Virtual Is Golden

TECHNOLOGY PROVES MORE VALUABLE THAN EVER DURING THE COVID-19 PANDEMIC
As I write this, there are only two months left in 2020. It was a year that moved very quickly, and at other times, it felt like the world stood still. The COVID-19 pandemic required numerous adjustments and adaptations to be made while we continued to educate our students and offer them extra support. Despite the challenges, there were many unforgettable memories and historic moments in 2019-20 that we are thankful to share with our friends and supporters.

2020 was extraordinarily special for the Construction Management (CM) Department. In this Construction Innovator issue, you will read several stories about how we educated the future leaders of construction during the pandemic. You will read how faculty developed creative ideas to implement our Learn by Doing philosophy while keeping students, faculty and staff safe.

We are excited to share the news of our historic win at the Associated Schools of Construction Regions 6 and 7 Competition. Cal Poly brought back the greatest number of trophies from competitions this year! After March 2020, the pandemic did not allow us to compete in person, but that did not stop our students as they continued to excel during virtual competitions.

My most amazing memory is meeting with many great alumni and friends who have supported and strengthened the CM Department. Since joining Cal Poly, I have had the pleasure of meeting with hundreds of alumni. I truly enjoy hearing their fond memories of Cal Poly and the pride they feel for our students who will go on to become the future leaders of the construction industry.

My ambitious goal is to connect with all CM alumni over the next five years. If we did not have the pleasure of meeting yet, please reach out, plan a visit and share your stories with us. I am very hopeful we can all celebrate the 50th anniversary of the CM Department in November of 2021. Please check for 50th anniversary updates at construction.calpoly.edu.

Thank you for reading. I hope you stay safe and healthy.

JEONG WOO | DEPARTMENT HEAD
ON THE COVER
The COVID-19 pandemic has inspired the Construction Management Department’s increase in virtual learning activities to ensure the well-being of students and faculty, shown in this stylized simulation of a Zoom meeting. Pictured are students Corie Nalder (foreground) and (top, from left) Carson Ernst and Samantha Lopez, Lecturer Thomas Kommer, and students Shaina Suanico and Kyle Bresnahan. Pages 14-16 feature innovative virtual processes and activities that faculty have implemented.

THIS PAGE
A team of Cal Poly students and faculty traveled in 2019 to the small fishing village of Agbokpa on Lake Volta in Ghana to help provide power to the villagers. The team designed and built a water pump and installed solar panels with help from the locals, enabling them to refrigerate their daily catch — their main source of income.

CORRECTION
There was an error that appeared in the fall 2019 Construction Innovator. The Donors’ List that was included on Page 7 in the article “Giving on a Grand Scale” mistakenly listed Shane N. Alexander as Shane A. Nelson. We regret and apologize for the error.
ALTHOUGH THE COVID-19 pandemic has altered life for people and businesses in countless ways, Cal Poly’s Construction Management (CM) Department has managed to keep operations running smoothly, if differently.

The CCCE (California Center for Construction Education) continues to offer “info” sessions, meet-and-greet events and career fairs, albeit virtually. During the virtual info sessions, company representatives talk to students about their companies and the types of projects they work on. The sessions also provide students with information on available internship and job opportunities.

“The Haskell Co. was honored to lead the first CCCE virtual info session,” said Quincy McNames, senior project manager at the company’s Livermore, California, office. “We wanted to be of service to CM Associate Professor Scott Kelting and the CCCE in making the best efforts to limit COVID-19 impacts to the program. I view these info sessions as an excellent opportunity for companies and industry to teach students something, through experience and expertise, that colleges may not be teaching. It could be related to ‘soft skills’ or trends in customer contract expectations or delivery methods.

“The info sessions are related to the uniqueness or niche of a particular company, and this keeps the sessions fresh for the students,” McNames continued. “Of course, these events

As a participant in the CCCE’s Carpenters Apprentice Program, Devin Deiranieh builds real-world skills while working on the BMR Apex project for Rudolph and Sletten Inc. in San Diego.
give companies and students the ability to meet and evaluate each other for ‘fit’ — sometimes years before graduation. At the sessions, companies can collect resumes from interested students in a fantastic program. It’s a win-win!”

The CCCE’s Carpenters Apprentice program remains strong, according to Kelting. “During summer 2020, we had 21 students interning at 15 companies in Northern and Southern California,” he said.

The CM Department thanks all participating companies for providing students with a great Learn by Doing experience: Build Group (Pacific Structures); Cahill Contractors LLC; DPR Construction; Granite Construction Inc.; Hathaway Dinwiddie Construction Co.; Kaiser Permanente; Largo Concrete Inc.; McCarthy Building Companies Inc.; McGuire and Hester; Morley Builders Inc.; Neff Construction; Nibbi Bros. General Contractors; PCL Contractors; Webcor Concrete; and XL Construction.

Devin Deiranieh installs waterstop to keep water from seeping into the structure where the wall and slab meet. Crew members take COVID-19-related precautions, such as wearing masks and distancing themselves at the job site.

THOUGH NOW MEETING virtually twice a year, CMAC (Construction Management Advisory Council) continues its work to increase alumni involvement and strengthen connections with industry practitioners. These connections support student internships, participation in national competitions, alumni mentoring and hands-on experience in the field.

As CMAC continues to grow, so do the learning experiences available to both industry members and construction management students.

“CMAC and the Construction Management Department have accomplished so much together for our students, and our relationship has been even stronger in these unprecedented social challenges,” said Department Head Jeong Woo. “I truly appreciate each of the CMAC members who are dedicated to providing boundless opportunities for our students and make contributions to support the future leaders of the construction industry. We will continue to move forward with one common goal: preparing construction professionals committed to excellence.”
A CRAB-WORTHY ANNIVERSARY
Several alumni gathered on campus to participate in the 2020 Crab Feed in honor of the Cal Poly Wrestling Team’s 40th victory anniversary over defending national champions, the University of Iowa, in December 1979. The participating alumni included Steve Newburn (Construction Engineering, ’81), who now works at Webcor Builders; David Jack (Construction Engineering, ’81), Wrestling Team member and starter (1977–80), who works for Kiewit; Rick Herrero (Construction Engineering, ’81), owner of Herrero Construction Inc.; and Paul A. Spieler (Construction Management, ’81), Wrestling Team member and starter (’81), who works for Spieler Structural Engineers.

USA PRESIDENT PISCITELLO
Tony Piscitello (Construction Management, ’90) has joined USA Construction Management Inc. as president. He has more than three decades of construction management experience, most recently as construction vice president for Mill Creek Residential Trust LLC in Portland, Oregon. Piscitello will oversee USA’s

STANIFORD IS CHIEF OVERSEEER
Marcus Staniford (Construction Management, ’91), current president of CMAC (Construction Management Advisory Council), was recently promoted to chief operating officer of XL Construction. In this role, he oversees all of XL’s project operations, as well as the firm’s team-leading efforts in sustainability and integrated solutions (preconstruction, estimating, construction technology, data analytics and scheduling).
LARKIN’S ROCK-SOLID CLIMB
Kyle T. Larkin (Construction Management, ’96) has been appointed executive vice president and chief operating officer at Granite Construction Inc., one of the largest diversified construction and construction materials companies in the U.S. Larkin is responsible for overseeing the company’s day-to-day operations. He joined Granite in 1996 as an estimator in the company’s Reno, Nevada, location and has held positions of increasing responsibility, including project engineer, project manager, chief estimator and manager of construction. From 2011-13, Larkin served as president of Intermountain Slurry Seal Inc., a wholly owned subsidiary of Granite. In 2014, he was promoted to vice president and Nevada regional manager, and in 2017, he was named senior vice president and California group manager. In 2019, Larkin was named senior vice president and manager of the Construction Materials Operations, which comprises the California Group, the Northwest Group, the Infrastructure Services Group, and all vertically integrated materials facilities. Larkin also holds an MBA from the University of Massachusetts, Amherst.

SALTZGIVER ENJOYS JOURNEY
Shane Saltzgiver (Construction Management, ’09), has had a challenging and rewarding journey since graduating during the global financial crisis of 2009. He first found work as an ice delivery man and electrical project manager before founding VEC, a construction technology firm supporting many large U.S. construction projects. The company recently celebrated a milestone: 100 people and 100 projects in three years. Over the past three years, VEC has become a global force of 115 team members with five offices on three continents. The company mission is to “create the opportunity for people to achieve their unique purpose through our leadership in delivering the AEC (architecture, engineering, construction) technological revolution.” He writes: “I am eternally grateful for the foundation that Cal Poly has given me to pursue my unique purpose so I can share my passion with students and others in our industry. I enjoy every chance I get to stay connected with Cal Poly, most recently through my involvement with CMAC and as co-chair on the Construction Technology in Education Committee. I’ve learned that the reward is in the journey, and that life doesn’t always unfold as you think it will, but if you see every challenge as an opportunity, are willing to work hard even when there is no guaranteed monetary value and the odds are seemingly against you, that life has a beautiful way of delivering something beyond your wildest imagination.”

ALOHA FROM BRIAN POAGE
Brian Poage (Construction Management, ’12) is a proud Cal Poly alumnus and has been an innovator in the construction industry for nearly a decade. He recently was featured in a podcast exploring how contractors can distinguish their businesses while striving to deliver projects during the COVID-19 pandemic. Poage started his career with Turner Construction, working as a field engineer, project engineer and superintendent on projects, including the Sempra Energy Headquarters in San Diego and the Wilshire Grand Tower in Los Angeles. After Turner, he worked for a developer in Los Angeles and at WeWork, both as a project manager. He currently is the construction support manager at Raken, a construction software company focused on improving field workflows by leveraging technology. He and his wife own a small retail shop, The Aloha Bungalow, in their hometown of Redondo Beach, California, and live in Carlsbad. Read more and listen to the podcast at: https://www.forconstructionpros.com/business/podcast/21139227/raken-explores-how-covid-is-turning-prefab-video-conferencing-and-collaboration-into-construction-profit.
CHOI TAKES UP SLAC
John Choi (Construction Management, ’14) has been working for the last five years as a construction manager at the U.S Department of Energy National Science Lab (SLAC National Accelerator Laboratory) at Stanford University. His work has involved managing federally funded X-ray research facilities construction projects. Prior to his current job and right after graduating from Cal Poly, Choi worked as a construction project engineer for Webcor Builders, where he managed the construction of Samsung’s North America headquarters in San Jose, California. The $400 million 1.1-million square-foot 10-story office building includes a data center and a parking structure. The building was completed in late 2015. Choi earned certification as a construction manager from CMAA (Construction Management Association of America) and is a LEED-accredited professional. While working full time at SLAC, he is pursuing an MBA degree from the Indiana University Kelley School of Business.

FULL CIRCLE FOR REED
Matty Reed (Construction Management, ’15) returned to Cal Poly as a lecturer after deciding he wanted to recreate the Advanced BIM (building information modeling) class based on his experience with BIM and VDC (virtual design and construction) in the architecture, engineering and construction industry. The goal was to build a class that reflects the current state of technology on real-world projects and distill the key aspects of BIM into the curriculum using the most advanced tools available. The course is designed so that each new project uses the data created from previous assignments, which is intended to simulate the data-flow on a real project. Students are broken into teams and must learn to use various cloud collaboration tools to complete each assignment successfully, stimulating how BIM teams often function on projects outside of academia. “Integrating technology into education is one of my long-standing passions,” Reed said. “In college I first took CM 421 in one of its earliest iterations, which sparked an interest and helped set me on the path of learning more about the application of technology in construction. Later in college, I taught CM 421 as a student instructor for two years, and my senior project focused on evaluating the current state of technology in the Cal Poly CM curriculum and outlining possible short- and long-term solutions to better integrate technology into the curriculum.” After graduating, Reed founded the Construction Technology in Education Committee (CTEC) and serves as its chairman. “Teaching this class has allowed me to come full circle from when I first took Emerging Trends in 2012.”

EVENTS CALENDAR

2020
DECEMBER 5
Fall Commencement — Virtual
https://commencement.calpoly.edu/fall

2021
JANUARY 26
Semiannual Construction Management Job Fair — Virtual
https://ccce.calpoly.edu/cm-career-fair/

FEBRUARY 8
Associated Schools of Construction Region 8 Competition — Virtual
http://region8.ascweb.org/student-competitions-home/

FEBRUARY 3-6
Associated Schools of Construction Competition Regions 6 and 7 — Virtual
https://www.asc67.org/competition.html

FEBRUARY 9-11
National Association of Home Builders Competition — Virtual
www.buildersshow.com

APRIL TBD
Cal Poly Open House — Virtual
https://orientation.calpoly.edu/

JUNE TBD
Construction Management Advisory Committee (CMAC) Meeting — San Luis Obispo, California (May be moved to virtual forum.)
https://ccce.calpoly.edu/cmac/

JUNE TBD
Construction Management Scholarship and Awards Reception

JUNE TBD
Construction Management Spring Banquet and Golf Tournament

JUNE 12-13
Spring Commencement — Please check for updates at https://commencement.calpoly.edu/guests

DATE TBD
CM 50th Anniversary Celebration Activities — Delayed, but not forgotten! Please check for updates at construction.calpoly.edu.
CONSTRUCTION MANAGEMENT (CM) senior Reagan Milligan was honored as one of this year’s 30 Most Influential Women Under 30 by The Wire, an online publication of Cal Poly’s Women in Business.

The annual list recognizes the most influential, inspiring and determined female leaders on Cal Poly’s campus and celebrates them for the extraordinary things they have accomplished and their impacts on the community.

Milligan was recognized for being an “incredible model of female leadership in construction.” She has been a member of the Women in Construction club (WIC) since her first year on campus and served last year as co-president.

“Reagan’s hard work and dedication to WIC have made a direct impact on the club’s transformation and presence on campus,” said friend Madeline Meyer. “She has continued to inspire the club’s members to be fierce and unapologetic leaders in the industry. Reagan’s senior project was even dedicated to developing a plan to help other universities start their own Women in Construction clubs.”

Milligan spent countless hours after class working with the Construction Management Department’s Project Management Team, which won the Associated Schools of Construction 2020 regional competition.

Since high school, she has spent summers interning and gaining experience in the construction industry. Last summer Milligan worked for Blach Construction as a project engineer and was invited back to work for the company in summer 2020.

“I am so incredibly proud of her, her achievements, and what she has done for WIC and our department overall. I think we can expect nothing but greatness from Reagan,” said construction management Assistant Professor Stacy Kolegraff, club founder and advisor.

This year, The Wire singled out women for their tangible successes as well as the “grace, passion and love” the women put into their work. According to the online article, “These women embody the compassion that it takes to be a true leader and the fearlessness it takes to enact change. These are the women that we will follow in the wake of the many things that plague our world today.”
Even in the midst of a pandemic, the Construction Management (CM) Department kept its festive spirit and held — albeit virtually — its annual Spring Banquet and Awards Ceremony recognizing students for their achievements and dedication.

Approximately 60 students, faculty, staff and donors participated in the event, held June 5 to announce scholarship recipients and senior award winners. In all, 26 students received $83,100 in scholarships.*

Thanks to the generosity of Tim Bolton, vice president of construction with The Hanover Co., Brad Denney, vice president at Webcor Builders, and the California Center for Construction Education, the department was able to send each student a $20 DoorDash gift card since holding the traditional banquet was not possible this year.

A highlight of the evening was honoring third-year CM student Jacob Kerrigan Clark with the inaugural Ken Brickwedel ISA Award, given to the best instructional student assistant of the year. The award recognizes the student who contributes the most as an ISA during the academic year.

The Brickwedel Award is made possible through an endowment established in 2018 in memory of CM alumnus Ken Brickwedel, who passed away in November 2015. The endowment was initiated by a group of CM alumni from the classes of ’87, ’88 and ’89 who created the fund as a way to honor their classmate and colleague. Their effort had raised $35,900 as of Feb. 6, 2020. Additionally, a CMAC Mixer hosted at XL Construction in January 2019 raised $1,400.

Clark was honored for his work in Building Information Modeling, a class he has been teaching since fall 2019, working about 15 hours a week creating the curriculum, updating and grading assignments, and lecturing to multiple sections of BIM. He admits that juggling work and school is challenging.

“Some weeks can be difficult, so planning in advance is important,” he said. “I usually work long days Monday through Thursday to make sure classes and my priorities are squared away.”

The department’s Senior Award Winners were also recognized in the virtual ceremony. Read about them on Pages 17-24.

* This includes the William Cosko and James Hearn Scholarship, which was given in fall 2020.
STUDENTS SET RECORD AT 2020 ASC REGIONS 6 AND 7 COMPETITION

Cal Poly construction management (CM) students brought home 10 awards, including six first-place trophies, in their best showing ever at the 2020 Associated Schools of Construction Regions 6 and 7 Student Competition.

The Cal Poly teams earned more than twice as many awards as their nearest competitor, with six first-place trophies, two second-place awards, one third-place award, and an award for best presentation at the competition, held in early February in Sparks, Nevada.

They competed against 1,540 students on 207 teams from more than 50 U.S. universities. Cal Poly CM students have been competing in the ASC region 6 and 7 competition since its inception in 1988.

“This very special achievement by our students is a testament to the success of Cal Poly’s Learn by Doing methodology,” said CM Department Head Jeong Woo. “It also reflects the high-quality classroom teaching our students receive. No other CM program in the country this year was able to match this team record.”

The student teams spend months preparing for the competition, working under the guidance of faculty coaches and team sponsors, many of whom are Cal Poly alumni.

“It is a valuable learning activity,” Woo said. “The competition provides opportunities for our students to gain practical knowledge by working with their peers on the problems provided by the competition judges.”

The six winning teams include the Commercial, Concrete, Electrical, Heavy-Civil, Preconstruction and Project Management teams. The Mixed-Use Team and Mechanical Team placed second, the Integrated Project Delivery Team placed third, and the Sustainability Team won the Best Presentation Award.

“Taking home first place in the ASC Commercial competition was the highlight of my Cal Poly construction
management career,” said Avery Spector, of the Commercial Team. She and her teammates started preparing for the competition in May 2019.

“As team captain, I found it challenging to keep everyone engaged with such a long practice period,” Spector said. “With four returning team members, we worked collaboratively and with more composure this year during the competition, which is very hard when you’ve been sitting at a computer for 20 hours and are watching your second sunrise in a row together.

“I am so thankful for the supportive and hardworking community that I’ve found in the Cal Poly construction management program,” she continued.

Woo also credits industry partners for maintaining close relationships with the faculty and students and providing financial support to the department.

“Our friends in industry not only provide much-needed funds for a variety of purposes, they also visit campus, meet with students and help our teams succeed,” Woo said.

TWO WINS AND A SECOND-PLACE AT ASC REGION 3

Cal Poly CM students placed in three of four national categories at the 2019 Associated Schools of Construction Region 3 Division Competition held in Downers Grove — a suburb of Chicago.

Cal Poly’s Preconstruction and Project Solutions teams took first place, while the Electrical Team earned second at the competition, held Oct. 16-19.

“This year’s victories were all the more impressive knowing that 19 of the 24 students were competing in Downers Grove for their very first time,” said Professor Greg Starzyk, advisor to the Preconstruction and Concrete Solutions Team since 2012. “This competition was entirely new to them, but they mastered it like experienced veterans,” Starzyk said.

STUDENTS PLACE SECOND AT INTERNATIONAL ASC REGION 8

A team of Cal Poly CM students and one architecture student took second place in the Design Build category at an international construction competition held in Manchester, England, in November 2019.

Under the guidance of advisor and CM Professor Lonny Simonian, the students competed in the Region 8 Associated Schools of Construction Competition. The first day, the team worked all day on a problem statement for a project. The next day, the students presented their project to a panel of judges.

This competition, held at the University of Salford, attracted teams from universities across Britain and in Czechoslovakia, Germany and Ireland, as well as U.S. universities in Alabama, California, Colorado, Nebraska, Oklahoma and Rhode Island.

“This international competition differs from all other ASC competitions,” Simonian said. “This competition connects construction students from all over the world, challenging them to adapt to the differences between European and American construction.”

FIRST-PLACE AT DESIGN BUILD INSTITUTE OF AMERICA COMPETITION

A team of Cal Poly construction management, architectural engineering and architecture students won the 2019 Design Build Institute of America’s Western Pacific Region student competition, held in November 2019 in Las Vegas.

The competition drew 35 student teams representing 27 universities from across the country. Fourth-year CM student Elle Fryer, who is serving as captain of the 2020 team, competed along with four other students and two alternates.

The team was given a packet describing the project — a performing arts center for a university in Kansas — a few months before the competition. As the competition’s phases went on, more details were sent to the team, which had to adapt the building accordingly. The students completed renderings of the project, estimates, value engineering, a schedule and sustainability plan.

This was the first DBIA competition for the team. “We viewed it as a huge learning opportunity, great team bonding, practice for the ASC student competition, and an amazing way to network with industry professionals,” Fryer said. “I ended up getting an internship, which led to a full-time job offer upon graduation because of the people I met at this conference.”

“This very special achievement by our students is a testament to the success of Cal Poly’s Learn by Doing methodology.”

Department Head
Jeong Woo
ASSOCIATED SCHOOLS OF CONSTRUCTION TEAMS

**REGIONS 6 AND 7 (2020)**

**First Place**
**Commercial Team**: Parker Doshier, Tyler Morales, Will Myers, Marco Reza, Avery Spector, Shaina Suanico. Alternates: Skylar Schrank and Sophie Stewart.

**Concrete Solutions Team**: Grace Brekke, Peter Finocchio, Gavin Griffin, Jack Radovan, Tim Smith, Sterling Treloar. Alternates: Thomas Rogers and Jackson Thomas.

**Electrical Team**: Emily Bohannon, Giovanni Dal Canto, Ryan Fiorio, Nicholas Gairaud, Andreas Rasmussen, James Ziebell. Alternates: Miriam Robles and Amanda Schrader.

**Heavy-Civil Team**: Kyler Cruz, Ryan Nielsen, Justin Reno, Tony Roberts, Logan Smith, Sean Stratton. Alternates: Amanda Kaezler and Courtney Martin.

**Preconstruction Team**: Gerald Charette, Kyra Glaus, Garrett Henley, Billy Markham, Cole Murrin, Shay O’Laughlin. Alternates: Amanda Kaesler and Courtney Martin.


**Second Place**
**Mixed-Use Team**: Adam Alvarez, Jacob Clark, Sebastian Froman, Ashley Isla, Matt Langbey, Ryan Proctor. Alternates: Keagan Coyne and Liz Galvez.

**Mechanical Team**: Howard Duong, Ramón Hernández, Kian Kemp, Jordan King, Jeremy Miller, Jonathan Rosete. Alternates: John Camacho and Carson Ernst.

**Third Place**
**Integrated Project Delivery Team**: Josh Brouwer, Robbie Courtney, Karl Heuchert, Evan McCollough, Andres Nasr-Church, Jesus Pena. Alternates: Eric Cederstrom and Michael Knoechel.

**Best Presentation**
**Sustainability Team**: Brad Burfield, Grayson Farnham, Danielle Moody, Jonathan Ott, Gannon Van Sickle, Madeleine Zetterquist. Alternates: Isabella Crafton and Hailey Lancaster.

**REGION 3 (2019)**

**First Place**
**Preconstruction Team**: Billy Markham, Jerry Charette, Kyra Glaus, Garret Henley, Cole Murrin and Shay O’Laughlin.

**Project Solutions Team**: Kirk Arena, Josh De Mattei, Makenna Gitchell, Carly Hudak, Collin Martin and Alex Trujillo.

**Second Place**
**Electrical Team**: Nick Gairaud, Emily Bohannon, Giovanni Dal Canto, Ryan Fiorio, Teddy Powers and James Ziebell.

**REGION 8, INTERNATIONAL (2019)**

**Second Place**
**Team members**: CM majors Meredith Beckman and Andres Nasr-Church, and architecture major Elizabeth Reed.

**DESIGN BUILD INSTITUTE OF AMERICA TEAM**

**DBIA WESTERN PACIFIC REGION (2019)**

**First Place**
**Team members**: Recent graduates Meredith Beckman, Patrick Shami and Connor Layman, CM student Elle Fryer, architectural engineering student John Leone, and architecture student Hannah Kommer.
The COVID-19 pandemic, which has disrupted lives and brought unique, unexpected challenges to nearly every aspect of life around the globe since early 2020, has given Cal Poly — and the Construction Management (CM) Department — new opportunities to improve and succeed.

The decision was made in March to hold winter quarter finals virtually, and an extra week was added to spring break so that faculty could convert their on-campus lectures and labs into virtual experiences. As usual, CM faculty met this unprecedented challenge with aplomb, providing students with innovative, creative ways to learn online. Three of them are profiled here.

“We started redefining the meaning of Learn by Doing,” said Department Head Jeong Woo. “We identified the classes benefiting from being taught remotely by leveraging innovative technologies. There is no doubt that hands-on learning is still the centerpiece of our curriculum in the virtual learning environment. We taught hands-on labs on campus safely by virtue of practicing social distancing and the use of personal protective equipment.”

SCOTT KELTING AND STACY KOLEGRAFF ASSIST FACULTY IN COLLEGEWIDE PIVOT TO VIRTUAL LEARNING

Construction Management Professor Scott Kelting and Assistant Professor Stacy Kolegraff were tapped to assist the College of Architecture and Environmental Design faculty make the switch from in-person teaching to online learning. Both have experience teaching online and have taken classes through Cal Poly’s Center for Teaching Learning (CTLC).

“We had been on Poly Learn and had to switch to Canvas, the university’s new learning management system,” Kelting
said. "Many faculty had never taught 100% online. This was a huge transition; they had to quickly learn best practices and get up to speed with the new learning management software."

Kelting and Kolegraff conducted Zoom trainings and held individual consultations with faculty.

Kolegraff said the experience was a positive one. "It was good to hear what others were doing and to talk about different teaching ideas," she said. "For example, switching from multiple choice exams to more project-based exams allowed students to show they understood the material but reduced the likelihood of plagiarism or cheating," she said.

Although many of the faculty were a bit overwhelmed by the switch, they took the time to understand the available tools and made sure the content was inclusive and accessible for all participants.

Kelting believes some faculty members might decide to go fully online with courses that lend themselves well to it.

"New software and apps are continually being introduced, giving us new ways to do things," he said. "I can continue to improve. I’m taking a training, Effective College Instruction offered by the Association of College and University Educators, to make my courses more accessible to a diverse population. I’m trying to make it more accessible and more interactive."

Kolegraff thinks the pandemic has changed teaching forever. "The normal way of doing things is not going to work," she said. "It’s no longer a set schedule. I had my students text and call me before classes started. They could text, call, email or Zoom with me when they needed. Some students need additional support and ask for it; others don’t ask. You need to really put yourself out there and make sure you’re checking in with them — especially in an asynchronous setting."

**ANDREW KLINE USES VIRTUAL COMPUTER LAB TO AID ONLINE LEARNING**

Lecturer Andrew Richard Kline used Amazon AppStream to teach CM 115: Fundamentals of Construction; CM 280: Building Information Modeling; CM 413: Jobsite Management; and CM 422: Advanced Scheduling.

Amazon AppStream allows students to virtually access large software systems without downloading them. Revit, a modeling software, and P6, a scheduling software, are a few examples.

"A number of construction-related software systems are not compatible with Mac computers," Kline said. "So
students have to run a parallel system that allows Windows to operate on their Mac. Downloading software can be difficult for several reasons: computer memory size and technical difficulties, as well as the number of steps it takes to download. This process alone can take a few days to get a 30-plus, in-student class on the same page.

In the past, Kline has sidestepped these issues by relying on the department's computer lab, which has those software systems installed.

"When we went virtual, the AppStream created a 'virtual computer lab' for students," Kline said. "With the AppStream, they were able to obtain the same amount of information, if not more, than in the typical in-class setting. We did not have to spend a week getting everything installed; we were able to start right away."

Kline thinks the outcome was effective, but said the students were a little hesitant to try something new. "The students were a bit reluctant at first, but they are technically savvy and easily adapted to the new systems," he said.

And the students weren't the only ones gaining new information.

"I learned to make the content more accessible by providing quick 'how-to' videos and tutorials," Kline said. "We implement a lot of software to help our students learn the different components of building and management, but typically the amount of software is difficult to grasp. This new learning platform will definitely be utilized in the future."

STUDENTS STILL GOT TO ‘SWING A HAMMER; DRIVE A NAIL’ IN KOLEGRAFF’S CLASS

"I’d say you nailed it; no pun intended. The build kit was extremely well put together and easy to use while pertaining to the stuff we were going over in class. “The building activities help with being able to work hands-on.” “I think these building projects are great; I wouldn’t change anything!”

Those are just some of the positive remarks from students in Kolegraff’s Residential Construction Management class, for which she created individual small building kits.

"The kit was an idea I had been thinking about to help reinforce different building systems, how they go together, and project sequencing," Kolegraff said. "But, because we actually build a tiny house in class, I never did it."

The switch to online learning, however, spurred Kolegraff to action. "I wanted to maintain the building portion of the class, but obviously, with some adjustments. Research indicates that students consider the hands-on portion of the class the most effective and preferred way of learning, so it was important to keep this as part of the class. Also, since many of the students had moved home, it had to be small enough to ship to them."

Assembling the kits last spring for 18 students turned into a family affair. "My husband helped me cut the rebar, and my kids helped assemble the boxes," Kolegraff said.

One of the difficulties with virtual learning is connecting meaningfully with students.

"Connecting is critical," Kolegraff insists. "You have to be there in more forms than the Zoom environment. You have to provide multiple types of content since students have different learning methods. Overcommunicate. Repeat yourself. And let the students know that you are here for them — even if you’re not in the same room."
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STUDENT ACHIEVEMENT

They Rock!

RECOGNIZING EIGHT EXTRAORDINARY STUDENTS IN THE CLASS OF 2020

MEREDITH BECKMAN
OUTSTANDING LEADERSHIP AWARD

While earning her degree, Seattle resident Meredith Beckman (Construction Management, ’20), wanted to give back to the Construction Management (CM) Department for all it does to give students the tools and opportunities to succeed long beyond their college experience. “I wanted to do my part,” Beckman said. “I served as vice president of the campus chapter of the American Society of Construction Management (ASCM) and as captain of the Design Build Team that competed at the 2020 Associated Schools of Construction Regions 6 and 7 Competition. I’ve done my best to be an effective leader by listening to the needs of fellow students and making executive decisions that positively reflect on the department,” she said.

Her efforts were recognized when she was named the CM Department’s 2020 Outstanding Leadership Award winner, an honor she shared this year with Billy Markham and Avery Spector.

Beckman’s parents encouraged her interest in construction management. “My parents’ background in engineering motivated me to pursue an education in STEM (science, technology, engineering and mathematics),” she said. “After touring a construction site with a female project executive and learning more about her career path, I knew that I wanted to study it. And the CM department ultimately drew me to Cal Poly.”

She had wanted to experience the university’s renowned Learn by Doing methodology, which is, she said, “extremely important in creating a well-rounded education. I feel that this learning style allows students to take the reins on our own education.”

Beckman is looking forward to beginning her job as a project engineer for XL Construction in the Bay Area but admits she will miss aspects of Cal Poly. “I will miss the tight-knit community, as well as having the mountains, ocean and all my favorite people in one place.”

MEREDITH BECKMAN
OUTSTANDING LEADERSHIP AWARD

Meredith Beckman puts Learn by Doing to the test, volunteering with Habitat for Humanity on a residential home for a family of five in Chiang Mai, Thailand.
RYAN BROWN
OUTSTANDING SENIOR AWARD

Ryan Brown (Construction Management, ’20), this year’s Outstanding Senior Award winner, enrolled at Cal Poly as a business major, but switched to construction management (CM) after completing a corporate finance course and “realizing that finance and accounting was not what I wanted to do.”

Brown earned the award for maintaining an outstanding grade point average throughout college and seeking to “make a solid contribution in the classroom.”

I was extremely surprised when I heard I had won the award,” he said. “There are so many smart kids in the CM Department; I had a hard time believing I was the one who got the award. I was also excited because it shows that my hard work didn’t go unnoticed.”

Brown, who hails from Denver, was an avid university lacrosse player who recalls some great times while competing.

“My favorite memory is when we played Cal Berkeley at home this year and beat them in the final 10 seconds of the fourth quarter,” he said. “That victory secured our spot as the No. 1 team in the nation in the Men’s Collegiate Lacrosse Association. I’ll remember that game for the sheer excitement of a close rivalry game with a ton of fans cheering us on.”

Brown came to Cal Poly for a “great education in one of the prettiest places in America. I love San Luis Obispo as a town and Cal Poly for its people and affordable education.”

And for an education rooted in hands-on learning.

“Learn by Doing is important,” Brown said, “because it cements the material in your brain more so than a traditional classroom approach. I learned to think critically and apply the knowledge I learned in the classroom to real-life scenarios.”

Brown accepted a job offer with Vertix Builders as an assistant superintendent in his home state of Colorado.

Ryan Brown works on renovating the Swedish Medical Center Pharmacy in Denver. He credits Learn by Doing for teaching him to think critically and apply classroom lessons to real-world projects.
Although Parker Doshier (Construction Management, ’20) says he’ll miss everything about Cal Poly, he’s excited to begin his new job as a project manager at Landmark Builders Inc. in San Jose, California.

Doshier, who won the department’s 2020 Best Hired Muscle Award, has many fond memories from his undergraduate days.

“ I loved the town of San Luis Obispo and the people that I met in the department,” he said. “ I loved the Learn by Doing motto and the hands-on learning. And the weather is always beautiful.”

The one thing he likely won’t miss, he said, are the long nights and early mornings students often have to contend with.

Doshier, who went to high school in El Dorado Hills near Sacramento, won the Best Hired Muscle award for his work in the Simpson Strong-Tie Lab and for “always being willing to lend a hand whenever a faculty member or a student needed something done.”

He traveled to Belize in December 2019 with five other students to build bleachers and a shade cover at a soccer field — “a communal gathering place for refugees.”

He was on the winning Commercial Team at the 2020 Associated Schools of Construction Region 6 and 7 Competition. For the last two years, he was also part of the logistics team responsible for hauling the supplies and materials, including computers, printers, white boards, and all other supplies to help the teams succeed, to the ASC competition in Sparks, Nevada.

Doshier first considered enrolling in the architecture program, but when he discovered construction management — and the Simpson Strong-Tie Lab — he knew it was a better fit.

“At the end of the day, construction is about working with people and meeting deadlines, and the Learn by Doing model was crucial in making that happen,” he said.
Nick Gairaud (Construction Management, '20) "was ecstatic when I heard I won" the department's 2020 High Voltage Award, said the recent graduate. "It felt great to be recognized by the department for all of my hard work and participation over the past four years."

Helping to rebuild houses for Hurricane Katrina victims inspired Nick Gairaud’s passion for building.

He was honored for his commitment to the Electrical Team, on which he participated in the Associated Schools of Construction (ASC) Competition four times, as well his involvement in competitions sponsored by the National Electrical Contractors Association, including the Green Energy Challenge and the Solar District Cup.

His passion for building was sparked during a trip to New Orleans to help rebuild houses for Hurricane Katrina victims.

“I loved the hands-on aspects of construction,” the Campbell, California, resident said of that high school experience. “I was obsessed with why things were built the way they were, and I was equally impressed by the fact that something I did, with my own hands, could potentially change somebody’s life.”

Enrolling at Cal Poly came naturally since both Gairaud’s parents attended the university, and the family had spent time in San Luis Obispo throughout his childhood.

Gairaud has fond memories of his first competition, the 2018 ASC’s Region 3 Competition held in Downers Grover, near Chicago, which includes four categories that are open to any ASC-affiliated university.

“The best moment was at the awards ceremony,” he said. “We swept the Open Division competitions, winning four first-place awards. It felt great after all our hard work and preparation that we could represent Cal Poly in such a positive way. The best part was when we walked through Chicago’s O’Hare airport holding our giant checks.”

Gairaud will soon start his career as a project engineer at Sprig Electric in San Jose.
BILLY MARKHAM
OUTSTANDING LEADERSHIP AWARD

Experience.
Those are just some of the principles and goals that Billy Markham (Construction Management, ’20) achieved during his time in the Associated Students of Construction Management club.

“I was just there to help facilitate students and industry representatives push these ideals, while also having a great time,” said Markham, a 2020 CM Outstanding Leadership Award winner. “Generations of students have passed through Cal Poly’s Construction Management (CM) Department, and every year, they enter the industry ready to contribute and conquer. I’m glad I got to be part of it.”

The San Jose, California, resident said choosing to major in CM was “just a lucky guess. I have family in construction; however, going into college I didn’t envision going into the industry. It wasn’t until attending my first major classes, meeting fellow CM students, and taking on a few internships that I realized my love for the industry.”

Markham decided to follow his sister to Cal Poly when she was in her third year. “After visiting a few times, I fell in love with the campus and the community,” he said. “My four years only cemented my appreciation for San Luis Obispo.”

And that made saying goodbye to Cal Poly the hardest aspect of Markham’s undergraduate years. “Well, that and my surveying class — that was challenging, too,” he added.

Markham noted that Cal Poly’s Learn by Doing philosophy is its “bread and butter. What better motto for a construction management major?” he asked. “Learn by Doing pushes for hands-on experience and is the main reason Cal Poly CM graduates are so sought after. It’s taught me to get my hands dirty (in a good way).”

Markham will be getting his hands dirty in his new job as project engineer at Swinerton in the Bay Area.
WILL MYERS
SERVICE TO THE DEPARTMENT AWARD

Will Myers (Construction Management, ’20) always knew he would work in construction; it’s in his DNA.

“I grew up working for my grandfather’s residential company in Hermosa Beach, California. Construction has always been what I wanted to do,” he said. “I chose Cal Poly because I believed it could turn me into a young professional with many opportunities and also show me how much more to construction there is than just swinging a hammer.”

He was correct.

“Learn by Doing allows students to grow from success and failure,” Myers said. “Applying my classroom lessons in internships and professional settings helped me to stand out in my career and in life. It taught me to make the most of every opportunity!”

Myers’ work in the Simpson Strong-Tie Lab as a technician during his four years on campus led to his winning the Construction Management’s (CM) 2020 Service to the Department Award.

“I think it became clear to my peers and the faculty that I’m passionate about service,” he said. “I helped students learn hands-on construction skills and prioritized the department’s success. My work in the classroom, on the job and in industry has been a good representation of what Cal Poly CM is all about.”

Learning to balance academics and extracurricular activities was a challenge, Myers admitted. “The department offers students so many amazing opportunities, from global construction service projects to software training. I found myself looking for growth opportunities outside the classroom.”

Now back to his roots, he’s working in residential construction.

“I’m fortunate to have a job, given the pandemic,” he said. “I continue to work hard and learn more about the construction business every day.”

Myers plans to work with a commercial builder in San Diego.
Everett Anthony Roberts (Construction Management, ’20) has plenty of great Cal Poly memories, many of them from serving on the Heavy Civil Team that competed in the American Schools of Construction (ASC) Competition in Sparks, Nevada.

“By far, my best memory is everything leading up to the bus ride home — including the actual 2020 competition,” Roberts recalled. “At that point, I realized how much my peers and I had grown, learned and developed. I was filled with joy and pride.”

Roberts served as captain of the 2020 Heavy Civil Team, which won for the second consecutive year. He volunteered his senior year to help the department plan meetings for the captains of the ASC teams, organized faculty-led workshops, and coordinated material and software needs for the teams.

Those efforts paid off; Roberts was named the winner of the 2020 Service to the Department Award. “I was very surprised and grateful that I won the award. I didn’t know I was being considered for it,” he said.

Growing up Lincoln, California, where his father worked as a construction manager, Roberts has been “surrounded by the construction industry my entire life. I visited Cal Poly as a junior in high school and instantly fell in love with the campus. I had heard it was one of the best schools for construction management in the country, and I knew it was where I wanted to go.”

It’s where Learn by Doing comes to life and where Roberts learned that the theoretical and classroom exercises are “no substitute for real-world and practical applications. I learned more through ‘doing’ than I did through any classroom learning,” he said.

Now working for Turner Construction Co. in Sacramento as a field engineer, Roberts plans to pursue an MBA in a few years.
The biggest challenge Avery Spector (Construction Management, ’20) faced during her undergraduate years was finding a balance between work and leisure.

“It was important to find enough time and energy to complete my studies as well as to do the things that I enjoy, like hiking and surfing,” Spector said.

She seems to have found the time she needed to not just “get by,” she found the time to thrive. She is one of three construction management (CM) seniors to win the 2020 Outstanding Leadership Award.

In addition to working as a student assistant, Spector served on the executive board of the Associated Students of Construction Management. She also served two years on the Commercial Team that competes in the Associated Schools of Construction Regions 6 and 7 Competition. She led the team as captain in 2020, and the team won.

Spector also spearheaded the creation of the annual formal dance for CM students and helped organize it for three years.

She followed her sister, an economics major at the time, to Cal Poly. “I was going to apply to architecture,” Spector said, “but I opted for CM. I like that it deals with people and involves problem-solving and math.”

Cal Poly had everything she was looking for in a college campus: temperate weather, good hiking trails and good waves for surfing. “And the university is of the caliber I was looking for,” she said.

Although Spector looks forward to her job as a project engineer at DPR in San Diego, she’ll miss Cal Poly.

“I’ll miss everything,” she said. “I’m still in denial. It was especially hard because of the COVID-19 situation interrupting classes. I didn’t get a chance to say goodbye or to properly thank the faculty.”
GREGORY STARZYK IS PROMOTED TO FULL PROFESSOR
Construction management (CM) faculty member Greg Starzyk, who has 15 years' experience teaching in higher education, was promoted to full professor, effective fall quarter 2020. He was the only faculty member in the College of Architecture and Environmental Design to earn the designation.

Starzyk worked in the building trades for 10 years, first as a union-sponsored apprentice carpenter and then as a Chicago-area contractor. Later, he gained 23 years of international construction management experience with a Chicago-based company.

The author of two textbooks — “Construction Law: Contracts, Risks and Regulations” and “Construction Law Casebook” — Starzyk developed and teaches CM 334: Construction Law and CM 450: Integrated Project, Design and Program Management. He has also taught in 15 interdisciplinary project studios.

He earned a B.S. degree in civil engineering from the University of Illinois at Urbana-Champaign, a master's in project management from Northwestern University in Evanston, Illinois; and a Juris Doctorate from Taft University.

Starzyk believes that, “If I fill my students' sails with a passion for learning, they will sail off into an uncertain future with ease.”

JOE CLEARY IS NAMED ASC OUTSTANDING EDUCATOR
Assistant Professor Joe Cleary, a relative newcomer to the Construction Management (CM) Department faculty, received a 2020 ASC (Associated Schools of Construction) Regional Outstanding Educator Award for contributions to construction education.

Each year, ASC awards are given to deserving faculty members who have been nominated by their colleagues. Cleary was to have been recognized at the 56th ASC International Conference in April 2020, but because of the COVID-19 pandemic, the conference was postponed, then canceled.

The Regional Outstanding Educator Award honors faculty members who have taught a minimum of seven years at an ASC member school. It recognizes contributions to construction education, excellence in teaching, service to the ASC and dedication to the construction profession.

“IT’S AN HONOR TO BE NAMED, AND BEING SELECTED IS A HUMBLING RECOGNITION FROM AN OUTSTANDING ORGANIZATION OF HARDWORKING, DEDICATED AND KNOWLEDGEABLE FACULTY THAT I’M PRIVILEGED TO CALL MY COLLEAGUES,” said Cleary, who came to Cal Poly as a lecturer two years ago from Illinois State University. He was selected for an assistant professor position last year.

LECTURER ANDREW KLINE RETURNS TO THE JOB SITE FOR ENRICHMENT
Alumnus and Construction Management (CM) Department Lecturer Andrew Kline (Construction Management, '11) wanted to expand his experience in real-world construction activities and share them with his students, so he participated in the Associated General Contractors of America (AGC)/Cal Poly/Largo Concrete program.

The program, sponsored by the Robert L. Bowen Industry Residency, aims to enrich the classroom experience through summer residencies with AGC-member companies. The faculty must identify the specific skills and knowledge to be gained during the residency, work with a firm that will provide the requested experience, and obtain support from the faculty member's institution.

“I think participating in this program is an investment in the future of the construction industry,” Kline said. “Sharing this recent professional experience enables me to be more effective in the classroom.”

Kline worked on Cal Poly’s new William and Linda Frost Center for Research and Innovation during summer 2020, gaining professional experience without taking time away from campus and family.

“It was an amazing experience to be onsite with Largo’s team, learning from the superintendents and management team on this very complex project. I was able to learn from an industry leader while expanding my understanding of current industry methods, standards and quality. I look forward to bringing all I learned into the classroom to benefit students.”

THE SMITH FAMILY IS ALL SMILES
California Center for Construction Education Program Manager Rachell Smith and her husband, Shea Smith, welcomed the birth of their daughter, Rae Cierra Smith, in March 2020. Rae is the first grandchild of Construction Management alumnus Stephen Newburn ('81).
DEAN'S MESSAGE

Cal Poly Proud

STUDENTS, FACULTY AND ALUMNI SOAR ABOVE THE CHALLENGES OF 2020

As we all make adjustments to living our lives meaningfully and doing our best work within the context of COVID-19, I hope that you are well and safe.

In the College of Architecture and Environmental Design (CAED) we continue to celebrate our students’ achievements and are especially proud of their stellar, record-breaking performance in the 2020 Associated Schools of Construction student competitions. We also celebrate our dedicated faculty as they reinvent Learn by Doing by distance and prepare us to return to campus equipped with new perspectives and capabilities.

I am especially grateful for the impactful leadership provided by the Construction Management Advisory Council and for everything our alumni and supporters do to pave the way for our graduates as they embark on fulfilling careers in the construction industry.

Now, more than ever, our students need your advice and perspective. I invite you to join the CAED community and connect with our students on the Cal Poly Career Connections networking and mentoring platform. You can find us at: https://careerconnections.calpoly.edu/hub/calpoly/group/caed-community/about.

Best regards,

CHRISTINE THEODOROPOULOS | AIA, PE | DEAN COLLEGE OF ARCHITECTURE AND ENVIRONMENTAL DESIGN

“...We continue to celebrate our students’ achievements and are especially proud of their stellar, record-breaking performance in the 2020 Associated Schools of Construction student competitions.”
IT’S A WONDERFUL FEELING — celebrating years of academic and personal achievement as you claim your degree and the dream job that awaits.

Your choice to enroll in Cal Poly’s construction management (CM) program was brilliant, and now your Learn by Doing education is paying off. What could be more satisfying than realizing your professional hopes and dreams? For many Cal Poly alumni, giving back is the next step.

Your monetary gift will help provide the latest equipment, support hands-on labs and offset the cost of student travel to job sites. It will ensure that current and future students continue to learn and grow from the best CM program in the nation.

To make a donation, simply visit http://construction.calpoly.edu and click on the “Support CM” box. Questions? Contact Department Head Jeong Han Woo at 805-756-5493 or jwoo21@calpoly.edu.

Thanks for your support!

Alexis Canas (Construction Management, ’20) is one of six Great Grads of 2020 chosen from across the university.
Students in the Construction Management Department’s Construction Surveying class, taught by lecturer Bryan Knakiewicz and lab instructors Jason Hailer and David VanMuyden, practice social distancing while observing the flyover of an unmanned aircraft system (UAS). The maneuver, courtesy of Hensel Phelps, was conducted to collect photogrammetry data for a surveying exercise.