA ASCE shared their career paths and what they do during a typical day at work via a zoom presentation. This was another way for students to learn about professional life and about the different fields of civil engineering. We had four different workshops this quarter featuring alumni Ben Baker, Emily Guglielmo, Andrea Brown and Kristine Gali (who presented together), and Ben Wong, each of whom is very successful in their respective fields of transportation, structures, data science, and water resources. We had a total of 44 students in attendance at these workshops and they had the opportunity to ask questions of our speakers about their experience in the workforce. The virtual format for these workshops proved useful as many of our speakers live outside of the Los Angeles area.

Next quarter, we look to continue to have industry shadows with more companies and hopefully will continue our Day in the Life Alumni Workshops as well.

TRICK QUESTION

Stacy and Witbeck try to outsmart info session attendees in their trivia game by pulling an “all of the above.” Little do they know, the students have learned from the presentation and know the answer(s).
This fall, ASCE at UCLA’s Career Fair was attended by 30 companies in varying fields of civil engineering, and 150 student members. Our career fair was held via Gatherly, a platform that allows groups to gather in a virtual “hotel” setting where different floors each contained different virtual booths for the companies.

There have been many challenges created by the COVID-19 pandemic, but those of planning a career fair to take place in such troubling times were quite unique. Our first challenge was company turnout, as many companies around the country have struggled financially during this pandemic. There was also hesitation due to the uncertainty of their future plans for hiring and internships. This was an alarming realization at first, due to the fact that we still have a very large student base who would be counting on the career fair to secure them an internship or full-time job. Nevertheless, with the help of our team of career fair interns, we were able to reach out to more companies than in previous years and managed to still get 30 companies to sign up to attend.

Once this challenge had been tackled, the next issue became planning for student turnout. Because the ASCE at UCLA Career Fair is an event for paid members of ASCE only, each student had to be sent a personal link for them to attend the event, requiring students to RSVP beforehand. In normal years though, there is no need to RSVP, since students simply walk up to Ackerman Grand Ballroom and scan their Bruincards. This unfortunate but necessary change resulted in many students not registering for the career fair until the last minute. Once again though, the fabulous team of interns stepped in and made sure that all students who registered for the career fair before the event started were sent a link.

Despite the aforementioned challenges posed by hosting a virtual career fair and the uncertainty of future plans for both students and companies, ASCE at UCLA managed to put on a very successful virtual career fair! We initially expected to have an attendance of about half of that of one of our in-person career fairs, both on the company and student sides. However, we were pleasantly surprised by having a larger turnout than expected—about 2/3rds of that of our career fairs from the previous year. We were also very lucky to get the opportunity to work closely with one of the web developers of Gatherly to customize our event to our needs.

This included creating a custom map for each floor so that companies may be identified by their logo and creating a unique drop-down page for the beginning of our event. Having the ability to cater the virtual platform to our needs was incredibly helpful and played a significant role in how smoothly the career fair ran.
Due to UCLA’s announcement that campus will remain closed through winter quarter, ASCE at UCLA’s winter career fair will also take place 100% online. While this may be disappointing for some students and companies, we are confident that our Winter Career Fair will be even more successful, as we plan to make changes based on the feedback we received from students and company representatives after the Fall Career Fair. The Winter Career Fair will once again take place on Gatherly, on January 28th, 2021, from 10 am to 2 pm.

NETWORKING NIGHT

MICHAEL NISHIKAWA

Networking Night is an amazing opportunity for members of ASCE at UCLA to meet and connect with industry professionals in a more casual manner the evening before the Career Fair. Attending the event allows company representatives to get to know students beyond their resume and these personal connections are huge networking advantages.

Despite the circumstances of hosting a networking event completely virtual, Fall Networking Night was a huge success. In attendance were 65 students, 35 representatives spanning roughly 20 different companies, as well as our practitioner advisor Dr. William Goodin. Our platform, Gatherly, was great at allowing students and representatives to engage in one-on-one and group conversations, and overall received very positive feedback from both students and company reps.

ASCE at UCLA is excited to announce that Winter Networking Night will be on Wednesday, January 27, from 6 pm to 9 pm! Working to build off of our successes of Fall Networking Night, we will once again be using Gatherly as our virtual platform. We have a diverse and impressive set of companies scheduled to be in attendance, and it will be an event you won’t want to miss out on!

PANTS OPTIONAL …just remember not to stand up.

PRACTICE MAKES PERFECT Networking Night attendees chat with Alyssa Yim of Storie and Severson, practicing not only their networking skills, but also their ability to use Gatherly, ASCE at UCLA’s platform of choice for Career Fairs and Networking Nights during the virtual school year.
SOCIAL

JUSTIN SAUTTER

What a wonderful first quarter of socials and events we’ve had for this (so-far) virtual year! Starting with the Among Us Social—the first of a few virtual game nights throughout the quarter—it allowed us to have some fun at the start of the quarter and allow the new and old ASCE members to get to know one another. Continuing down the video game path, UCLA ASCE hosted a collaborative Mario Kart tournament with Cal ASCE! Students from each school were able to use the virtual environment to play with one another while streaming their races for viewers to watch! (Shout out to Jose Alberola for bringing the UCLA pride and coming in second!)

The virtual format of this quarter definitely provided more drawbacks than benefits, but despite that, events over Zoom still allowed students an outlet to interact with other society members and have some fun in the process. The last of the purely social events was a fun game night that highlighted Scribbl.io (a great Pictionary alternative) and other fun strategy games. Near the end of a tough fall quarter, the members of ASCE also got the opportunity to attend the Virtual Alumni-Student Tailgate and socialize with past members.

Overall, looking forward to the rest of the year, fall has given a good benchmark for the events that are capable over Zoom. All things considered, more inter-university ASCE socials could be possible in the near future as well as much more fun socials. Though we are glad we can connect virtually at the moment, we look forward to a time when we’ll be able to socialize in person again.
COMMUNITY SERVICE

KATHERINE TSAI

This fall, while unfortunately still virtual, didn’t slow down ASCE! Community service events have been difficult to coordinate because of the virtual setting, but it hasn’t stopped us. The first event we held was “Help the Hungry” where volunteers coordinated with LA Works and FoodOasis.LA to contact food banks and soup kitchens for information that would go into a public database system that aims to help give people in need easier access to information.

The second event we held was “Community Service: MARATHON EDITION” where people who participated in exercising during a set time would earn double the points in our ongoing Active for Good competition. Exercising a certain amount and logging it on the app allows you to earn points that go toward donating food packets to those in need. Our members had a great time exercising and earning points. Next quarter, I plan on hosting more events that would be more hands-on such as making cards for children, elderly people affected by COVID-19, and anyone else in need or upcycling old shirts into masks!

TRANSFER OUTREACH

ERFAN KOHYARNEJAD

As the transfer outreach chair, I am responsible for introducing ASCE and its projects to transfer students and help transfers get more involved in these projects to gain hands-on experience. During the fall, we hosted our first ever Transfer Career Workshop. During this event, we helped transfer students with resume writing tips and interview questions. This was an excellent opportunity for students who joined to make connections in the event and get to know their peers. Since the event was virtual, we wanted to have as many attendees as possible if it was in-person, so I partnered with other engineering clubs such as Biomedical Engineering Society (BMES) and American Society of Mechanical Engineers (ASME) to announce this event. Also, to have some interaction during the event, we played a Kahoot game, which was fun and educational. I plan to have more events designed for transfer students to help them succeed in both professional and academic fields. One of the planned upcoming events is a class planning workshop that I highly recommend all transfers to attend in the winter.

KEEP RUNNING! Logan McDevitt and Katherine Tsai continue running at 2:05 PM to get even more double-points for Active for Good.

AND THEY’RE OFF! Youngbo begins running at 2 PM (La Croix in hand) to get double-points for Active for Good!
ATHLETICS

LOGAN MCDENVITT

This was definitely a unique time for athletics. With professional and collegiate sports on and off and intramurals, our main project, on hold, ASCE had to take a different approach to how we continue to stay active in fall 2020. Thank you to everyone who contributed to making this quarter a success.

The first project of the quarter was ASCE Fantasy Football, which has been ongoing each year to this point. In addition, we started up Fantasy Basketball for the new NBA season on December 22nd, which will run into the winter quarter as well.

Another cool thing we started was putting quick 10-20 minute workouts in the weekly ASCE email announcements. A BIG thank you to Emma, our Secretary, for always including those. If you missed them, you can always go back and check them out!

Finally, our biggest event of the quarter, which was in conjunction with Mentorship and Community Service, was our participation on the app Active For Good, in order to donate food to malnourished children across the world. Together, we earned a total of 215,771 points (about 29 days of walking) and donated 414 packets of food!! A huge thank you to Youngbo and Kat, our Mentorship and Community Service Chairs, and to everyone who participated. I hope we will continue this tradition into the winter.

Other than that, I hope to find new and innovative ways that we can stay active together while apart. Thank you everyone for suggestions throughout the past few months and I cannot wait to stay fit with you all these next two quarters.

I hope everyone had fun with what we were able to accomplish this quarter and I look forward to being active with you in person in the near future!
MENTORSHIP

YOUNGBO SHIM

Virtual lions, virtual tigers, and virtual bears, Oh My!

Mentorship has been a smashing hit in fall quarter. After a presentation explaining the important history of our mentorship program, all Mentorship applicants (over 100 of them!) were paired with their mentors/mentees, and everyone learned which Mentorship family they were placed into! Each family broke out into break out rooms to come up with their family names and design their family shield crests. Our four families this year are FIST B led by Catherine Nguyen and Rachel Tam, Shmint pennies led by Cade Luongo and Camille Ituralde, HTTPs://LuTangClan.emma led by Emma Golub and Lucas Tang, and kaaaron led by Ayla Dvoretzky and Katrina Berge. And with that, Mentorship hit the road!

Although we can’t be physically together, this program has helped everyone connect with one another on a more personal and social level! Along with our favorite online games such as Among Us, Scribble.io, and Scattergories, students have been exploring new social avenues. Family Heads Ayla and Kat have been leading Just Dance sessions, Emma hosted a pumpkin carving session, and students from all different projects have been staying in Zooms after work days just to hang out for a bit.

This quarter, Mentorship collaborated with both the athletic chair and the community service chair to spearhead the first “Active For Good” month-long event. Members who participated recorded their physical fitness activities on the “Active For Good” app; exercises received points, and more points accumulated led to more packets of food being donated to various communities in Africa to combat Severe Acute Malnutrition. In the end, family kaaaron won by accumulating 71,126 points, and Emma Golub was the individual winner, with 15,094 points!

To close the quarter, I hosted the “Fa La La Croix” Mentorship Concert! Lucas Tang, Brian Ling, and I performed hits from across the decades, Ayla and Kat showed everyone how to bake the most amazing chocolate-peppermint cookies, and Camille and Yuen gave a world-class demonstration on how to build the most structurally-sound gingerbread house!

Looking on to winter quarter, we hope to host even more events, collaborate with other board members to create new ways to connect members, and keep up the great work!
PSWC 2021
TORI MOK & NICK BOROV

The PSWC 2021 planning committee is in full stride executing the new plan of action! PSWC (Pacific Southwest Conference) 2021 is continuing the tradition of testing students’ classroom knowledge through technical reports and virtual presentations. Student chapters have the opportunity to compete in nine technical events including Concrete Canoe, Engineering X, Environmental Design, Geowall, Surveying, Sustainability, Technical Paper, Timber-Strong Design Build, and Transportation!

Additionally, PSWC 2021 is hosting a variety of non-technical events, such as Smash Ultimate, allowing participants to represent their student chapters by playing popular games. Non-technical events provide a wonderful opportunity for students to bond within and outside of their student chapters. For example, Collaboration places students in teams with participants from other student chapters, and teams must work together in order to win the challenges. PSWC 2021 has even extended non-technical events to YMF chapters; Hawai'i, Las Vegas, Los Angeles, Northern Arizona, Orange County, San Bernardino-Riverside, San Diego, San Francisco, and Southern Arizona YMF chapters have registered to compete in Jeopardy!

PSWC 2021 banquet has two exciting new additions. To start the evening strong, a Talent Show displaying the diverse skill set of participants will take place. The PSWC 2021 planning committee has received impressive submissions, and we are grateful to have representation from many student chapters! Also, PSWC 2021 will be announcing scholarship recipients during the awards portion of the banquet. In the beginning of January, students will be able to apply to scholarships; there are scholarships specific to each technical event and some that are available to any registered participant.

PSWC 2021 will challenge technical knowledge, foster friendships, prioritize safety, and support students’ needs.
CONCRETE CANOE

MATTHEW SAIKI

Concrete Canoe is a small scale construction project that focuses on the design, construction, and performance of a lightweight concrete canoe at the Pacific Southwest Conference (PSWC) regional competition. This year the project will be judged on one technical proposal with two additional enhanced focus areas of our choosing and a video presentation.

With the project transitioning to a virtual format this past quarter, we have taken advantage of the situation and focused more on understanding the reasoning behind long-continued practices within the project as well as providing practical knowledge in lieu of in-person experiences. We kicked-off the quarter diving into the components of concrete and the chemistry that holds it all together. The leadership team, consisting of two Project Managers and eight Project Directors, collaborated to present on specific topics within their areas of expertise to better educate the entire team as well as the new students that joined this year.

This fall, our mix design team was given another challenge: to create a lightweight, low density concrete mix without the use of cenospheres or manufactured microspheres. In response, the team researched new low-density aggregates and fly ash to be used in our mix. By outsourcing the mixing and testing, the mix design team was still able to obtain baseline strength results to use in the theoretical mix of the canoe. We also designed a new hull and mold that would make casting, demolding, and paddling more efficient. In addition, the construction team is in the process of changing the tensioning system from a pre-tension to post-tensioning as a complement to the new mold. In the history of the project at UCLA, it has only been successfully attempted once. With no prior experience of these techniques, the leadership team turned to project alumni for advice.

A new requirement to qualify for the national competition is a video submission highlighting the experiences of project alumni and the impact of concrete canoe on their lives. We had the opportunity to reconnect with several alumni from various canoe teams and we are so grateful for the wisdom they shared. Hearing their stories of working on the canoe and building friendships was encouraging to the team and it gives us hope for the future of the project.

Next quarter, we will be putting together our reports and preparing for PSWC, but we also intend to learn more about construction techniques and decide on a name for our national park/nature themed canoe. We are excited to showcase our product of passion, dedication, and excellence as Concrete Canoe at UCLA always has.
STEEL BRIDGE

ALEXIS BUI & STACY KONG

Steel Bridge had a unique and valuable virtual 2020 fall quarter. We were excited to see both new and returning members bring enthusiasm and dedication to our workdays.

During the fall, we focused on teaching members the design skills behind bridge-building to assist them in making meaningful contributions not only to this year’s project but also future ventures. We spent the first half of the quarter going over theoretical concepts such as the competition rules, bridge terminology, and the physics behind and engineering concepts used in design. The second half of the quarter involved hands-on, introductory workshops to programs such as AutoCAD, SAP, SketchUp, and Solidworks that are used to design, model, and test the bridge. Despite being unable to meet in person, our virtual work days and socials have still allowed us to meet new members, make good progress on our project, and grow closer as a team.

During the quarter, it was announced that our competition would be completely virtual, and instead of fabricating a physical steel bridge to take to competition and test, we would now present a 3-D model of our bridge along with a design report. Over the past quarter, we have worked on an arch bridge design with triangular deck chords. In order to develop our final design, we held workdays focused on brainstorming. In these, we presented our current design, and project members offered their insights and suggestions for improvement on both aesthetics and feasibility. Our first brainstorming workday centered around the general look and pieces of the bridge, while the second concentrated on designing the specific connections between each piece. In spite of our competition being virtual, we need to put the same amount of effort and thought into designing a bridge that could be physically constructed if the competition was in person.

Over the course of the next quarter, we will be working on our design report, which includes sections about the design, analysis, and constructability of our bridge. Working on the design report will be an entirely new experience for our team, but we are looking forward to overcoming the challenges ahead with our team. We are excited to see everyone again in winter quarter and welcome anyone new that is curious about Steel Bridge.
CONSTRUCTION MANAGEMENT

AMEYA PATEL

Fall quarter is always a busy one for our Construction Management teams! We managed to pack in seven crash course workdays in which we covered the basics of scheduling, estimating, site logistics, and LEED, all before applications closed in week 6. Since then, we’ve finalized our Design Build, Mixed Use, and Sustainability teams, led by Katrina Berge, Justin Ehrenberger, and Mia Verdolin, respectively. One of our project members’ favorite workdays this quarter was the Bluebeam Workshop, during which we walked through sample construction documents to familiarize everyone with construction PDF markups.

The transition to an online format was a difficult one for all the projects, but we were lucky enough to have workdays planned that could be recorded and posted online. We posted them on our brand-new team website, which was used to make all our team resources and information available to new members.

Looking forward toward winter quarter, we’ll be stacking up practice problems, team-building workshops, and mock presentations to get ready for competition in early February. Several of our friends in the construction industry are planning mentorship and workdays to hone in on specific skills like scheduling and estimating with our teams. With a good mix of new members and returners, we are excited for a great winter quarter and are ready to tackle the online competition!

TIMBER-STRONG DESIGN BUILD

KRISTIDA CHHOUR

This fall, Timber-Strong Design Build has been focused on equipping our project members with practical knowledge and skills. With an exciting new team of loyal project engineers and our hardworking directors, we’re ready for whatever this year’s competition will throw at us! During our workdays, we have been focusing on learning about characteristics of wood, wall framing, roof types, and the design process of our past structures. With this knowledge, we can better understand why timber structures are built the way they are. We have also been gaining experience with AutoCAD and hosted a C&EE 1 Workshop that helped guide over 60 people through basic skills. Aside from more technical tasks, we have been building a sense of community within our project, which is more important than ever while workdays are happening over Zoom.

This quarter has been quite a journey full of growth and learning, and we’re remaining focused on preparing for the challenges that lie ahead of us at PSWC 2021. I am so thankful to have my supportive directors and project engineers along for the adventure!
SEISMIC DESIGN
HONOR FISHER & ANJALI SWAMY

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). In a typical year, 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 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. Our goals are much different this year but we still plan to participate in the competition and provide a valuable experience to our project’s members.

In a usual fall quarter, we would come up with a preliminary design for our structure and build a prototype, but of course our progress looks much different this year. Throughout fall quarter we welcomed new members to the team by giving them a mini-project that mimics the usual design prompt of the competition. We started by hosting workshops to introduce them to structural engineering concepts like load path and helpful software like SketchUp. They then began designing the bracing scheme, floor plan, and column layout of a 9-story balsa wood model in SketchUp. We also tasked them to come up with an architectural concept and a name for their building. In winter quarter, they will test their models in SAP2000 and give a presentation on both the structural and architectural aspects of their design to round out the project.

Toward the end of fall quarter, the competition organizers announced the new format for the year. The premise of the project is that an existing hospital in the Seattle area is to undergo a structural renovation to increase patient capacity in light of the increased demand caused by the COVID-19 outbreak. The project will consist of four virtual deliverables in the categories of geotechnical engineering and seismicity, structural engineering, architecture, and retrofitting. The competition is to take place virtually from March 23-25, 2021 and will include team presentations and posters as usual. The organizers are also planning virtual events including technical tutorials, a post-earthquake reconnaissance workshop, and a quiz bowl to offer more to the project participants. Overall, we are excited to continue learning and participating despite the challenges posed by the virtual environment.

EARTHQUAKES HAVE NOTHING ON US We would be happy to let the Seismic Design team design all of LA’s buildings… would you?
Seismic Outreach is one of two service-based projects at ASCE at UCLA. It is a project that aims to educate and inspire the future generation of engineers. Our program works with one middle school each quarter and has three school visits and one Finale Day. Finale Day is a day where students present their completed project to UCLA volunteers.

During fall quarter, we worked with Paul Revere Middle School, servicing a total of 140 sixth grade students. During the first virtual school visits, UCLA volunteers gave a presentation about earthquakes, structural and environmental engineering, and the prompt for their project. The second and third virtual school visits were dedicated time for students to ask the UCLA volunteers questions about their project, from how to find the area of a building to the best materials for their structures. We hosted our first virtual Finale Day, where UCLA volunteers judged students in breakout rooms. Students came prepared to answer questions about their structure and architectural design, and there was a portion of the Finale Day for students to ask questions about college. Awards were given to students with the most impressive projects and to those that hit it out of the park! Overall, it was an incredible experience. The students were all engaged and prepared, and our volunteers had a blast learning about all the unique buildings the kids came up with. We are very grateful for Ms. Mabashov, Mr. Matsu, and Mr. Tokeshi for working with us to deliver the best program.

For winter quarter, we will be working with Emerson Middle School with 135 students. We learned a lot from this past quarter and will be making adjustments to the program to meet the needs of the sixth grade curriculum and the virtual setting. We will be shifting our focus from earthquakes to engineering models, demonstrating to students the importance of planning, constructing prototypes, testing, and redesigning. Due to the virtual setting, students will be tasked to create a structure that can withstand a certain amount of weight. We are very excited to work with them and will have just as much fun as we did last quarter!
Let's start by introducing some key terms.

**What is a fuse?**

A fuse is a safety device that can be removed to aggregate the duration of the resistance of a fuse. During an earthquake, it is important to identify the fuse that is承受ed by the movement to decrease the risk of fire. There are different types of fuses, the type used in this resisting frame is the thermal link fuse.
EWB-ASCE NAVAJO PROJECT

ANNA PHILIPP & RICHARD TRUJEQUE

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.

Fall quarter has been quite the success despite it being in a virtual format thanks to our general members’ continued attendance and participation, in addition to the work of our dedicated directors. Throughout the quarter 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. We understood that it is difficult to build personal connections through a virtual setting, so we held short socials at the end of every meeting to ensure that all of our members got to know one another and felt like a cohesive team. Thank you to everyone who came and participated in the meetings and socials! If you’re interested in joining our project and want to catch up on all of the curricula we have gone through thus far, we’ve archived the meetings and presentations. Please reach out to Anna (annaephilipp@gmail.com) or Richard (richardtrujeque@g.ucla.edu) at any time for access!

Winter quarter will consist of finalizing the design for our next system. We will be breaking out into teams where members can choose to work with the team that they are most interested in. The Power Team, for example, will work to ensure the solar panel chosen will work efficiently to power our system. The Drafting Team will finalize the design of the home and the pipe network in AutoCAD. The Civil Team will finalize the hydraulic design of the pipe network using EPAnet. In addition, we plan on continuing the short socials at the end of meetings!

Usually we would implement our finalized system during summer break and we’re hopeful that we may still be able to do so this summer; however, it is very dependent on the status of the pandemic. As soon as it’s safe for the residents of the home and our members, we will continue with our trip to Arizona for implementation!

WELCOME TO CHIL— I MEAN NAVAJO No, the Navajo Project team does not serve baby back ribs at their workdays.

WATER FOR ALL The Navajo Project team put their heads together to plan for their implementation of a sophisticated water system for families in the Navajo Nation.
SURVEYING

MILTON MAK

In this project, we teach our members the fundamental techniques and skills used in surveying and compete in PSWC in the spring. What is surveying? Surveying is the application of determining positions and angles within a given layout and is widely used in all civil engineering fields.

Although COVID-19 has prevented the use of in-person workdays, the transition to virtual workdays through Zoom has proven quite useful. During the fall quarter, we have dedicated our workdays to teach surveying concepts, equipment, concept applications. These concepts included differential leveling, pacing, taping, correction factors in taping, and triangulation.

Without the help of my project director, Benjamin Molina, none of this would have been possible.

For the winter quarter, we plan on selecting a competition team and focus on preparing for PSWC in the spring. This year, our competition revolves around the creation and presentation of topographic maps as well as differential and profile leveling with engineering design. Even if you haven't attended workdays in the fall, we still encourage all members to learn and practice surveying. Hope to see you there!

ENGINEERINGX

JOSEPH CHOI

Over the course of fall quarter, EngineeringX has been focusing on designing and thinking up creative obstacles for our course. All of the rough drafts of these obstacle courses have been created on Bluebeam, giving project members a chance to get used to a program widely used in the construction industry. Thanks to Zoom capabilities, all project members are able to work on the same file through screen share. As winter and spring quarters roll around, we’re looking to finalize our obstacle choices and to compile the analysis of our course into a single well-written report.

A VIRTUAL OBSTACLE COURSE? Not quite. But EngineeringX has been working hard to write up a technical report for their hypothetical obstacle course. Hopefully, they will get to put their skills in action next year!
EXHIBITLAB
SEDEF SIDDIQI

ExhibitLab involves a multidisciplinary team of students who will design a comprehensive and engaging website and virtual museum exhibit, titled “Resilience and Sustainability Strategies for the Next Generation of Buildings”, in which patrons will virtually interact with audiovisual, digitally rendered models, and a digital portal that 1) champions earthquake engineering and 2) highlights performance-based design. For the year of 2020-2021, Project Manager Sedef Siddiqi and Project Executive Peter Lee will lead the ExhibitLab team in designing a virtual exhibit and website to be launched spring 2021. Despite physical limitations due to COVID-19, ExhibitLab will still provide hands-on experience in research, structural modeling, and coding, as well as design experience with SketchUp, Rhino, and AutoCAD.

The motivation of ExhibitLab is to inform the public on the current state and next generation of buildings, and emphasize the importance of structural innovation for community resilience to seismic events. In general, success will be ensured by the general public’s understanding around the risk of seismic events in their cities as well as an industry update to the broader public, especially since cutting-edge technologies aren’t publicized.

Fall quarter was spent training the new members in the general skills required for ExhibitLab, as well as creating and publishing a python model that analyzes the environmental and economic impacts of controlled rocking steel braced frames (CRSBFs). As for the rest of the year, ExhibitLab will continue to expand the content on the website, which would involve writing another five articles. In regards to the virtual exhibit, it will be created through ArtSteps, with an expanded toolbox including videos, interviews, interactive models, pictures, and text.

GEOWALL
MAAN ALHAMDAN & PETER LEE

For fall quarter, GeoWall was navigating a lot of uncertainty as many of us have been. Rules came out and the competition will be held virtually, but sadly we won’t be able to compete due to us not being able to work on our design in-person. Despite this, we have been hosting workshops for current directors and interested members to learn more about how we design our wall, how our competition runs, and more general information about our project. It was great to see both new and familiar faces in the 3 workshops we hosted. We also held a workshop for C&EE 1 where we introduced the basics of geotechnical engineering, how to conduct soil mechanics tests, and the ins-and-outs of constructing a soil-nail wall. Our two other workshops went more in-depth and covered how to use the Settle3D software and our optimization spreadsheets. For next quarter, we are looking forward to helping our future directors transition to a successful team for next year, when hopefully we will be able to compete.

DIGGING INTO GEOTECH
The GeoWall team teaches aspiring civil engineers all about geotechnical engineering and soil nail walls.
Fall quarter brought new and familiar faces of all years to Environmental Design. Our quarter began with an introduction to the project, stormwater infrastructure, and this year’s competition prompt. Although the project traditionally focuses on wastewater treatment, this year’s prompt focuses on stormwater capture, touching on both environmental and water resources engineering concepts. We are tasked with developing a conceptual multi-benefit regional Best Management Practice (BMP) project to meet City of Los Angeles water quality standards. Our final report is scored on the performance and feasibility of our design, value to the community, ecosystem services, financial costs, maintenance, quality of methodology and documentation, and interdisciplinary collaboration.

During the site selection process, project members identified 14 potential locations that would best fit our project’s goals, considering infiltration rate, community benefits, and existing public utilities. Once our site was chosen, project directors led research groups in breakout rooms for site investigation, hydrology and hydraulics, project background, and literature review. Members joined teams that matched their interests and gained experience with GIS maps, HydroCalc, literature review, and code research, while compiling background information for our report.

During the upcoming design phase, we are excited to incorporate project members’ BMP research from earlier this quarter. As we continue to make progress towards our final report, members can anticipate learning more about BMP applications, cost estimation, and technical writing. Our goals for next quarter include finishing our design, analyzing ecological and community benefits, quantifying the costs of construction, operations, and maintenance, and composing our final report. Our design report is due February 26, 2021, and our presentation is due March 12, 2021.

In addition to competition preparation, the Environmental Design project hosted “What is Environmental Engineering?” and “What is Water Resources Engineering?” as part of ASCE at UCLA’s “What is ____ Engineering?” workshop series. These presentations introduced environmental and water resources engineering concepts to members interested in pursuing these fields, expanding on opportunities at UCLA and beyond. The workshop recordings can be viewed here: www.ascebruins.org/environmental-design.html.

Although we miss seeing each other in person, we are glad to have adapted smoothly to a virtual format. Slack became our platform for organized announcements, research groups, professional development, and pet photos, and Google Drive was used to efficiently organize our research findings. Throughout the quarter, we focused on building community and connecting virtually with pre-workday conversation prompts, game night socials, and holiday cards at the end of the quarter. We appreciate all the laughs and fun times from this quarter, and we’re excited to continue in the new year!
The ASCE Transportation Design Project provides students with an introduction to the transportation engineering field. Our project entails creating a proposal to solve a real-world transportation problem, which includes traffic analysis, CAD designs, cost estimating, and a site visit to the project area. We compete at PSWC by submitting our plans and presenting in front of a panel of judges from industry.

Project Managers Nathan Vardas and Nathan Sharafian, and Project Directors Francisco Ramirez, Katrina Berge, and Olive Long, feel that our project has transitioned well to a virtual format. During fall quarter, we hosted weekly workdays for the ASCE and ITE projects. We also hosted a C&EE 1 workshop, where we introduced students to the transportation engineering field and taught them how to calculate level of service (LOS) for an intersection. Overall, we saw continued interest in our virtual workdays among upper and lower classmen, and we are pleased that several freshmen have joined the team! This winter, we will have two workdays per week for the Transportation Design Project, which will be geared toward improving traffic flow at LAX by redesigning the central terminal and rideshare lot. We plan to delegate our team members to specific tasks, including CAD, traffic analysis, environmental design, and others, based on their interests and experience in different areas.
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