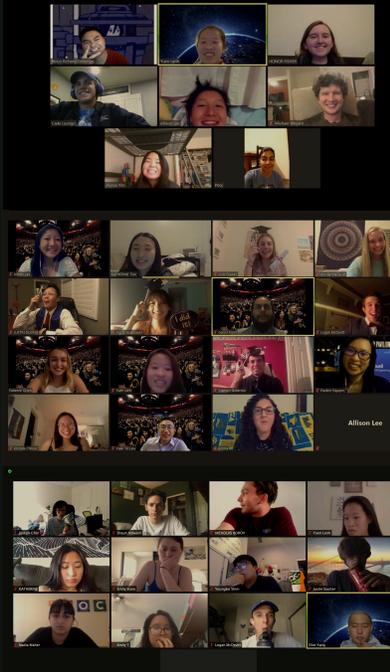


ASCE BRUIN

SUMMER/FALL 2020



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PSWC 2021 11
BANQUET 21

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ASCE BRUIN NEWSLETTER

American Society of Civil Engineers
UCLA Student Chapter
P.O. Box 951593
Los Angeles, CA 90095

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ELIOT YANG Vice President
CADE LUONGO Project Executive
RACHEL TAM Treasurer
EMMA GOLUB Secretary
SHAUN HOWARD Media Director
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JUSTIN SAUTTER Social Chair
AMEYA PATEL Construction Management PM
KATRINA BERGE CM Design Build Team Leader
JUSTIN EHRENBERGER CM Mixed Use Team Leader
MIA VERDOLIN CM Sustainability Team Leader
CATHERINE NGUYEN Concrete Canoe PM
MATTHEW SAIKI Concrete Canoe APM
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ANJALI SWAMY Seismic Design APM
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RICHARD TRUJEQUE EWB-ASCE Navajo Project PM
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NATHAN VARDAS Transportation PM
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WE'RE SOCIAL!



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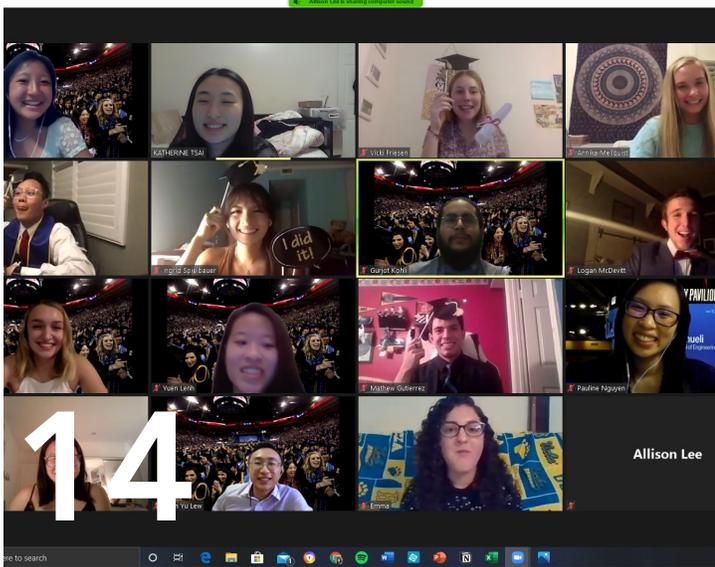


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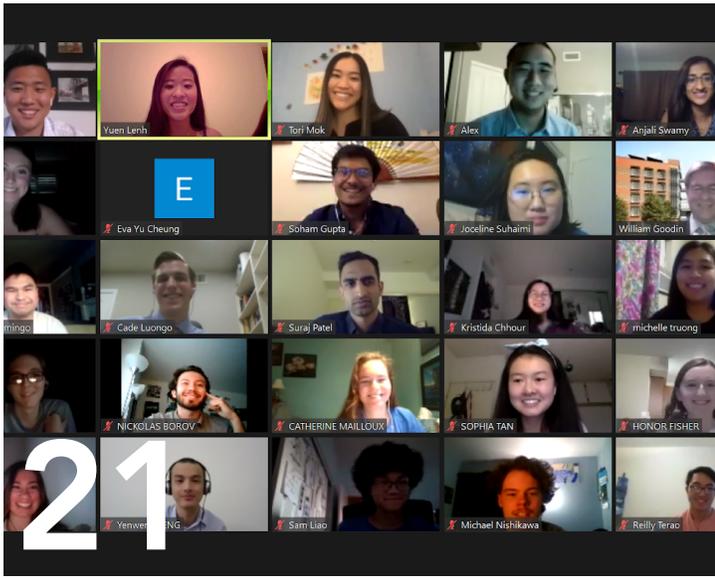


ascebruins.org





Proposal for Street Improvement Project
 Euclid Street from Glenoaks Avenue to
 Crescent Avenue



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A Letter

FROM THE PRESIDENT

YUEN LENH

Dear Alumni, Faculty, Students, and Sponsors,

As we wrap up another wonderful year, I am pleased to present our Summer/Fall 2020 ASCE Bruin Newsletter and share ASCE at UCLA's successes throughout the year. Even though our year was cut short due to the COVID-19 pandemic, we still received many notable chapter awards. We were selected amongst several ASCE student chapters in the Greater Los Angeles Area as the recipient of the LA Younger Member Forum (YMF) Outstanding Student Chapter award. We were also chosen to be the recipient of the Engineering Society at UCLA (ESUC) Overall Student Group of the Year award. These awards would not be possible without the diligence and dedication of our officers who work tirelessly all year long to build on our chapter's previous successes and to put on great events that benefit our 300+ members.



HARD WORK REALLY PAYS OFF ASCE at UCLA accepts the Outstanding Student Chapter award at LA YMF's 21st Annual Student Night and Job Fair in February 2020.

One of the main reasons why our members love ASCE at UCLA is the valuable hands-on experiences that they gain from our engineering projects, many of whom work hard all year long to prepare for their respective competitions. Usually, seven of our projects compete at the annual Pacific Southwest Conference (PSWC), however due to the COVID-19 pandemic, the conference was transitioned to an online platform in which only five of our projects could compete this year. Despite the virtual format, ASCE at UCLA still did very well, winning 2nd place overall amongst 18 universities, with four of our projects earning top-three finishes! GeoWall placed first while Environmental Design, Concrete Canoe, and Timber Design-Build placed second. Apart from PSWC, our Construction Management Mixed Use team placed first at the annual Associated Schools of Construction (ASC) Regions 6&7 Student Competition, and our Seismic Design team received fourth place at the annual Earthquake Engineering Research Institution (EERI) competition.

In addition to numerous project workdays, our organization hosted close to 90 general events this past year ranging from professional development events to social gatherings to community service outings. On our professional development side, we organized two career fairs, two networking nights, 17 company info sessions, five field trips, and many workshops. Some of our more well-attended events include our Mentorship Holiday Potluck, AutoCAD I and II workshops, Ice Blocking Mixer, Dumpling Making Social, E-Week Girl Scouts Day, and more. Through these events, our chapter hopes to provide our members with academic and technical support and to foster a community where our members feel welcomed and valued.

Despite hosting fewer events in spring quarter due to the pandemic and the adjustment to the online platform, we were still able to organize several workshops including our Path to Professional Licensure workshop, GRE and Grad School workshop, FE Prep workshop, and Job Hunting in a Pandemic workshop. We also held our 2020-2021 Officer Board Elections and End-of-Year Banquet virtually this spring.

With the end of the year comes the bittersweet moment of saying goodbye to our graduating seniors. Although we are sad to see them leave, we are grateful for everything they have done for our organization. Without their contributions, ASCE at UCLA would not be where we are today. Their dedication and passion inspire us to be the best leaders we can be. To all the seniors, thank you for your service, commitment, and leadership. You will truly be missed.

We would also like to take the opportunity to thank our alumni, advisors, sponsors, and the UCLA Civil and Environmental Engineering Department faculty and staff for all of their support. Without their generosity and assistance, all of our achievements would not be possible.

Looking ahead to the upcoming year, ASCE at UCLA will have a strong officer board consisting of 4 Core Officers, 15 General Officers, 20 Project Managers, 3 Team Leads, 42 Project Directors, and 6 Advisors. We have an incredible group of very capable individuals and I am eager to see each and every one of them excel in their position. Due to the ongoing pandemic, we are planning to be solely virtual in fall quarter and will be working hard to continue putting on high-quality events that embody our mission statement: "Adapting to succeed in changing environments by uplifting community, leadership, and acceptance." Regardless of the challenges that we may face next year, I look forward to seeing all of the exciting possibilities that the future holds for us. Please do not hesitate to contact myself (y.lenh07@gmail.com) or any other officers if you have any questions, comments, or suggestions about our chapter or would like to learn more about our chapter. We are always happy to welcome more members into our community and grow our ASCE family.

Best wishes,



Yuen Lenh, President
ASCE at UCLA 2020-2021



WHAT A LINEUP! Legend has it that the 2020-2021 officer board will be the third-best officer board to have ever graced ASCE at UCLA, right behind the 2019-2020 board and way behind the legendary 1978-1979 board.

MEMBERSHIP

JOSEPH CHOI

ASCE at UCLA proudly ends spring quarter and the 2019-2020 school year with 325 members. About a third of our members were new to ASCE this year and the majority were returning members. Our members were students majoring not just in Civil and Environmental Engineering, but also in Mechanical Engineering, Environmental Science, Materials Science, and more. Approximately 50% of our members were also ASCE National Members.

ASCE boasts participation from members not just in technical projects, but also professional events and social mixers. Throughout the year, we have hosted and seen a lot of member involvement in many general events and project workdays. For our professional development events, we have had an average of 22 members in attendance at info sessions, 12 members at field trips, and 24 members at our various workshops. For our general events, we have had an average of 9 members at community service events and 35 members at social events. On the projects side, we have had a range of about 4 to 17 members attend project workdays in each of our 11 projects.

Unfortunately, due to the COVID-19 pandemic, a lot of our events planned for the spring quarter were cut short, but we were able to hold the End-of-Year Banquet virtually with significant attendance from our ASCE chapter closing out another great year.

As ASCE at UCLA wraps up another successful year in membership, I am pleased to take on the role as Membership Chair. My name is Joseph and I am a second-year Civil Engineering major who loves spending time with my friends and having a good time. Last year, I was a part of the Steel Bridge and EngineeringX projects as well as an ASCE Intern. I am currently interested in structural engineering. As Membership Chair, I hope to maintain ASCE's friendly and homey atmosphere by hosting online events where people can still meet up and get to form bonds with one another. I am also looking to work with other officers to motivate members to attend online events. With my positive energy and enthusiasm, ASCE Membership will definitely thrive under my leadership.



SPRING GM, AFTER HOURS Some members just can't get enough of each other and stay a bit longer after Spring 2020 General Meeting, ASCE at UCLA's first-ever virtual general meeting.

INFORMATION SESSIONS

KATHERINE ACERO

ASCE at UCLA prides itself on creating and fostering professional connections with civil engineering companies of all forms. By hosting information sessions, we collaborate with companies to educate students on the different careers that a degree in civil engineering has to offer. In the 2019-2020 school year we hosted a total of 17 information sessions with a wide selection of companies. Average attendance for information sessions this year was 23 with a high of 34.

Due to the unfortunate circumstances we switched to virtual information sessions for spring quarter. Our single spring information session was hosted by *Exponent*, a consulting firm who specializes in human health, environmental, engineering, and regulatory issues.

I am Katherine Acero, pleased to be your Speaker Coordinator for the 2020-2021 school year. For fall quarter I look forward to strengthening professional relationships and continuing safe practices with virtual information sessions.

PROFESSIONAL OUTREACH

NADIA MAHER

Over the 2019-2020 school year, we had a number of field trips and industry shadow events during the fall and winter quarters. During the fall, 10 students visited the Smith Emery Lab and had the opportunity to see concrete and rebar get tested, there was a field trip to the new PCL campus apartment construction site, and there was a field trip to the LA Bureau of Engineering's Sixth Street Viaduct. During winter quarter, students visited the sustainable Santa Monica City Services Building project by Hathaway Dwinddie and the construction site for the new UCLA dorms by PCL Construction. Throughout the year, there were industry shadow events at KPFF Structural and Civil, Wood, Holmes Structures, Black and Veatch, and CDM Smith. Unfortunately, our events in the spring were canceled due to safety concerns relating to COVID-19.

I am Nadia, ASCE at UCLA's 2020-2021 Professional Outreach Chair. For the upcoming year, I am looking forward to organizing industry shadow events that represent a broader range of civil disciplines. We are working through the challenges of online formats to prioritize student safety and still providing experiences that will enrich students from a professional standpoint. For this fall quarter, we have decided that it would be best to not have field trips given the safety risks associated; however, we are planning on having a number of industry shadow events through online platforms. This gives students the ability to meet with and learn from professionals in the industry and learn about what they are doing from the comfort and safety of their homes. We also hope to have a few workshops with both industry professionals and alumni to give students a better idea of what daily life is like as an engineer after graduation.

MENTORSHIP

YOUNGBO SHIM

Now, more than ever, it is crucially imperative to guide the young through the thick uncertainty shrouding our unrelenting world. We must construct the glistening greenhouse upon a hill, where weathered seeds come to unfurl their sore leaves and blossom into the vibrant gardens they deserve to be. Hello, incoming mentorship chair Youngbo Shim here, and I am extremely excited for this upcoming year!

After Kristida led and concluded a very successful year of mentorship with new trailblazing traditions such as the potluck cooking competition, I have been planning this year's program, and let me give it to you straight: most of Mentorship will be online for the foreseeable future. Surprising, I know. But rather than standard Zoom meetings, we have been exploring other creative and interactive mediums.

In ASCE's inaugural Minecraft server, students have been slaying dragons and designing beautiful homes. Our ASCE Discord acts as a lounge where members come to discuss the NBA playoffs. In our Among Us games, crewmates scramble to repair the damaged spaceship before the imposter eliminates them.

Looking towards fall quarter, our strong team of newly appointed family heads has already been planning family events! We can't wait for the new year and don't forget to join Mentorship!



LOOK OUT!! lucasspookas (Kat Tsai, left) and carlyraestepson (Youngbo Shim, right), in true Mentorship spirit, protect Lucas Tang (middle) from the evil coronavirus guardians.



SPECIAL DELIVERY!

Kieran Cruikshank delivers the hot commodity of early 2020—toilet paper, that is—to Yuen Lenh, getting those coveted Mentorship points in the process.



VERY SOCIAL, STILL DISTANCING If you were concerned: yes, they are six feet apart in this photo.

SOCIAL

JUSTIN SAUTTER

Woooooeee it's time for another fun year of those classic ASCE socials we all know and love. Things may be a tad different (or more virtual) at least at the beginning of this year, but that means we can look back at the great times we had during the 2019-2020 school year to help us weather the times of limited gatherings!

Last year got off to an AMAZING start as our mentorship families and activities accelerated the good times right from the start. Having 4 smaller mentorship families allowed for more personalized activities and socials inside each family (big shoutout to Bailey Uy and Vivian Chong for leading the PPXD family like champs).

Fun events really got rolling by the Halloween Social where ASCE students came decked out in their best costumes to have a blast, just in time for Fall Career Fair. November meant it was time for the Student-Professor Barbecue where students, professors, and advisors alike mingled to get better acquainted with one another as well as just have a good time. Mini PSWC was also held for a fun time between ASCE members of different Southern California schools. Large socials were not all ASCE had to offer as many small events (like one of my favorites, the Succulent Social) were met with positivity. Pots were painted and plants were potted in an effort to decrease that midterm stress. As the end of fall quarter neared, so did finals; it came time for the quarterly study marathon in which students studied and snacked together in harmony.



CABIN FEVER? HARDLY KNOW 'ER! It's ASCE Bruin tradition to start off the new year in January with an annual ski trip in Big Bear. We're hoping we can make it out to the snow next January, but either way, Sautter will have many a virtual social opportunity for us in the meantime!

with cultivating wonderful socials for ASCE members, I spend my time rock climbing, playing way too much volleyball, sketching buildings, and struggling at Jeopardy.

The coming school year provides many challenges as to how socials and events will run for ASCE but by-golly if I'm not gonna do everything in my power to plan some great events. Some upcoming events may include a collaboration with Cal ASCE as well as game nights. I'm looking forward to having the best and safest time possible in the coming months!

Like a late-great Christmas present, the beginning of winter meant the annual ASCE ski trip to Big Bear! Of course many go every year to have an escape to the snow to enjoy themselves; the trip served as a unique opportunity for both older and younger students involved in civil engineering to bond in a non-professional setting and to make new, lasting friendships! Winter also brought about many food-related activities like mentorship family boba socials and "Dumplings After Dark", where members learned how to make their own dumplings by hand to destress after midterms. Unfortunately for all ASCE members and UCLA students in general, March marked the time when both school and socials turned fully virtual.

Howdy, howdy! My name is Justin Sautter or just "Sautter" for those that don't know me, and I am the 2020-2021 Social Chair. I am an incoming sophomore from the amazing Bay Area, and when I am not tasked

COMMUNITY SERVICE

KATHERINE TSAI

Hi everyone, my name is Katherine, and I am your 2020-2021 Community Service Chair! With spring quarter online, we unfortunately didn't get to do as many events as we had liked. However, previous Community Service Chair, Anna Phillip, planned loads of great events in fall and winter quarters!

One consistent club favorite event was our quarterly visit to Kindred Spirits Farm. We not only got to interact with the animals there (four piglets!) and tend to the garden, but we were also able to eat delicious vegan food, most of which came from the garden! We also participated in events such as Girl Scouts Day with LA YMF and the Archer School for Girls Outreach Event with IEEE WATT—events that aim to inspire young girls to pursue engineering.

This upcoming year may be virtual, but that doesn't mean the community service events are going to stop. From sewing masks out of old clothes to virtually tutoring young students, we're going to have tons of opportunities for you to come out and make an impact. Hope to see you there!

ATHLETICS

LOGAN M^CDEVITT

To start, thank you Shaina for leading us in intramurals and other athletic events last year. I am sorry that you were not able to have a complete year of sports, but thank you for transitioning me in these unusual circumstances.

I am Logan, ASCE at UCLA's Athletics Director for the 2020-2021 school year. Last year during fall and winter quarter, we participated in six different sports, including co-rec soccer, co-rec basketball, men's basketball, co-rec volleyball, co-rec dodgeball, and open league football. I look forward to playing intramurals again once campus opens up, but until then, I will gauge interest in esports and see how we can continue to form teams and participate as a club.

This summer, we began our annual tradition of a fantasy football league. As we are only a few weeks into the season, it is difficult to see who will pull ahead at the end, but it is exciting, nonetheless, to see many people engaged with each other and their teams. Speaking of professional sports, we will be having hybrid watch parties for those here in Westwood and for those at home, so look out for that when big games come around! (Sko Dodgers!)

This fall, we are also looking to work with a company called "Active for Good" in order to get people to compete and stay active in order to donate food packets to those in need. In short, the more steps you have, the more you can donate, so look out for more details on that later on!

Lastly, I look forward to having ASCE members prepare and participate in the athletic events at PSWC 2021. Although PSWC will be virtual this year, pandemic- and virtual-friendly versions of basketball and soccer are planned for the conference! Let's show the other schools why UCLA is not just the #1 public university because of academics. Thank you to everyone for being team players and I am excited to see what we will accomplish this year!

PSWC 2021

TORI MOK & NICK BOROV

Following the unfortunate circumstances that brought us a nearly full cancellation of PSWC 2020, originally meant to be held at CSU Fullerton last year, UCLA has been put in a unique position of reshaping its plan to host PSWC 2021. With Tori Mok as PSWC 2021 Chair and Nick Borov as 2020-2021 Conference Coordinator, we are working hard to make this year's event as true to its roots as it can be, while being sure that everyone is safe and able to participate, even from home. A constant flow of new ideas will allow us to bring that Bruin spirit we have always shown at our past conferences, even if it has to be in a virtual setting.

Tradition meets innovation—the PSWC 2021 planning committee (headed by Tori Mok and made up of External Events Director Ki Ja Ourdoune, Financial Director Kristida Chhour, Non-Technical Events Director Lucas Tang, Publicity Director Sarah Ciudad, Technical Events Director Katherine Tsai, and Technical Events Scheduling Director Alexis Bui) has transitioned to a virtual format creatively reimagining events in order to maintain the conference's rich tradition of building a community and cultivating student chapter pride. We have elevated event prompts, technical and non-technical, to continue challenging students to demonstrate their classroom knowledge, display their athletic skills, and collaborate in light-hearted games. To further achieve the goals of PSWC, we have added EngineeringX, a technical design report on the structural analysis of obstacle courses, and Younger Member Forum (YMF) Jeopardy, a non-technical event focused on engaging participation from young professionals across the region.

All events will be live-streamed to allow participants to cheer on and appreciate the work of their colleagues in hopes to strengthen the sense of pride and camaraderie in the student chapters.

Lastly, the PSWC 2021 planning committee prioritizes the wellbeing of our participants, and we have refocused our fundraising efforts to provide various scholarship opportunities. PSWC 2021 is taking a new form to preserve the conference's traditions while catering to the needs and interests of its participants!



FREEWAYS, PALM TREES, AND THE BIG SCREEN

We won't be seeing any of the iconic LA landmarks in-person during PSWC 2021, but we can sure change our Zoom backgrounds to help!

CONCRETE CANOE

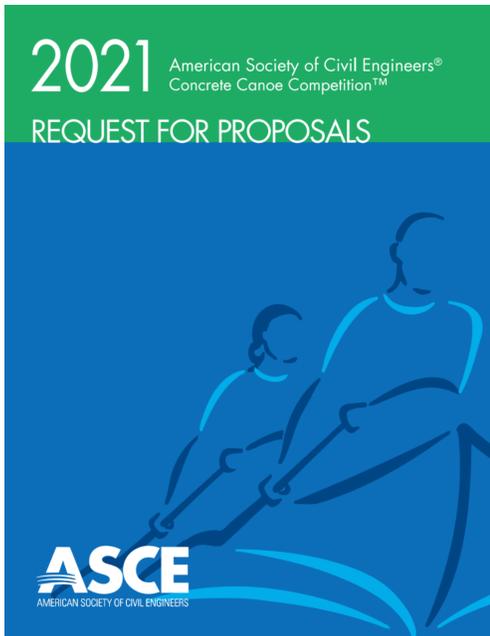
CATHERINE NGUYEN

When week 8 of winter quarter rolled around, the Concrete Canoe team was busily preparing for PSWC with full steam ahead. From furious sanding, constructing artistic displays, to final paddling practices at the Marina, everything was set to sail... and then it didn't. It was perhaps the first time in school history that a canoe was constructed only to be unused. It was disappointing, to say the least, that the full potential of our efforts could not be displayed.

This didn't bog down team spirits, however, and we had a number of small joys as the project winded down during the entirely virtual spring quarter. Our Technical Proposal, a mock construction bid for ASCE's Concrete Canoe Committee, placed 2nd at virtual PSWC out of 18. Project Directors were selected, and both new and departing leadership participated in an online transitional session to facilitate proper knowledge transfer. Veterans advised and voiced concerns regarding their positions to their successors, and project management introduced the new team Drive. Lastly, a surprise celebration was held for Canoe's graduating Class of 2020.

With the official 2020-2021 RFP's release in early September, project management has been adjusting the project timeline for a competition format that will be entirely virtual. Instead of a canoe, deliverables will consist of two

technical reports, a technical presentation, and a video presentation. While field construction will be missed, we will use this opportunity to hone our technical abilities in hull fluid dynamics, structural analyses, and concrete mix design. Our team camaraderie will be maintained using the collaborative software Slack. And as interpersonal relations are more important now than ever, long-term goals include improving marketing and outreach to boost membership, maintaining close relationships with existing sponsors, and building new ones.



2021 ASCE Concrete Canoe Competition™ Request for Proposals

MIXTURE: COVID-19 SPECIAL

CEMENTITIOUS MATERIALS						
Component	Specific Gravity	Volume	Amount of CM			
Type III Cement	3.15	2.94 ft ³	400 lb/yd ³	Total cm (includes c)		
GGFS, Grade 120	2.93	1.37 ft ³	250 lb/yd ³	900 lb/yd ³		
Fly Ash, Class C	2.85	1.43 ft ³	250 lb/yd ³	c/cm ratio, by mass 0.444		
FIBERS						
Component	Specific Gravity	Volume	Amount of Fibers			
PVA Fibers	0.92	0.09 ft ³	5 lb/yd ³	Total Amount of Fibers		
Nylon Fibers	1.40	0.03 ft ³	3 lb/yd ³	8 lb/yd ³		
AGGREGATES						
Aggregates	Abs (%)	SG _{abs}	SG _{nom}	Base Quantity, ft ³	Volume, Yds ³	
Expanded Shale	13	1.53	1.73	600 lb/yd ³	6.20 ft ³	
Pumice	17	1.39	1.86	350 lb/yd ³	3.54 ft ³	
LIQUID ADMIXTURES						
Admixture	lb / US gal	Dosage (lb./cu. ft)	% Solids	Amount of Water in Admixture		
Liquid Dye	12	20	59 %	8.44 lb/yd ³	Total Water from Liquid Admixtures, Σw _{adm}	
HRWR	8.5	6	47 %	1.90 lb/yd ³	10.34 lb/yd ³	
SOLIDS (DYES, POWDERED ADMIXTURES)						
Component	Specific Gravity	Volume (ft ³)	Amount (lb/yd ³)			
Solid Component of Liquid Dye	2.36	0.03 ft ³	8.44 lb/yd ³	Total Solids, Σ _{adm} 8.44 lb/yd ³		
WATER						
			Amount	Volume		
Water, w _c = [Σw _{agg} + w _{adm} + w _{water}]			450 lb/yd ³	7.21 ft ³		
Total Free Water from All Aggregates, Σw _{agg}		w/c ratio, by mass 4.12	57.50 lb/yd ³			
Total Water from All Admixtures, Σw _{adm}		w/cm ratio, by mass 0.50	10.34 lb/yd ³			
Batch Water, w _{batch}			497.16 lb/yd ³			
DENSITIES, AIR CONTENT, RATIOS, AND SLUMP						
Values for 1 cy of concrete	cm	Fibers	Aggregate (SSD)	Solids, Σ _{adm}	Water, w	Total
Mass, M	900 lb	8 lb	1323.5 lb	8.44 lb	450 lb	2687.94
Absolute Volume, V	4.91 ft ³	0.12 ft ³	11.75 ft ³	0.03 ft ³	7.21 ft ³	23.02 ft ³
Theoretical Density, T _c = ΣM / ΣV	112.27 lb/ft ³		Air Content, Air, f = (T - D) / T × 100%			11.4 %
Anticipated Density, D	99.55 lb/ft ³		Air Content, Air, f = (T - D) / T × 100%			11.4 %
Total Aggregate Ratio = (V _{agg} / V _{total})	43.5%		Slump, Slump flow, Spread (as applicable)			4 × 1 in.
C30 = RCA Ratio = (V _{agg} - w _{agg}) / V _{total}	100%					

COVID-19 SPECIAL The 2021 request for proposals in all its glory.

As the returning Project Manager for the 2020-2021 academic year, assisting me will be Assistant Project Manager Matthew Saiki, Directors Andrew Wong, Ayla Dvoretzky, Dhruv Purohit, Michelle Truong, Sam Vi-Tang, Tommy Gong, and Vache Sahakyan, as well as Senior Advisor Megan Magorka. Our team consists of new and old faces alike, which will bring the perfect (concrete) mix of experience and innovation to the table. We are more than (concrete) pumped to take on this year's twist to the traditional competition!

CONSTRUCTION MANAGEMENT

AMEYA PATEL

Construction Management (ASC 67), alongside the Timber-Strong Design Build project, forms the construction management program at UCLA, a field quickly gaining popularity with civil engineers. The project consists of three teams, which participate in the nationwide Associated Schools of Construction Conference (ASC 67). The three teams we have had for the past few years are Sustainability, Mixed Use, and Design Build—together, they give ASCE members a sense of how to compile a proposal for a construction project or sustainability consultation. In the 2020 competition this past February, our Mixed Use team did an amazing job, placing 1st for the first time! Our Sustainability and Design Build teams, both largely non-returners, were able to make monumental strides in improving our competition preparation process. For the 2020-2021 school year, our teams will be led by Ameya Patel as Project Manager, Mia Verdolin for Sustainability, Justin Ehrenberger for Mixed Use, and Katrina Berge for Design Build. As COVID-19 restrictions are being redefined every week, ASC 67 has announced that the 2021 competition will be held completely online. This makes the travel logistics much easier for the project, but the teams are still waiting on the details of the project prompts. The teams plan to adhere to their workday schedule for the fall, educating ASCE members on topics including project scheduling, estimating, Revit, and LEED certification. Everyone looks forward to building off last year's momentum, continuing with industry workshops and compiling a vault of construction management knowledge for years to come.

SURVEYING

MILTON MAK

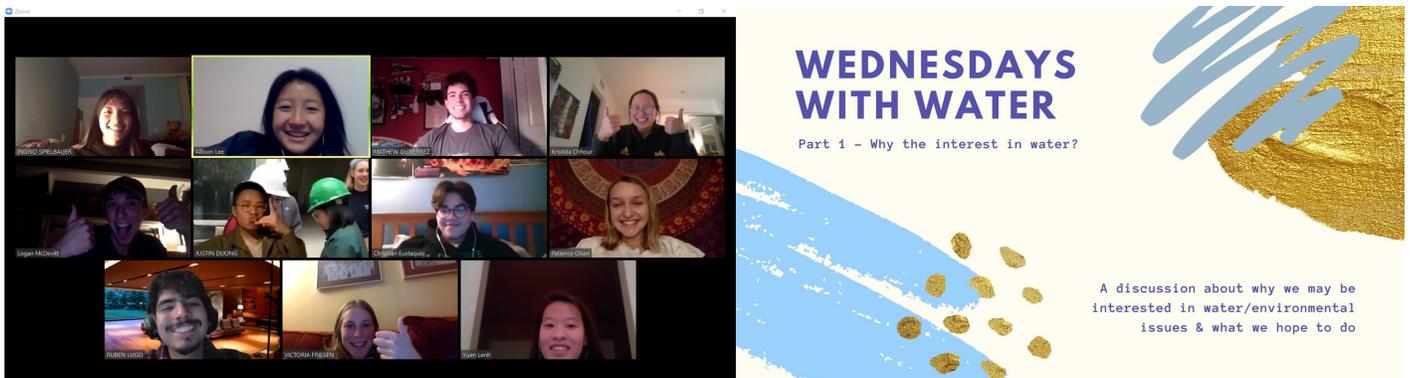
Hello and welcome to Surveying! In this project, we learn the basics of surveying and send a team for the surveying competition at PSWC each year. What is surveying? It is the skill of determining the position of points on the land that can be used for maps and layouts. With its own section on the PE exam, surveying is a fundamental skill for any civil engineer. During our normal workdays, we use professional surveying equipment such as the automatic level, Philadelphia rod, tape measure, plumb bob, reflector rod, and total station to conduct surveys to gather data on the elevations, distances, and angles of points around the UCLA campus. This past year, the four planned competition events were geared more towards practical applications of surveying. These events included pacing, leveling, building a stakeout, and calculating the dimensions of a cut sewer line. Throughout our workdays, we prepared our members by teaching them surveying concepts and practicing the use of surveying equipment to simulate real-life applications and calculations of each respective concept. However, due to COVID-19, our expected PSWC events were unfortunately canceled.

For the 2020-2021 term, the Project Manager will be Milton Mak and the Project Director will be Benjamin Molina. While the COVID-19 pandemic remains active, we plan to continue teaching surveying skills to other prospective members through an online platform as well as the recruitment of potential team members to compete at PSWC 2021. Look out for more Information about the fall quarter online workdays. Hope to see you there!

ENVIRONMENTAL DESIGN

ALLISON LEE & PATIENCE OLSEN

Last year, our PSWC competition prompt challenged us to design and build a system that could treat water contaminated with crushed concrete, motor oil, fertilizer, lemonade, vinegar, ferrous sulfate, and salt. Extensive research during fall and winter quarters produced ideas for filter media that were sustainable, economical, and creative as always, including aspen chopstick shavings to remove motor oil and bentonite clay to increase system retention time. Thanks to the efforts of our Build Team and our modular, stackable design, our system could be constructed in under 5 minutes! Although we were not able to showcase our impressive construction time and innovative treatment system at PSWC, we are proud to have placed 2nd for our final design report. During the remainder of spring quarter, the Environmental Design project focused on hosting virtual socials to maintain community while many members returned to their hometowns. We had incredible fun during workdays and at social events together, even as spring quarter transitioned to a virtual platform.



ENVIRO CAN'T BE STOPPED! The Environmental Design project team adapted extremely well to changing circumstances, shifting to virtual socials and workshops almost as soon as the pandemic began.

During the summer, we hosted a series of workshops, “Wednesdays with Water”, where members and non-members alike were invited to discuss and learn about regulatory, economic, and social factors of water treatment and distribution. Workshop topics included water-related careers, environmental justice, stormwater engineering, irrigation engineering, environmental bioremediation, and more. We appreciated the consistent member turnout and participation, and we look forward to hosting many more similar workshops in the fall! We also were able to return to the lounge to reorganize Environmental Design materials, in preparation for future in-person competitions.

This year, the project will be led by Co-Project Managers Patience Olsen and Allison Lee, and Project Directors Eric Estrada Oajaca, Christian Eustaquio, Emily Story, and Katherine Tsai. Despite the challenges that virtual project coordination may bring, we are excited to engage with the next generation of environmental engineers!

Since Environmental Design competition rules were released early this year, the team will be able to begin research and preparation as soon as the school year starts. This year's prompt differs from the traditional water treatment prompt, calling for innovative solutions to stormwater capture in the LA area. Virtual project meetings will include small-group research sessions and continued presentations on relevant topics, including stormwater concepts that are taught and applied in upper-division courses. We will continue to create a (virtual) community of environmental engineers through our project meetings and socials, and work towards researching and producing a stormwater capture plan to address increasing water demand in LA.

TIMBER-STRONG DESIGN BUILD

KRISTIDA CHHOUR

With the new school year starting, exciting things are happening with Timber-Strong Design Build! Our project is relatively new and our first team was put together for PSWC 2018. Since then, we have been a branch of the Construction Management project. This year, however, we will debut as our own independent project, led by Kristida Chhour (Project Manager), Erfan Kohyarnejad (Design Director), and Phoebe Lee (Aesthetics Director). That means that this is our very first time having our own section in the newsletter! To better introduce ourselves, Timber-Strong Design Build is a project that challenges students to design and construct a sustainable, light-framed wood housing structure that is structurally durable and efficient.

Along with our project team, the Timber-Strong Design Build competition itself is growing. We anticipate it becoming a national ASCE event that students outside of the Pacific Southwest compete in. Although the full implications are not yet certain, this may mean more national competitions in the future!

At our most recent competition, PSWC 2020, we successfully placed 2nd based on our technical paper and design. Although we did not get to fully build our structure, we spent lots of time learning during the prefabrication process. This fall, we will continue to bolster project membership and provide a strong educational foundation for our project members. We will review our past structures to learn from both our successes and shortcomings to pave the way for success in this coming year.

ENGINEERINGX

HEATHER KURTZMAN

Our first year as a project was a little bumpier than expected, with workdays being cut short due to online learning. But we are so excited to be able to introduce EngineeringX as an official project for the Pacific Southwest Conference and share it with other universities. Even though we couldn't physically build, we still spent the spring brainstorming new ideas for future obstacle courses. During the summer, Project Manager Heather Kurtzman and Project Directors Michael Nishikawa and Joseph Choi were able to draft the official rules for the premier of EngineeringX at PSWC 2021. While the event is virtual, each team will be able to write a professional technical report for their obstacle course the same they would for a structural engineering firm. We are so excited to host virtual workdays over Zoom throughout fall quarter to brainstorm new obstacles for this year's virtual course. As a growing project, we look forward to welcoming new members into our ranks to learn more about the structural aspects of civil engineering in a fun way, and we hope we will eventually be able to build the course we envisioned.

GEOWALL

MAAN ALHAMDAN & PETER LEE

We are just starting the new academic year and are optimistic and excited for what's to come. This year's GeoWall team will be led by Co-Project Managers Maan Alhamdan and Peter Lee who are both seniors excited to utilize their extensive background with GeoWall in past years to continue building on the team's success with new members. To recap, GeoWall is the only undergraduate geotechnical engineering project here at UCLA, and we build a model soil-nail wall out of poster board and kraft paper. The goal is to design a wall that withstands loading conditions using the least weight of kraft paper reinforcements within the allotted time during competition.

The past year, we were tasked with constructing a three-sided soil nail wall that holds back 500lbs of sand and an additional 50lb vertical load placed just 1 inch away from the corner of the wall. We've worked on our design throughout the year and brought it to our national competition that was held by the ASCE Geo-Institute in Minneapolis, Minnesota, during winter quarter. We landed 1st place again this year in our design report and placed 4th overall for nationals, an incredible feat that couldn't have happened without the help of our project directors and members. Although we unfortunately could not attend PSWC in person this year, we submitted our design report and placed 1st there as well.

Although it is unclear whether or not a competition will be held as the situation is still fluid, this year's team will do preparations in the event of the safe reopening of on-campus activities such that the team will be able to practice their builds. As the situation becomes more clear, we will also see if attending competitions in-person is viable or if competition will be held remotely. We will keep you up to date as the year progresses.

STEEL BRIDGE

ALEXIS BUI & STACY KONG

ASCE at UCLA's Steel Bridge Team is tasked with designing, fabricating, and constructing a 1:10 scale steel bridge that takes into account real-world factors such as structural efficiency, cost, and constructability. Last year's prompt led to the design of a truss bridge for minimal deflection due to the incorporation of offset footings in the competition prompt. By using the CNC mills in the student machine shop, we were able to automate some of our manufacturing process, further streamlining our fabrication. While the testing and competition of the bridge were postponed due to COVID-19, ASCE at UCLA's Steel Bridge is proud to have been highlighted in the American Institute of Steel Construction's monthly magazine for outstanding inclusivity and diversity.

Despite social distancing restrictions limiting some of the hands-on aspects of the project, the 2020-2021 school year will still offer valuable experience in structural analysis as well as programs such as SAP 2000, AutoCAD, Fusion 360, and Sketch Up. Online workdays this fall will be focused on both collaborating on and designing a bridge for this year's competition, as well as teaching new members—regardless of previous experience and knowledge—design fundamentals and how to use the various programs.

This year, Project Managers Alexis Bui and Stacy Kong, along with Directors Aaron Houn, Joseph Choi, Kathryn Hoang, Reilly Terao, and Samuel Liao will lead a team of new and old members through a new virtual form of competition. From late summer through the end of fall quarter, we will set to work on developing and refining a design based on the new set of rules released by AISC. Although the upcoming year brings a new set of challenges, we look forward to working with everyone to overcome them.

SEISMIC DESIGN

HONOR FISHER

Seismic Design is a structural and earthquake engineering project focussed on competing in the annual Earthquake Engineering Research Institute's Seismic Design Competition (EERI SDC). The goal is to design, model, and construct a 5-foot tall balsa wood structure to be tested on a shake table to determine seismic resilience. In addition to the physical structure, competitors must submit a design proposal, informational poster, and seismic performance prediction as well as give a short presentation on the construction process, architecture, and structural design. This past year, we were able to build a full prototype model in addition to our final structure and attend the competition in San Diego where we placed 4th out of nearly 50 teams.

My name is Honor and I am the incoming Project Manager for the UCLA Seismic Design team. I've been heavily involved with the project for three years and am looking forward to sharing all that I've learned with new and returning members. I will be joined by my Assistant Project Manager, Anjali Swamy, and our Project Directors, Varun Tankha, Tiffany Choi, James DeLong, Michelle Truong, and Catherine Mailloux. Over the summer we've been training our new directors, researching innovative topics in structural and earthquake engineering, and preparing content for our fall quarter workdays.

During a normal year, our team would begin construction of a prototype structure during fall quarter which would be followed by a shake table test and subsequent design iterations. Unfortunately, that will not be possible this year due to the COVID-19 outbreak and the cancellation of on-campus activities. We will still be hosting project workdays during the fall which will mainly consist of virtual presentations on civil engineering topics and programs. We plan to host a series of tutorials for AutoCAD, Fusion360, and SketchUp which will allow students to develop and practice their drafting skills more comprehensively than in previous years. We also plan to create a series of educational lectures covering topics in structural, geotechnical, and earthquake engineering to give underclassmen an idea of the possibilities of these fields. The lectures range from basic elements of structures, like braces and shear walls, to complex research topics, like base isolation, to explanations of various career path options. We see this as an opportunity to provide additional career insight and technical information to our participants and are looking forward to a great year regardless of the challenges.



ONE WITH THE SKYLINE If you squint your eyes, the Seismic Design team's fourth-place-winning balsa wood structure looks like it could be a part of the San Diego skyline.

SEISMIC OUTREACH

CAMILLE ITURALDE & LUCAS TANG

Seismic Outreach is one of two community service projects within ASCE at UCLA. It has been our mission since the beginning of our project to educate and inspire underserved youth to the possibilities of a future in engineering. Through our interactive, quarter-long program, we routinely visit middle schools within our area and challenge them with a structural/environmental engineering prompt that blends creative thinking, problem-solving, and collaboration. Our hope is to spark an interest for students to begin working towards a higher education in STEM.

This past spring, we were unable to host any school visits or finale day. However, we were able to plan and put together a virtual format of the project that we are looking forward to launching this upcoming school year. Quarantine has also allowed us to host a college fair with a new elementary school, Noble Avenue Elementary School, to answer any questions they had about UCLA and college life. It was a fun experience for elementary and college students alike and a great way to end another successful year.



SEISMIC OUTREACH ASCE at UCLA

Earthquakes

When two tectonic plates rub against one another, **earthquakes are caused!**

Epicenter: the point directly above the focus of an earthquake

Loads

Structural engineers must consider

1. **Vertical loads:** forces in **downward** direction
 - Gravity
 - People
2. **Lateral loads:** forces that act **side to side**
 - Earthquakes
 - Wind

EARTHQUAKE PHENOMENA STRUCTURAL ENGINEERING

OUTREACH, BUT MAKE IT VIRTUAL Although Seismic Outreach couldn't physically visit middle schools like they normally do, the presentation portion of their visits could be easily adapted to a virtual setting, allowing them to continue educating and inspiring young students.

For the upcoming year, Seismic Outreach plans to work with the same three middle schools virtually until we are able to return to our in-person program. Our adapted program has students use household materials to build their structures. Volunteers will still be able to help students via Zoom, and there will be a virtual finale day to have students showcase their structures and architectural renderings. While we understand that it will be new, uncharted territory, we hope to retain the same level of student engagement. The silver lining of having an online program is that we now have the ability to reach more schools. We hope to be able to host more virtual college fairs and reach more schools that were previously too far away. Leading the project during the 2020-2021 academic year will be Co-Project Managers Camille Ituralde and Lucas Tang. The leadership team also includes our Project Directors: Megan Bruning, Ada Chen, and Nathan Sharafian. We are all very excited to continue teaching and inspiring students about the wonders of engineering and college!

EWB-ASCE NAVAJO PROJECT

ANNA PHILIPP & RICHARD TRUJEQUE

The Navajo Water Project works all year to design and implement a fully functioning off-grid solar-powered water system for a family on the Navajo Reservation. There is a lack of access to running water on the Navajo Reservation and our goal is to work directly with families in need so that they will have easier access to water in their home to make their day-to-day lives a little bit easier. This year the project will be led by Co-Project Managers Anna Philipp and Richard Trujeque.



ROAD TRIPPIN' The Navajo Project assessment trip was one of the many things that only happened in our pre-COVID world. It's a shame that the project never got to implement their final design, but they'll be back as soon as they are able!

We spent the past year designing a new system for the Begay family. Before COVID-19 struck the Navajo Nation, we were able to go on our assessment trip to meet the owners of the home and take the necessary photos and measurements to create the design and plan for the construction of the system. We had nearly all of our supplies ready along with our design, we just needed to take our final implementation trip; however, due to the ongoing pandemic, the trip had to be indefinitely postponed. As soon as it's safe to do so, we will be heading to the reservation to implement the 2019-2020 system.

As many students moved home due to the pandemic this past spring quarter, and UCLA moved to a virtual setting, we began focusing on leadership transition. The new leads for each team within the Navajo Water Project are as follows: Brooke Baranek and Sophie Huang for the Civil

Design Team, Kirsten Wannewetsch and Eric Eduardo Saavedra Garcia for the Power Team, and Jonah Nucci and Rian Montagh for the Drafting Team. Together, we began creating a guidebook that will aid new and current members in learning about each of our project teams.

Throughout fall quarter, we will be continuing our search for a family on the reservation in need of a water system. In addition, the Navajo Water Project will have one-hour meetings, twice a week. Our plan is to focus on a curriculum that will teach members of the project the basics of electrical and civil design so that our members will have all the knowledge that they need to help work on the design of our future system. Through this education, we hope that any project member will be an asset to any of the teams regardless of their major.

We hope to have an efficient and productive year despite having to adapt to a sudden online setting!

TRANSPORTATION

NATHAN SHARAFIAN & NATHAN VARDAS



YOUR TRUSTED TRANSPORTATION CONSULTANTS

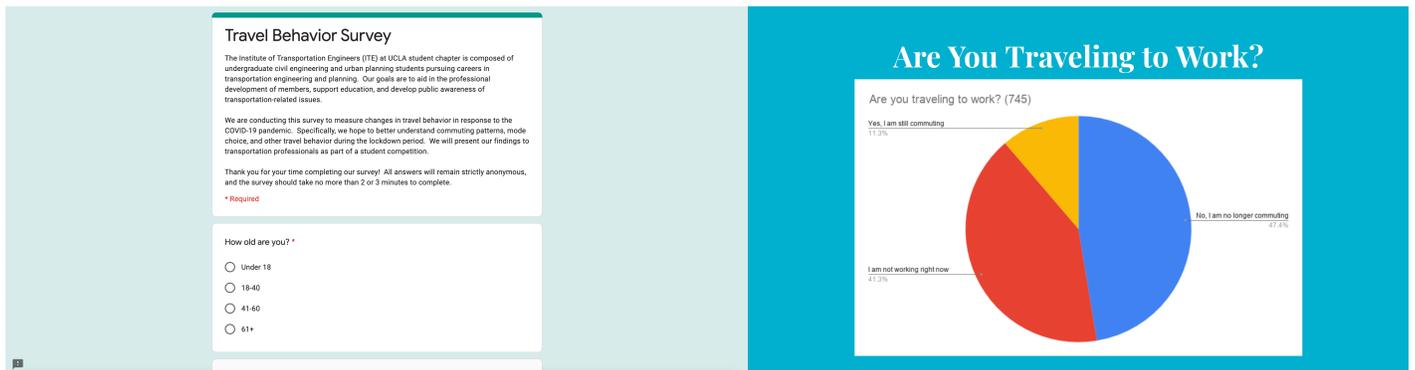
The Transportation project team went under the name "D.W. Corp." for the purposes of their proposal for PSWC 2020.

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.

Last year, our proposal detailed traffic signal modifications and median construction for an unsafe corridor in Anaheim, CA. A good mix of upper and lower classmen, including several freshmen, showed interest in the project and assisted with project work throughout the year. During workdays, we divided the group into a scheduling team, traffic control team, design team, and cost estimating team based on our experience levels in these areas. We spent much of our time teaching each other skills and collaborating with online research, working towards good results while encouraging a positive, light-hearted group dynamic. Ultimately, our team completed the proposal and submitted it before the end of March, but the in-person presentation was unfortunately canceled

due to the pandemic. As a result, we were judged solely on the proposal, and placed 8th out of 17 schools. Although we were disappointed with our low ranking, we hope that we can improve on our performance this year!

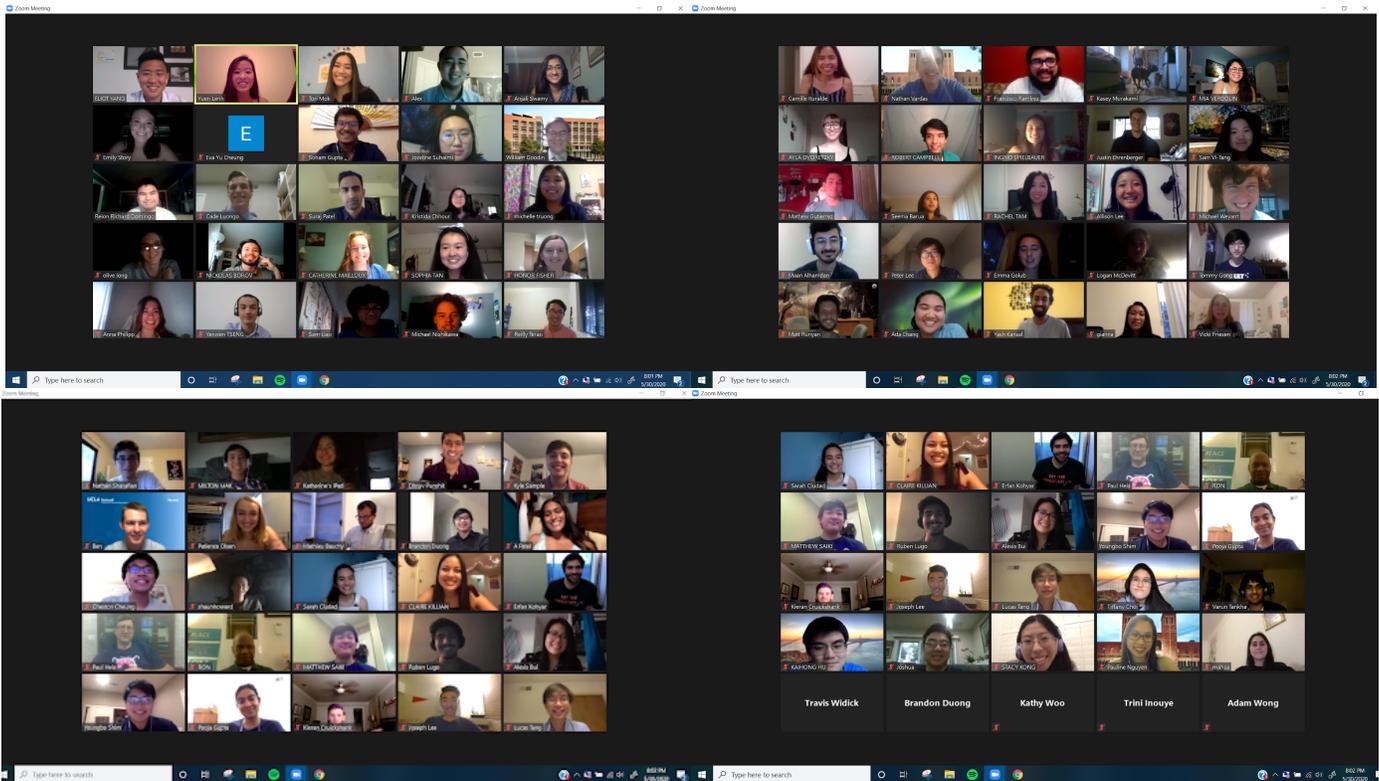
For the new school year, Project Managers Nathan Vardas and Nathan Sharafian, and Project Directors Francisco Ramirez, Katrina Berge, and Olive Long, feel confident that our project can transition to a virtual format. Our leadership has experience completing a transportation project remotely. In the spring, we conducted a travel behavior survey with the Institute of Transportation Engineers (ITE), which won funds for UCLA at two student competitions. We are excited to start work on the Transportation Design prompt for this year, which will be geared towards design at LAX. Additionally, we will host a workshop to introduce CEE 1 students to the transportation engineering profession and hopefully recruit them for the project.



HOW HAS COVID-19 AFFECTED YOUR TRAVEL BEHAVIOR? Recognizing that the pandemic had an immense impact on transportation patterns around the world, the Transportation project team wanted to quantify the changes in people's travel behavior as a result of stay-at-home and social distancing measures.

END-OF-YEAR BANQUET 2020

YUEN LENH



This year, due to the COVID-19 pandemic, ASCE at UCLA's annual End-of-Year Banquet took place virtually through Zoom on May 30th. We welcomed over 120 UCLA Civil and Environmental Engineering faculty and staff, alumni, industry professionals, and students to celebrate a year of incredible success and amazing leadership. During the Banquet, we played Breakout Room Trivia, gave a summary of the major events we held, thanked our officers who served this year, introduced the next year's officer board, shared our projects' recaps and results, and announced our award winners.

Kicking off the awards portion of the night with the academic awards, Byron Tseng, Dr. Robert Campbell, and Professor Mathieu Bauchy were voted as and awarded the TA, Lecturer, and Professor of the Year, respectively. For project awards, Samuel Liao, Jonathan Tai, and Maan Alhamdan were honored as the Project Engineer, Director, and Manager of the year, respectively. The Ryan C. Worley Rising Star Scholarship awards were continued this year to recognize and reward younger members for their involvement and dedication to ASCE and to the civil engineering field. This year, freshman Shaun Howard and sophomore Tori Mok were selected to be the recipients of the scholarship. Finally, the prestigious Richard T. Shimano Leadership Award was presented to senior Claire Killian in recognition of her leadership, dedication, and service to ASCE at UCLA. In recognition and appreciation of our graduating seniors who unfortunately did not receive the proper send-off that they deserved, a senior tribute video was created by the 2019-2020 officer board and played at the end of the Banquet.

Overall, despite the virtual platform, the event ran smoothly and many people enjoyed themselves. Hopefully, next year, we will be able to hold our End-of-Year Banquet in person, but regardless, I have no doubt that our next Vice President, Eliot Yang, will plan a fun and amazing Banquet.



Congrats
ASCE UCLA





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2020

42

43

12

KODAK 400

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