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ASCE BRUIN NEWSLETTER
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FROM THE PRESIDENT

YUEN LENCH

Dear Alumni, Faculty, Students, and Sponsors,

With 44 events hosted, I am proud to announce that ASCE at UCLA had another successful quarter! We kickstarted our quarter off with our Winter General Meeting where general officers discussed upcoming events and project managers gave updates on their respective projects. We also announced our members of the quarter and elected our 2021 Secretary, Jackie Lim!

On our professional side, we hosted many company info sessions and workshops with a successful Networking Night and Career Fair on top. Similar to last quarter, our Networking Night and Career Fair were hosted on a platform called Gatherly where students and company representatives could move around on a map and join different huddles of conversations. We had a great turnout for both events with 16 companies and over 50 students at Networking Night and 30 companies and over 130 students at Career Fair. Additionally, we continued hosting info sessions and inviting our alumni to speak in our Alumni Day in the Life series. We also held numerous workshops such as our Bluebeam Workshop alongside Engineers Without Borders and an AutoCAD Workshop. Furthermore, we held several talks relating to civil engineering ethics including our Critical Forecast of the 2028 LA Olympics event, held jointly with ASCE at UCI, and our Unconscious Bias in Engineering talk.

In addition to our professional events, we organized many socials that featured activities like playing online games, platonic speed dating, and relaxing with yoga. We also hosted several fun events under our mentorship program including a baking competition and an ASMR challenge. With our members’ strong competitive spirit, we decided to continue our Active for Good challenge in the month of February. Under this challenge, our members fiercely competed with each other to increase their exercise activities and provide food packets for malnourished kids through an app called Active for Good. This competition was not only a lot of fun for us but also culminated in a donation of 623 food packets!

KNOCK KNOCK, WINTER SESSION IS ON! At the first officer meeting in the winter quarter, officers donned a creative UCLA background and were excited to discuss ongoing plans for the quarter.
Aside from our general activities, our projects worked diligently all quarter long in preparation for their respective competitions. Kicking off competition season, our Construction Management project competed virtually at the Associated Schools of Construction Regions 6 & 7 competition in the beginning of February where our Mixed Use team placed 2nd and our Sustainability team placed 1st! As for our other projects, the Seismic Design team has been working through their competition deliverables. Meanwhile, the rest of our projects have been busy completing their technical reports and presentations and will be competing in the Pacific Southwest Conference (PSWC) over spring break.

We are very excited about PSWC not only because it is where eight of our projects will be competing but also because we are hosting the conference this year! Our PSWC committee has been working hard all year long to plan a great conference that fits a virtual setting and we have no doubt that it will be amazing. Technical and non-technical events will be live streamed through our PSWC 2021 at UCLA Facebook page!

Despite spending the past year in the virtual setting, ASCE at UCLA proudly continues to uphold our success. As a testament to all of our officers’ hard work and commitment to ASCE at UCLA, our chapter received the LA YMF Outstanding Student Chapter award this quarter. Chosen out of 11 chapters in the Los Angeles region, we were selected based on a video we submitted explaining our transition to the virtual world and highlighting the events and activities we continue to offer our members.

Of course, none of our achievements would be possible without the assistance of our alumni, advisors, sponsors, and the UCLA Civil and Environmental Engineering Department. Your constant help and support in all of our activities is greatly appreciated. We are incredibly thankful for your generosity and hope to continue working with you in the future!

If you have any questions, comments, or suggestions about our chapter or would like to learn about how to get more involved, please do not hesitate to contact me. I would love to hear from you!

Best wishes,

Yuen Lenh, President
ASCE at UCLA 2020-2021
MEMBERSHIP

JOSEPH CHOI

ASCE at UCLA continues to have strong membership numbers as we end the winter quarter with 240 members. Similar to the previous quarter, we hope to see a continuation in event participation as we continue to hold virtual club events. Our membership includes students outside of civil engineering, such as mechanical engineering, chemical engineering, environmental engineering, and more.

With 12 different projects and member attendance of 4-15 participants at every project workday, ASCE at UCLA provided members ample opportunity for technical experience this quarter. For our professional development events, we had an average of 10 students attend 6 different info sessions held by civil engineering and construction companies. We also held a Winter Welcome Back virtual social where we focused on creating an environment for members to interact on a more personal level.

INTERNSHIP PROGRAM

ELIOT YANG

ASCE continued and expanded its internship program throughout the winter quarter. There were a total of 7 ASCE officers who volunteered to be intern managers. These officers were the Vice President, Treasurer, Speaker Coordinator, Media Chair, Career Fair Coordinator, PSWC 2021 Chair, and Community Service Chair. The goal of the intern program was to integrate newer members and underclassmen into the network and inner workings of ASCE at UCLA.

During the winter quarter, ASCE had 13 interns ranging from freshmen and sophomores to first year transfer students. Interns completed tasks for their intern managers and helped organize the logistics for ASCE events as well. Moving to an online format was definitely a challenge, but having the support of our interns was beneficial for everyone and aided in making ASCE as successful as it was so far this year. In addition to having a successful year, intern managers and interns alike developed mentorship-type relationships and long-lasting friendships. Our Vice President expressed that he “could not have been more thankful for the opportunity to meet and work with my interns and could not have held as many successful workshops as I did without them.”

Thank you to all of our interns!
PROFESSIONAL OUTREACH

NADIA MAHER

This winter quarter, we hosted a variety of professional outreach events to broaden students’ experiences with the professional workforce. We had five alumni host four Day in the Life Workshops throughout the quarter. Kyle Tomita spoke to us about his experience in structural engineering. Amy Derret taught us about land development and revealed her career path. Sam Zabb-Parmley spoke about his experiences in building exteriors and waterproofing. And lastly Max Armenta & Ho-Shing Chau co-hosted a workshop about their respective paths in environmental and structural engineering and how they both ended up at Brown & Caldwell. Overall, the alumni taught student attendees the diversity of career paths and fields that exist since they were all once in our shoes. It was great having these events be virtual, as the alumni did not have to be local to share their knowledge.

We also had four companies host industry shadows: John A. Martin, HNTB, Verdant Power, and Hathaway Dinwiddie. Students were able to shadow civil engineers at these companies and learn about the day-to-day life either one on one or in a small group. While we would prefer for students to be able to go in and see the office and be able to interact in an office environment, online shadows provide a good alternative and a window into what daily life is like for engineers during these times.

Next quarter, we plan on continuing both programs, and adding to the diversity of speakers and companies we learn from.

EXCITING LIVES Various alumni shared their work life in their respective fields. Members today were ecstatic to learn about Kyle Tomita’s life as a structural engineer.

WHO LOVES WATER CraftWater, a water resources engineering company from Career Fair, came to share how they tackle water-related issues.

COOL PROJECTS Members learned about LAX’s Automated People Mover at a Professional Outreach Event.

INFORMATION SESSIONS

KATHERINE ACERO

This winter quarter we had the pleasure of hosting info sessions with HNTB, Kimley-Horn, Simpson Gumpertz & Heger, Craftwater Engineering Inc., BakerRisk Engineering, and Morley Builders. We had a maximum attendance of 21 students at the Craftwater Engineering info session where representatives and alumni gave an engaging presentation on their current and past environmental engineering projects.

We look forward to hosting info sessions with more companies this spring quarter as we prepare for the summer internship season!
CAREER FAIR

EMILY STORY

This winter’s Career Fair was quite successful with an attendance of 135 students, 26 companies, and 61 professional representatives all congregated in Gatherly. While this turnout was slightly lower than usual on the company side, it was not far behind that of the fall Career Fair earlier this school year, which was a big accomplishment for us. Additionally, we had a large number of companies in attendance who had never attended an ASCE Career Fair before or who had not attended in several years such as Mott MacDonald, Saiful Bouquet Structural Engineers, and Kennedy Jenks. This was all thanks to the persistent work of the Career Fair interns who researched new companies to contact and reached out to see if they were interested in attending.

While the event overall was a great success and enjoyed by students and representatives alike, there were significant audio difficulties at the beginning. Luckily, after about an hour of trying different methods, all the company representatives were able to talk to students. After this initial hurdle, the event ran smoothly!

We also had a mock interview workshop the week leading up to the Career Fair where students were able to get practice being interviewed by real company representatives and professionals. There was overwhelmingly positive feedback for this event, as students were able to get feedback on their resumes as well as practice interviewing during that time. There was also a presentation which outlined proper interview etiquette and some common interview questions so that students could prepare ideas for how they would respond to such questions.

I am extremely excited for our career fairs to return in person and I am confident that next year's career fairs will be at least partly in person. However, Gatherly remains a great tool to accommodate students and company representatives who feel more comfortable attending from home during this climate. Regardless of what next year may look like, I am incredibly grateful for the ASCE community, which was so supportive in the planning and execution of these virtual career fairs!

PLEASE INTERVIEW ME Members had a chance to learn about interview etiquette skills and practice them in front of ASCE alumni. They also got great feedback as well!

THE PLACE TO BE Career Fair attendees had a blast using Gatherly again for the Winter Career Fair. These members were chatting in a group before entering an open table with a company representative.
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.

Winter Networking Night was a huge success, and we were able to build on our successes from the fall to put on a lucrative and worthwhile event. In attendance were a little over 50 students, 29 representatives spanning roughly 16 different companies, as well as our advisor Dr. Goodin. Our platform, Gatherly, was great at allowing students and representatives to engage in one-on-one and group conversations, and once again received very positive feedback from both students and company representatives. There were only a few technical difficulties this time around, due to a Gatherly outage in some areas, however these were resolved fairly quickly and allowed those affected to quickly go back to networking.

As an outlook for the future, ASCE at UCLA is excited to announce we will be continuing the tradition of Networking Night for next fall and winter. However, due to uncertainty regarding the pandemic and vaccinations we have yet to set a date nor decide on whether the event will be virtual or in-person. Should the event be virtual, we will use the successes from these past two quarters to continue to provide an event worthwhile to both students and company representatives. Should the event be in-person, we will go back to providing an event similar to Fall 2019 and Winter 2020, where we will use a nearby restaurant and provide a casual in-person setting for students and industry professionals to converse.

LET’S GATHER Members had a pleasant night speaking with Joanna Sanchez-Nunez of KPFF and Adam Wong of BKF Design Engineering before moving on to explore the other many floors available.

EVERYONE WELCOMED Dr. William Goodin, one of ASCE’s advisors, stopped by to say hi to attendees throughout the night.
SOCIAL

JUSTIN SAUTTER

For the social aspect of UCLA ASCE in Winter 2021, it went as swimmingly as anyone could have hoped while every student was struggling to stay afloat with their winter classes. The different virtual socials brought some fun to the quarter every few weeks. Many of the virtual challenges from the previous quarter still remained. These challenges mainly consisted of event ideas, club engagement, and technological burnout for students. Despite these, ASCE held many wonderful socials throughout the quarter that energized members and allowed them to have fun outside the zoom classroom.

Winter quarter began with the “Winter Welcome Back Social” in which members, both new and old, became better acquainted with one another through many rounds of platonic speed dating. This consisted of different questions between pairing of club members that allowed people to learn more about each other beyond just a civil engineering basis. This activity was followed by many consistently used online games such as skribbl.io and Tetris. The event was attended by at least 18 people at any time with members coming and going throughout the social. This social event was then followed by the “This Could Be Us But You Playin’ Game Night” in which the main event of the night was WIKI WARS. Members raced from one Wikipedia topic to another using only the links inside each Wikipedia page. This event was very supported by all 16 members who had attended. The whole event had a fun, wacky atmosphere that welcomed all and encouraged participation from everyone.

The last purely social event of the quarter was the “Tetris Tournament of Champions”. As 16 fierce competitors took the stage to fight in Tetris matches, almost everyone had 1 goal in mind, survive. Throughout the rounds and many sad defeats the finals showed a fierce competition between Yuen Lenh, Alexis Bui, and Justin Sautter who would proceed to place on the podium in that order. It proved to be a wonderful final social for the winter quarter. There will be even more fun events in spring quarter when everyone feels a bit less weight on their shoulders.

COLORFUL BLOCKS GALORE Participants had a challenging night of strategically placing Tetris blocks, some attacking more than others!
MENTORSHIP

YOUNGBO SHIM

To get members out of the Winter Quarter Blues, Mentorship hosted a series of creative and engaging events. Firstly, Bake a Cake and Get Quizzed on Ocean Facts was well… exactly what the name of the event entails. Over 20 bakers were taken out of their element by having to juggle their knowledge about the torrent depths while baking and decorating their cakes. Bonus points were given for those who decorated their cakes with a scene of rabbits on a picnic. A month later, 18 students came together for A.S.(C.E.)M.R., ASCE’s very first ASMR event!

Additionally, mentorship has continued with the established tradition of collaborating with the other branches of ASCE. Logan McDevitt, the Athletics Chair, hosted our second Active for Good month-long event, a 30 day challenge where members logged their physical activity to make an impact and donate ready-to-use therapeutic foods for severely malnourished children. ASCE Zoomga (Zoom yoga), led by family head Emma Golub, was also created to help students decompress from their studies. Mentorship also teamed up with Shaun Howard, the Media Director, to incorporate mentorship into ASCE’s social media accounts through “Family Takeovers”, where members could post pictures and videos showing off a slice of their life! The more pictures posted, the more points a family could earn. Finally, mentorship worked with Kat Tsai, the Community Service Chair, to participate in new challenges like FreeRice, a free-to-play website that donates rice to those in need by playing a multiple-choice trivia game, and Ecosia, a browser extension that automatically donates to organizations that spearhead reforestation initiatives. Through these programs, our members could easily fit philanthropy between their busy schedules!

Looking towards the final quarter of mentorship for this year, we hope to continue hosting exciting events for our ASCE members! We’re expecting a tight race for which mentorship family will take home the Mentorship Championship! Currently, Shmint Pennies, led by Camille Ituralde and Cade Luongo, hold the most points, but we’re excited to see which families will step up to attempt to dethrone them!
COMMUNITY SERVICE
KATHERINE TSAI

As you all know, this year has been completely virtual. However, that has not stopped us from participating in community service events! Initially, we wanted to find events that would let us all socialize with each other on zoom. The difficulty in that is that there really weren’t many things we could do all together virtually! Thus, this quarter, we shifted our events to be more individualized and easy to do in one’s spare time. We put together a masterlist of all the community service events people can participate in at www.tinyurl.com/ASCEservice and created a point system so people can earn prizes! Plus, on ASCE’s Instagram story, we highlight one community service event every Wednesday, so stay tuned!

In the upcoming quarter, as the projects wind down from PSWC, we hope to host more outreach events with students in low income communities as well as adding to the masterlist! If anyone has any questions or possible community service ideas, feel free to message me, we’d love your input!

TRANSFER OUTREACH
ERFAN KOHYARNEJAD

During winter 2021, Transfer Outreach hosted a combined course-taking event with Cade Luongo, the Project Executive, where we tried giving underclassmen and transfers critical guidelines on taking classes and how to finish their major requirements in their desired timeline. After the presentation was done, there were several break-out rooms for different civil tracks and one specific room for transfer students. The goal of these break-out rooms was to provide students with the chance to have one-on-one meetings with upperclassmen to gain advice. The underlying purpose of the break-out rooms was to have students interact with each other more and was an attempt to overcome the fact that it was a virtual event. A total of 25 students attended this meeting which included a good mix of civil engineering majors of different emphases.

For the Spring quarter, I plan on welcoming newly admitted transfers and introduce the ASCE UCLA chapter to them so that they can be involved with ASCE projects from the very start of their journey at UCLA.

KNOWLEDGE PASSED DOWN
ASCE members of all years gathered to teach or learn about major requirements for fellow civil & environmental engineering majors.
ATHLETICS

LOGAN MCDENVITT

Athletics in ASCE went swimmingly this quarter; we had fun together while helping the community and the world. We once again had a month full of activity and goodness with our second ever “Active For Good”. Through this campaign, we were able to donate 623 food packets to malnourished children across the globe, which is 209 more packets than we donated in November (with two fewer days)! We also had a virtual watch party for UCLA Basketball, where we watched UCLA unfortunately take an “L” to our cross town rival, USC.

Moving on, to destress our minds and bodies, our very own Emma Golub led two yoga sessions. We look forward to doing them again next quarter with more participation! Athletics also started a #fitfriday campaign on the ASCE social media where we sent our fitness/well-being advice to our Instagram followers so they would gain tips on how to live a healthier lifestyle. We look forward to the new ideas we will come up with next quarter to get further involvement. Due to their success, Athletics will continue Active for Good (most likely in May) and have more Zoom yoga sessions. We may also try to utilize the UCLA Recreation Center, safely of course, if possible as it has just opened up again.

Virtually, Athletics have been challenging but we are so happy to see people want to get involved and stay active in such a stationary time. Thank you everyone for a successful winter quarter grind! Time to spring forward.

GET YOUR HEAD IN THE GAME

ASCE at UCLA members watched fellow Bruins try their best in a basketball game against the Trojans.

#fitfriday CAMPAIGN

Athletics teach members how to live a healthier lifestyle through yoga.

ACTIVE AND PRODUCTIVE

ASCE students competed to get the most points for their self-satisfaction in being healthy and helping donate food.
PSWC 2021
TORI MOK & NICK BOROV

With PSWC 2021 right around the corner, the planning committee is in full stride! Student chapters have been extremely dedicated to the technical events and we are excited for them to present their hard work. Presentation schedules have all been released with the hope that student chapters will be able to host watch parties and ignite a sense of school pride.

Although the conference is focused on technical events, we cannot wait for our light-hearted elements, the non-technical events. With Collaboration, Impromptu, and Mystery Event left as a surprise for participants, we are eager to reveal what we have in store. We truly look forward to fostering a sense of community in this virtual setting.

Lastly, we cannot forget the big night-- the closing banquet! With nine impressive acts from six schools, the Talent Show is something you cannot miss! In addition, a total of $30,000 will be awarded to our dedicated participants through our PSWC Scholarship Program. And of course, we will reveal the results of all of our competitions.

We are so excited to share this experience with all of you. Thank you for your participation and support!

PUMP, PUMP, PUMP IT UP To encourage excitement for the arrival of PSWC, the PSWC committee held a jeopardy game for members to play on Pump-Up Day.
CONCRETE CANOE

CATHERINE NGUYEN

Winter Quarter was a busy one for UCLA Concrete Canoe as we tirelessly worked on our technical proposal and enhanced the focus area report due in mid-February. In early January, we conceived a name for the canoe based on a National Parks theme – Trailblazer, meant to symbolize its innovative design that pushed the team to completely redesign the construction process. The aesthetics team conceptualized a captivating aesthetic design to visually manifest this innovative spirit. Trailblazer’s naturalistic visual elements will include a blue river running down the length of the hull interior, and a California redwood and compass on the tips. The National Parks theme was also reflected in our report graphic design, which mimics the iconic WPA-style artwork of the 1930s and 1940s.

The technical proposal presents our approach to the canoe design and construction methodology. In collectively drafting the technical proposal, team members improved their technical writing and report formatting skills. Team members also produced structural drawings using AutoCAD and Bluebeam, a Gantt chart of the project schedule in Microsoft Project, and cost estimates. We are especially thankful for alumni Sam Delwiche ’13, Maxwell Armenta ’17, Ada Chang ’19, and Joshua Widjaja ’19, who provided feedback for our many revisions.

The enhanced focus area report allows teams to present two special aspects of the project’s design, construction, or operations. One of our topics was our implementation of a Level 2 BIM process in coordinating hull design, construction design, and material procurement efforts with the use of shared 3D hull models. Our second topic was laboratory material testing and how it aided us in providing concrete strength estimates after switching to virtual mix design.

Educational work days continued outside of report writing. Project engineers learned basic 3D-modeling in Fusion360, ran computational fluid dynamics (CFD) simulations on the canoe hull in SolidWorks Flow Simulation, and helped conduct peer-review of other schools’ technical proposals.

We are proud of our efforts over the past two quarters and are very excited to compete at PSWC. Next quarter, we are looking forward to recruitment and transitioning upcoming leadership to prepare for a potential in-person experience!
STEEL BRIDGE

ALEXIS BUI & STACY KONG

The Steel Bridge team is happy to be ending a successful winter quarter. This year, our team was tasked with designing a 22-foot long bridge that could be fabricated and built. Due to Covid-19 restrictions, we took part in the AISC Student Steel Bridge Competition’s virtual option that included a report and video that explained the design, analysis and potential construction sequencing of the bridge. We are thankful for everyone who came out to workdays and helped us with the report and gave their valuable insight.

Shortly after the beginning of winter quarter, we finalized our bridge design and began outlining our report. Instead of spending our time in the machine shop to fabricate our bridge, the quarter was spent working on our design report, where we took the chance to go over our design in great detail, expand upon our design decisions and processes, and apply the various analysis techniques used in class. The construction sequencing part of the report provided us with an opportunity to ensure that our bridge was designed with the same level of care as a normal year by detailing how, exactly, our bridge was to be built. Thanks to everyone’s efforts, we finished both our report and video on time and submitted them by the end of February.

Despite competition being over, Steel Bridge is taking the opportunity to use spring quarter to prepare our members for future success in the upcoming years. If you are interested, be on the lookout for some upcoming socials and workshops.

SUSTAINABILITY

GAELLE ELALAM

Over the course of the winter quarter, Sustainability focused on researching and writing our technical paper for the 2021 Pacific Southwest Conference regional competition. This year’s prompt asked us to evaluate the environmental impacts of UCLA’s Pauley Pavilion. We looked at the waste associated with the usage of Pauley Pavilion and critically assessed their zero-waste plan. We also developed three plans with changes that are sustainable and that help UCLA achieve its goal of zero waste. At the conference, we will be judged on our technical paper as well as our live video presentation.

This year, we had to transition to an online format. Although it was difficult, we had loyal and hardworking project engineers and directors to help navigate us uncharted territory. All project members were able to use screen-sharing and a shared Google drive to stay connected and work together.

This quarter has been quite a journey full of growth and learning. With the help of Project Director Joshua Chung, and our Project Engineers Lauren Gallardo, Aaron Masikip, Kenneth Jeon, Sophia Tan, and Natalie Semersky, we are so ready and excited to present at PSWC 2021!
CONSTRUCTION MANAGEMENT

AMEYA PATEL

Winter quarter marks the culmination of the Construction Management Project with our competition in early February. After a workday-packed fall quarter, final competition preparation takes place in January with practice problems and mock presentations. Each team – Mixed Use, Design Build, and Sustainability – worked on a practice problem that mimicked what competition could be like, and presented it in front of our friends in the industry. This opportunity enabled them to get direct feedback from industry professionals with experiences like the competition judges, and better prepare themselves for competition.

Competition looked different this year without the typical voyage to Nugget Casino & Resort in Sparks, Nevada. All teams participated virtually, with competition following a modified schedule to accommodate for individual schedule restraints. This tested not only the teams’ construction knowledge, but communication skills and willpower, with extended workdays during competition—totaling over 24 hours of work time each! But the results showed that the teams’ hard work paid off this year. Sustainability placed 1st in their competition, beating competitors from UC Berkeley and Cal Poly SLO. Mixed Use placed 2nd in their competition, achieving team lead Justin Ehrenberger’s goal of a back-to-back top-3 finish for the team. Design Build had another great year, with huge progress made in mastery of Revit, and the highly collaborative project was successful despite physical distance. Our alternates also experienced competition via the Alternates Competition, where they met students from other schools and learned about the compilation of a project proposal.

Overall, winter quarter was a tremendous success for all three teams of the Construction Management Project, with all teams exhibiting progress and true commitment to the project. We are ready to carry this momentum into spring quarter as we prepare for next year!

A GREEN WIN The Sustainability Team competed against top schools and secured a gold win for ASCE at UCLA. Here is Sustainability team member Youngbo Shim with the 1st place trophy!
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). The goal in a typical year 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 virtual competition and provide a valuable experience to our project’s members.

Given the circumstances, over the course of the fall and winter quarters, we have facilitated a “mock competition” project to mimic the traditional competition for our workdays. We welcomed our new team members with introductions to the Seismic Design project as well as mini-presentations, exploring topics in structural and earthquake engineering. During the fall quarter, we introduced our mock competition where groups were tasked with delivering the designs for a 9-story balsa wood model. We taught members SketchUp and used it to design the bracing schemes, floor plans, and column layouts, just as we would for the non-virtual competition. During the winter, we introduced AutoCAD, where members could reproduce their designs to be put into SAP2000. All of the designs were tested and analyzed with sample ground motions. Throughout, groups continued to develop their inspirations for their architectural style, and created posters and presentations to display their work. We ended winter workdays with the amazing presentations from our groups.

This winter quarter, we received tasks for the virtual 2021 EERI Seismic Design Competition. The premise is that our team is designing an additional 10 floors to an existing 10-story hospital in Seattle to increase capacity for the demand of COVID-19. We have completed the first deliverable which focused on the seismicity and geotechnical details of the site. The second and third deliverables focus on the structural analysis of the existing structure using SAP2000, lateral system design of the additional 10 floors which have a tapering floor plan, an architectural facade and interior layout design, and a LEED BD+C Healthcare scorecard. As we finish our second and third deliverables, we are looking towards the retrofitting task that comes with the fourth deliverable during the spring quarter. While the 2021 EERI Virtual Meeting is March 23rd-25th, the virtual competition is taking place April 15th-16th, where we will present our designs and concepts to the judges. Despite the virtual setting, we had a fulfilling first two quarters, no doubt due to our incredible team members, and we are looking forward to the virtual competition this spring.

ALWAYS ON THE GRIND On Seismic Design workdays throughout the winter quarter, members did mini practice competitions to prepare for the real one. They would group up 3-4 people and have them design, model, and make a building based on predetermined requirements to present to their peers.
SEISMIC OUTREACH
CAMILLE ITURALDE & LUCAS TANG

Winter quarter is all wrapped up and so are all our presents for the kids that won awards! This past quarter we worked with 5 sixth-grade classes (about 135 students) from Emerson Middle School, and we had a blast. We were super excited to reveal our new program after spending all winter break revamping our presentations and overall project goals to encompass the new sixth-grade science standards. Instead of the usual presentation about earthquakes and bracing, we focused on the engineering design process and ways to be sustainable with their buildings. To test student structures, we had them place items that increased in weight with every school visit- from quarters to water bottles to textbooks!! Overall, we were super impressed with the kids’ structures and had so much fun watching them grow into the future superstar STEM students we know they’ll be.

Although we had lots of fun, there were still many challenges we faced. Emerson was strict about not letting volunteers into Zoom breakout rooms with students without staff supervision, so we had to do everything in the main room. While this did make it harder to be interactive with the quieter students, we tried our best to make all of our activities engaging and to positively reward students who answered or asked questions. In addition, there were some students that didn’t participate at all and came without a structure to finale day, whether it be because it was hard for them to get materials or because they had trouble finding motivation to complete the project. We did our best to keep them engaged during finale day, and encouraged them to come up with college related questions to ask us.

We are still in the works for what’s to come next quarter. The middle school we usually work with, Lincoln Middle School, has yet to get back to us about running our virtual program. In the meantime, we have a fun STEM day activity coming up and we are hoping to host some college fairs as well! And finally... here are some of Camille and Lucas’ highlights of the quarter!

• Seeing all the fun and creative buildings the kids came up with.
• Seeing students use random objects as weights when they didn’t have coins or books lying around- one student used bananas!
• One of the students proclaiming “Cade is Pewdiepie!!!!” at every school visit.
• And of course... seeing all of our Outreach volunteers’ beautiful faces at every school visit :)

Thank you to everyone who volunteered! We appreciate the support and look forward to whatever next quarter may bring!

CREATIVE KIDS AND REWARDS From the drawing board to a physical replica, the kids from Emerson had an amazing time with Seismic Outreach team on another amazing project. They even got treats at the end of the quarter!
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.

Winter quarter has been a success as our members have consistently worked hard towards finalizing our design using skills in AutoCAD, EPANET, and SOLIDWORKS that were developed during fall quarter. We continued to hold two one-hour meetings per week, where the Power Team, Drafting Team, and Civil Team split into groups and focused on their respective parts of the project. We also continued to hold short socials at the end of our Thursday meetings to ensure that all of our members continued getting to know one another and feeling like a cohesive team. The beginning of spring quarter will consist of finalizing our design as well as budgeting for materials. Before the pandemic, we were able to hold demonstrations with the components of our system so that members could familiarize themselves with them. Due to COVID-19 we are not able to do so in person. To overcome this obstacle, our Power Team is holding a workshop for our members so that we gain familiarity with solar panels using a mini solar panel and an Arduino kit. We will continue to hold short socials at the end of our Thursday meetings!

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

Thank you to everyone who came and participated in the meetings and socials! If you are interested in joining our project and want to catch up on all of the curriculum we have gone through thus far, there are archived meetings and presentations. Please reach out to Anna Philipp (annaephilipp@gmail.com) or Richard Trujeque (richardtrujeque@g.ucla.edu) at any time for access!
SURVEYING

MILTON MAK

Hello and welcome to Surveying!

In this project, we learn the basics of surveying and send a team for the surveying competition at PSWC each year.

What is surveying? It is the skill of determining the position of points on the land that can be used for maps and layouts. With its own section on the PE exam, surveying is a fundamental skill for any civil engineer. During the winter quarter, we geared our workdays to focus on our PSWC prompt. Specifically, we focused on the process of staking out sewer pipelines as well as a brand new topic, topographic mapping using Civil 3D. Working alongside the technical paper team and the presentation team, we worked countless hours scrubbing through Autodesk forums and tutorial videos over Zoom to tackle such a daunting and unfamiliar task. From countless technical problems such as audio cutting off during zoom meetings to Civil 3D crashing numerous times, none of this would have been possible without everyone’s help! Special shoutout to our awesome Project Director, Ben Molina, for his hard work and dedication to our project!

Next quarter, our project will be settling down and our usual weekly work days will be cancelled. Instead, we will be hosting occasional workdays showcasing our final PSWC project and walking members throughout the whole process. Be sure to join our mailing list for any updates!

Mailing List: https://forms.gle/tfXXw6ZNtpmhDKCh8

Hope to see you there!

ENGINEERINGX

HEATHER KURTZMAN

EngineeringX is a structural-based project where we design—and build during in-person times—a 100 ft long obstacle course. We are excited as this year marks the inaugural year of EngineeringX at PSWC, and we look forward to many years of it to come.

EngineeringX was in full swing during winter quarter as we prepared for our first competition ever. There is great anticipation for the results as well as seeing all of the other ASCE chapters competing in PSWC embracing our new project. We spent the quarter writing our technical report, which included AutoCAD drawings, structural calculations, and of course, a ridiculously fun obstacle course. With ranging levels of experience, one of the highlights of this quarter was every members’ growing ability to learn AutoCAD and create mockups of the various obstacles. This year we embraced our Zoom workdays and took advantage of different features, such as recording important workdays for those who cannot attend. Additionally, sharing screens allowed us to collaborate on AutoCAD obstacles in real time and bounce ideas off each other for every little detail. While it was unfortunate we could not meet in person to build our course, it only made us more excited for what next year has in store!
TIMBER-STRONG DESIGN BUILD

KRISTIDA CHHOUR

This quarter passed by so quickly and in those ten weeks our team has accomplished so much! We received the design prompt for our PSWC competition in the first half of the quarter and within a month, it was due. With great determination, we designed a small-scale, light-framed, two-story structure based on the Allowable Stress Design method and then created construction documents for it using AutoCAD. Our team was excited to apply the AutoCAD skills we have been developing since the fall. After we made the construction documents, we modeled our structure in Revit which included all of the beams, plywood, connectors, and aesthetic details. Our aesthetics team put in some amazing work on our report and structure to match our Avatar: The Last Airbender theme. All the graphics we used are original creations by our team members!

Throughout the entire process, our team gained lots of experience with sustainable design, reading and creating construction documents, and modeling in Revit. The competition gave us a great experience and we’re excited to see how we perform in competition at PSWC. I’d like to thank my dedicated team who has supported me and each other throughout the entire process. They are a huge part of what makes this project worthwhile!

GEOWALL

MAAN ALHAMDAN & PETER LEE

In the winter quarter, we learned that the national competition for GeoWall would not be held this year. Fortunately, the competition at PSWC was still happening. Thus, we worked on designing a three-sided soil nail wall that held a 50lb vertical load and a 20lb eccentric load applied through PVC pipes. We hosted numerous concentrated and productive workdays and over the course of four sessions, modeled the stresses on our wall using software including RSPile and Settle3D, conducted “virtual” soil laboratory tests using the data given in PSWC’s competition rules, and completed our design report. Eventually, our team prepared a technical report outlining our methodology for designing our wall and presented our report in front of a panel of judges at PSWC. For the next quarter, we are planning on hosting more concentrated workdays to help transition our current directors so that they can compete successfully (and hopefully in person) next year.

TIMBERING AWAY TO PSWC

The Timber-Strong Design Build team show off their aesthetic Avatar: The Last Airbender themed background at one of their work days, ready and hopeful for a great time at PSWC.
After spending fall quarter compiling background information on our site, we spent winter quarter designing stormwater Best Management Practices (BMPs), analyzing their benefits, and composing our design report. During the design phase, members learned about the variety of BMPs and their design considerations. BMPs were placed within the site to capture stormwater from over 100 acres of impervious area and members performed sizing calculations and selected plants and soil for the vegetated BMPs.

In the analysis phase, members calculated cost analysis, determined operations and maintenance requirements, selected non-structural BMPs, and performed a literature review to quantify ecosystem services, treatment capability, and community benefits. All the pieces of our project were brought together as our members created beautiful mock-up diagrams. Our efforts finally culminated in a 128-page design report!

Overall, workdays had a consistent turnout and our online community grew even stronger through socials and pre-finals study sessions. The project hosted two online game socials this quarter, one that even included an enviro-themed crossword puzzle!

We are incredibly proud of all of the work that everyone has put in, and we hope that our members have taken away new skills in code research, literature review, cost analysis, and technical writing. Thank you to our directors for their incredible hard work and positivity, and to our members for their flexibility, willingness to learn, and the time they spent to make the project what it is. We are also incredibly thankful for the alumni who took the time to provide insightful feedback. Lastly, we are excited to show all of our hard work at PSWC!
TRANSPORTATION

NATHAN SHARAFIAN & NATHAN VARDAS

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.

We had a busy winter quarter; our team submitted our report for PSWC, collected data for the ITE Trip Generation Manual, and worked to prepare our presentation for PSWC. The Transportation Design report outlined design, trip generation, level of service, cost estimates, and environmental impact analysis for the redesign of LAX-it: LAX’s auxiliary Uber and Lyft lot. We elected to relocate the LAX-it Redesign to better integrate our lot with LAX’s future Automated People Mover, and we added sawtooth stalls for better flow within the lot. With workdays twice a week and some weekends, our team worked tirelessly to turn the report in on time. Free movement between breakout rooms allowed us to maintain a similar dynamic to in-person workdays, allowing us to work in small teams and switch breakout rooms to ask questions of others when needed. We hope to earn a high ranking at PSWC, but most importantly we’re proud of everyone for taking on unfamiliar tasks and showing up for virtual workdays.

We are quickly gearing up to present our Transportation Design report at PSWC during Spring Break. This will mark the end of a long, productive two quarters and we are excited to see everyone’s hard work turn to fruition. Once spring quarter begins, we will switch gears to work on the data analysis and report for the ITE Data Collection project, which should take several weeks. The remainder of the quarter will be devoted to the Student Night and RSBITE presentations where our team will present the Data Collection project in competition with nearby student chapters. The incoming Project Managers will lead these presentations. We are grateful to have had the privilege of being Project Managers this year and we would especially like to thank our Project Directors Katrina Berge, Francisco Ramirez, and Olive Long for their hard work and dedication to the projects.

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. Continuing from the fall quarter, due to COVID, ExhibitLab will still provide hands-on experience in research, structural modeling, and coding, as well as design experience with SketchUp, Rhino, and AutoCAD.

During Winter quarter, we focused on shaping and designing the exhibit as well as the content to be placed within. We cleaned up the website, making it more mobile-friendly and overall responsive, as well as embedding interactive SketchUp models. We also refined the SketchUp models using V-Ray, and began the process of creating the online exhibit, hosted on Hubs by Mozilla. For the rest of the year, we plan on completing our website, with an additional four articles, as well as modeling and furnishing the virtual exhibit.
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