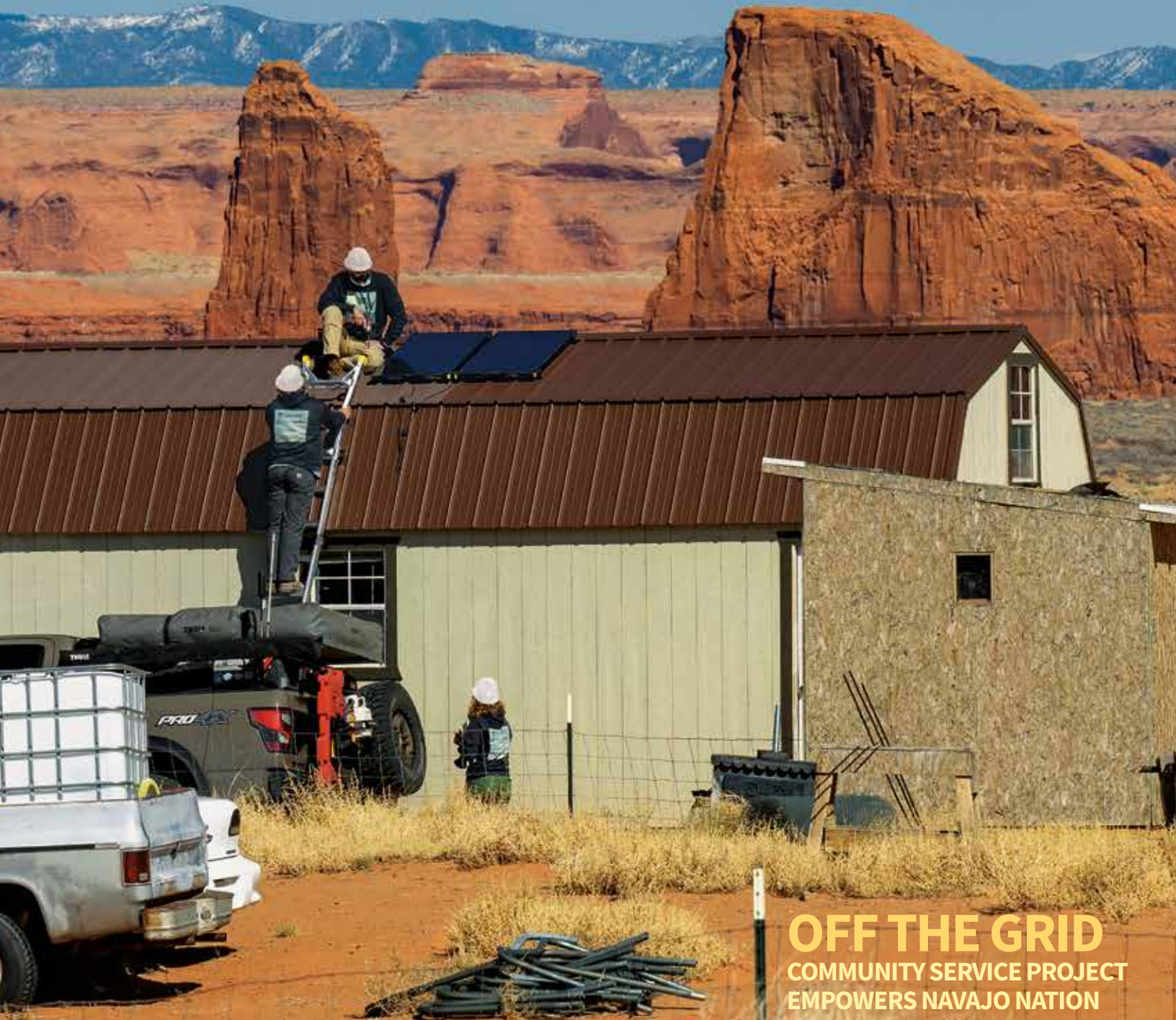


CONSTRUCTION

INNOVATOR

CONSTRUCTION MANAGEMENT DEPARTMENT | COLLEGE OF ARCHITECTURE AND ENVIRONMENTAL DESIGN | WINTER 2023



OFF THE GRID
COMMUNITY SERVICE PROJECT
EMPOWERS NAVAJO NATION



CAL POLY



CM Department Head Jeong Woo toasts with guests at the department's 50th anniversary celebration in spring 2022.

—

“The CM Department will continue investing its resources to create innovative curricula, provide students with unparalleled opportunities and support faculty members who cultivate talents and inspire innovations.”

—

Making A Difference

Students' Learn by Doing skills benefit real-world projects, thanks to your support

I feel blessed to have been part of many unforgettable moments and historic achievements in the Construction Management Department in 2022. Some of them will last forever, and they will motivate me every day.

This issue of Construction Innovator features inspiring stories of how our students put what they learn into real-world practice. The cover story highlights Cal Poly's service project, "Skip the Grid," in the Navajo Nation. I am so proud of our students for what they did to resolve energy and food inequality in the Navajo communities. You will also find a story about our recent facility upgrades led by CM students who devoted countless hours to delivering these projects.

We recognize the value of diversity and strive to create Cal Poly as a more inclusive and diverse place. You will learn about our commitment to diversity as you read a story about VEST Hackathon and Girls Build Academy.

You will also find stories about student achievements that were made possible by your financial support. On behalf of the students and faculty of the Construction Management Department, thank you for supporting construction education at Cal Poly. With your continued support, we are able to keep funding critical initiatives that directly benefit our students. The CM Department will continue investing its resources to create innovative curricula, provide students with unparalleled opportunities and support faculty members who cultivate talents and inspire innovations. We are proud of our reputation for educating the next generation in the built environment. I believe your support has been central to this success.

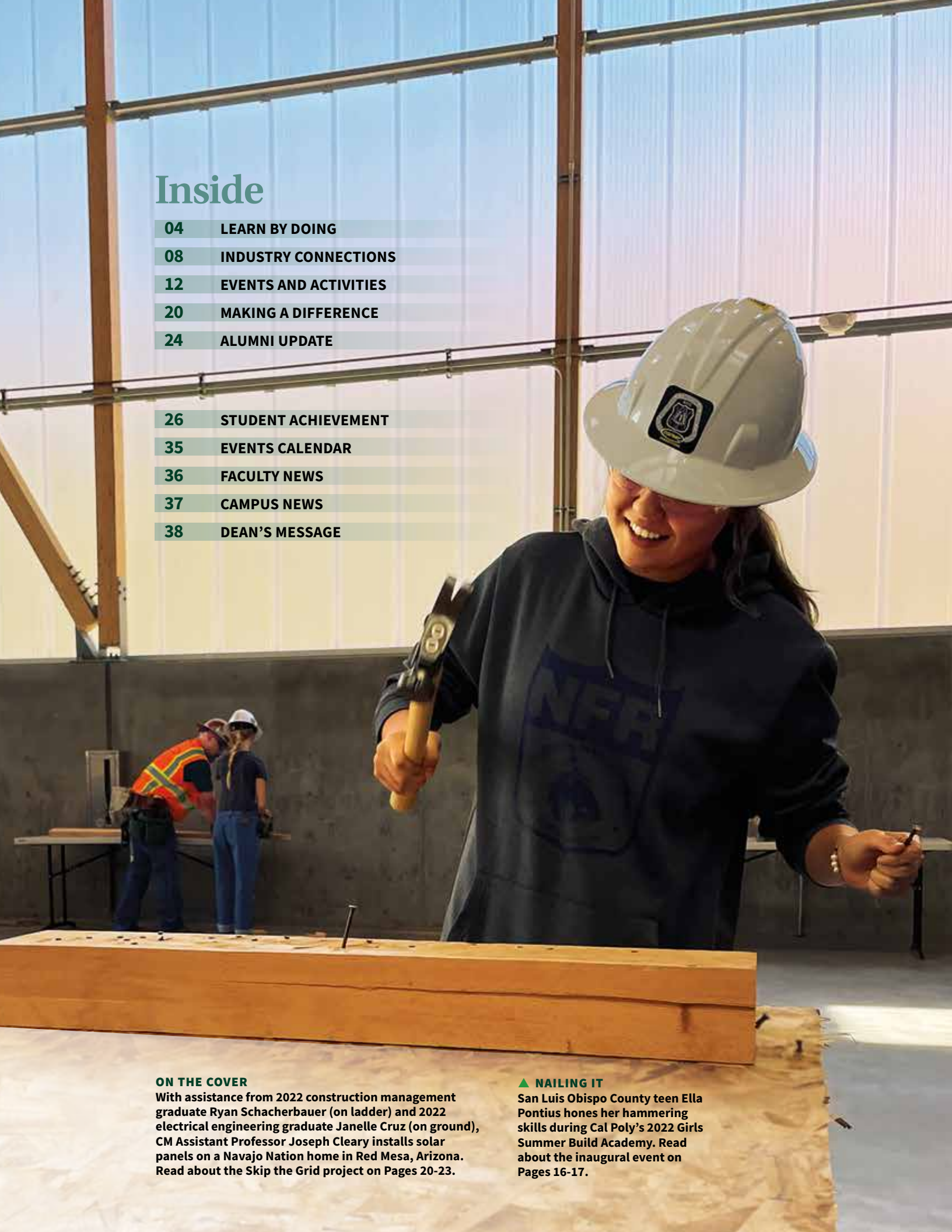
I hope you enjoy this year's issue, and if you would like to share your thoughts, please get in touch with me directly at jwoo21@calpoly.edu.

JEONG WOO | DEPARTMENT HEAD

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ON THE COVER

With assistance from 2022 construction management graduate Ryan Schacherbauer (on ladder) and 2022 electrical engineering graduate Janelle Cruz (on ground), CM Assistant Professor Joseph Cleary installs solar panels on a Navajo Nation home in Red Mesa, Arizona. Read about the Skip the Grid project on Pages 20-23.

▲ NAILING IT

San Luis Obispo County teen Ella Pontius hones her hammering skills during Cal Poly's 2022 Girls Summer Build Academy. Read about the inaugural event on Pages 16-17.



Enhancing Learning Opportunities

Students join with Cal Poly, industry partners to upgrade campus facilities

With construction management (CM) students leading the charge, the CM Department last year completed a few facility upgrades and enhancements. A total remodel converted a former computer lab into the De Mattei Student Lounge, designed by Dara Lin ('22), and a new roughly 4,000-square-foot concrete slab was designed and completed by Nathan Horst ('22) and Steven Zheng ('22).

DE MATTEI STUDENT LOUNGE AND COLLABORATION HUB

Recent construction management graduate Dara Lin ('22) led the transformation of a former computer lab in the Construction Innovations Center into the new De Mattie Student Lounge and Collaboration Hub, giving students much-needed study space and a collaboration area.

Lin worked with CM Department Head Jeong Woo, staff in the university's Facilities Management and Development department and industry partner Mark De Mattei to complete the project.

"This was a project close to my heart because I spent a lot of time in there," Lin said. "It was my refuge when other classroom spaces became too stressful, and so I wanted to create that same kind of comfortable, focused space for future students."

The department has undergone explosive growth over the last decade, more than doubling

▲ Finding refuge in a department computer lab during busy study times inspired recent CM graduate Dara Lin to develop plans to transform the lab into the De Mattei Student Lounge and Collaboration Hub.



◀ Lin designed areas for students to study and collaborate comfortably.

▼ Left: Dara Lin ('22).

▼ A generous donation by Mark De Mattei (shown with son, Josh, '21) funded the project.



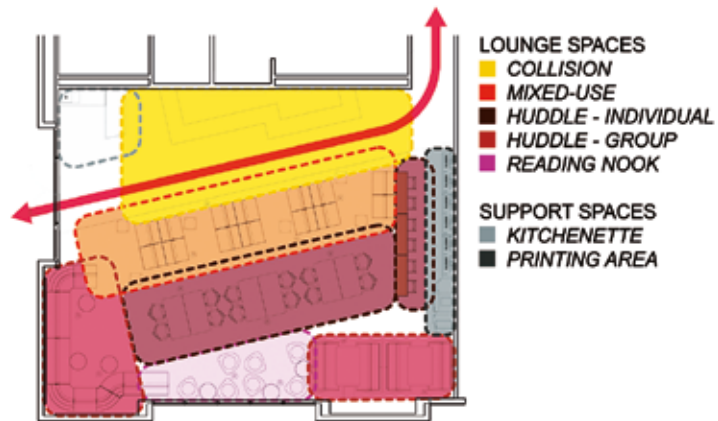
its student enrollment from fewer than 300 students to more than 600.

“All the department’s rooms were being used for classes during the day,” Woo said. “Students didn’t have a place to study; even the computer lab had to be used for classes. So, we created a lounge where students can do homework and work on group projects.”

The space features custom millwork bleacher seating, lounge seating, desk-height and standing-height workspaces, individual and group “huddle” spaces, a reading nook, a kitchenette and an area with printers and copiers.

“During this project, I got to work with a client, give design presentations, modify the design and create drawings accordingly, assist with product selection and help with project management,” Lin said. “Now, five weeks into my full-time position, I understand how valuable this experience was. I’ve had to do every one of these things on the job.”

The remodeled space was funded by a generous donation from De Mattei Construction and owner Mark De Mattei, whose son, Josh, graduated from the CM program in 2021.



“When Josh’s family came for his graduation, they saw that we had some classrooms that are sponsored by industry partners,” Woo explained. “Mark noticed that not many residential construction companies were among those sponsors. He wanted to promote residential construction as a career path, and so he donated money for the new student lounge. He’s a true believer of collaboration and teamwork and liked the idea of creating a space for collaboration.”

CONTINUED ON PAGE 6

▲ Lin’s zoning diagram defines how the space will be divided for the students’ use.

CONCRETE SLAB CONTINUED FROM PAGE 5

Nathan Horst and Steven Zheng signed on to the project in early summer 2021 after meeting with the project's key stakeholders and agreeing to a completion date that coincided with the start of the academic year in September.

Completing the slab, constructed with about 100 cubic yards of concrete and located around the exterior perimeter of the College of Architecture and Environmental (CAED) Support Shop, was a model Learn by Doing exercise.

"The design phase was not understood to have been within our initial scope of work," Horst explained, "but this ended up being a major Learn by Doing experience. We performed accurate onsite survey, calculated slopes and created Revit files for the plans and details."

The initial design, which included a trench drain to ensure proper drainage, had to be scrapped. "It was determined that the trench drain system would have to be custom made and formed up from the inside," Horst said. "We agreed that two catch basins would be a viable solution." They also had to revise the finish floor and flow line elevations.

The project was completely supported by donations of heavy machinery, rebar, storm drainpipe, catch basins, concrete and electrical conduit. And a great deal of student work.

The CM Department owes a debt of gratitude to CalPortland, the primary donor, as well as to United Rentals and Sunbelt for equipment, Midstate Concrete for drain inlet supplies and California Electric for electrical supplies. Ron Jordan Concrete Pumping also assisted with concrete pours.

"There were many endless days during which Nathan and I would work our morning internships, then work on our senior project from 3 to 9 p.m.," Zheng said. "The most difficult part, like most construction projects, was ensuring the project met the completion date."

The project was deemed a success and a great learning experience. "This project gave us a lot of knowledge about the construction industry, from design to closeout," Zheng said. "Through all of the challenges we faced, this project exemplified the true nature of Learn by Doing with lessons learned that will be remembered in future projects." ■



▲ Steven Zheng (foreground, left) and Nathan Horst renovated a concrete slab around the CAED's Support Shop. A CalPortland crew (background) was among the industry partners who donated materials and services.



- ▲ Left: Nathan Horst operates a compactor to reduce air pockets and moisture from the ground and level it.
- ▲ The team's preparation laid the groundwork for the underlying rebar.
- ◀ A CalPortland crew applies a smooth trowel finish to the concrete.

Activities That Enrich and Engage

CMAC, CCCE continue to expand educational and social offerings

The continued precautions our campus community has taken have allowed the Construction Management (CM) Department and its programs to gear back up to pre-pandemic levels, holding in-person gatherings, daily recruitment sessions and the largest career fairs, while also adding a new certification program.

CERTIFICATE IN INDUSTRIALIZED CONSTRUCTION

Contractors, engineers, architects and others looking to modernize construction and reduce costs could benefit from Cal Poly's new certification program in industrial construction.

▼ A certification program in industrial construction attracts professionals wanting to modernize construction and reduce costs without compromising quality and safety.

The CM Department and the California Center for Construction Education (CCCE) have partnered with the Project Production Institute to offer education and certification in industrial construction with a focus on offsite assembly and fabrication, including supply chain optimization and design. The program teaches participants how to more effectively control schedules without compromising quality and safety.

Industrial construction involves moving work offsite and adopting manufacturing-type production methods, as well as productization, described as altering a process or service to make it suitable for the public.

Industrialized construction requires more detailed and better-quality engineering, the ability to effectively manage supply chains, and knowledge and application of production management. For more detailed information, go to: <https://ccce.calpoly.edu/industrialized-construction-certificate-program/>.

MIXIN' IT UP

CMAC (Construction Management Advisory Council) continues its mission to make Cal Poly's construction management program one of the best — if not the best — in the country.

An all-hands CMAC meeting was held May 13, which coincided with the CM Department's 50th anniversary gala celebration. Attendees were able to celebrate the milestone with alumni, faculty, staff and friends.

CMAC held five in-person mixers in July and August throughout the state, spreading goodwill and camaraderie while promoting the CM Department to industry partners and supporters.

Two of the CMAC mixers were combined with Carpenters Apprentice Program celebrations, including one hosted by McGuire and Hester in partnership with NorCal Local 217 in Northern California and a Los Angeles-area mixer that marked the first Southern California Cal Poly Carpenters





▲ A Los Angeles-area mixer marked the first Southern California Cal Poly Carpenters Apprenticeship celebration with SoCal Local 714. The event was hosted by Largo Concrete Inc. at San Antonio Winery.

Apprenticeship celebration with SoCal Local 714. The Los Angeles event, held at San Antonio Winery and hosted by Largo Concrete Inc., attracted almost 70 people in celebration of the program's success.

"I think everyone had a wonderful time catching up with old friends and making new ones," said Charlie Mallers, Business Development/Client Management at Largo Concrete Inc., host of the event. "It was nice to have a mix of people, including general contractors that are CMAC members and ones that now want to join."

CM Department Head Jeong Woo added, "The mixer was a blast! It was the biggest we have hosted so far."

CARPENTERS APPRENTICE PROGRAM

This year, after a two-year pause, students who participated in the Carpenters Apprentice Program were able to attend celebration events and go on a field trip to the Carpenters International Training Center (ITC) in Las Vegas. The world-class facility was designed to develop and improve members' skills. It offers leadership training programs on its 1.2-million-square-foot campus, which spans more than 27 acres.

2022 CARPENTERS APPRENTICESHIP PROGRAM PARTICIPANTS

Anning-Johnson
Luke Sutherland

Blach Construction
James Colnett

Build Group (Pacific Structures)
Byron Calderon Cifuentes
Alejandro Gonzalez

Cahill Contractors LLC
Ben Carter
Mark Thielmann

DPR Construction Inc.
Nick Mayton
Aidan Toole

Granite Construction Inc
Aracely Berber

Hathaway Dinwiddie Construction Co.
Jack Byrne
Max Clement
Patrick FitzGibbon

Largo Concrete Inc. Los Angeles
Ricardo Camacho
David Economos

Largo Concrete Inc. San Diego
Russell Sprague

McCarthy
Robert Byrne

McGuire and Hester
Luke Vanderkooij

Overaa
Griffin Finnane

Swinerton Builders
Sergio Manriquez
Connor Paulbitski

Thompson Builders
Liam Dolan

Truebeck
Nick Zenner

Webcor Concrete
Mateo O'Sullivan



▲ CCCE Program Manager Rachell Smith with daughters Rae Cierra (left) and Isla Shea.

This year a record 23 students and 15 different companies participated in the summer internship Carpenters Apprentice Program. (See list, center.)

BABY ON BOARD

CCCE Program Manager Rachell Smith continues to grow opportunities for students, alumni and industry practitioners while also staying busy with her growing family. Smith and her husband, Shea, welcomed their second daughter, Isla Shea Smith, on Dec. 8, 2021. Isla joins big sister, Rae Cierra Smith, who will turn 3 in March.

For details about CCCE and CMAC activities, visit: <https://ccce.calpoly.edu/>. ■

Constructive Off-Campus Mingling

Construction management students attend their first American General Contractors Convention

“The AGC trip was an amazing opportunity to not only meet other students within the Construction Management Department from all different grades, but also to network with industry partners from all over,” said Reagan Tonda, one of 15 Cal Poly construction management students to attend the American General Contractors of California convention held in November 2021 in Palm Springs, California.

Accompanied by Department Head Jeong Woo and Associate Professor Paul Weber, the students attended educational seminars and met and mingled with construction professionals, all while enhancing their education in construction management.

“AGC is the largest professional organization that defines, teaches and promotes best practices in the construction industry,” Woo said. “AGC of California’s Annual Construct Conference brings together all levels of the organization’s membership, who

▼ Construction management students — many of them members of Cal Poly’s AGC student chapter — attended the 2021 AGC Convention in Palm Springs.

CONVENTION ATTENDEES

Cal Poly CM students (listed in alphabetical order) who attended include: Jaqueline Badal, Sam Balestreri, Tommy Collins (chapter event planner), Kyle Honsik, Lane Lagomarsino (chapter secretary), Daniel Lombardi, Luke Martin (chapter industry outreach representative), Joe Miller (chapter vice president), Isabella Peterson, Jack Ritchie, Corey Smith, Ryan Strain, Payton Strout (chapter president), Scott Thielmann and Reagan Tonda.

hear from exciting keynote speakers, attend engaging breakouts and enjoy fun networking opportunities.”

Several students also commented about their experience.

“The AGC conference was a perfect example of how important it is to get learning experiences outside of the classroom,” Tonda said. “We were able to attend different sessions on a wide range of topics, including technology advancements in construction and how to build a personal brand.”

Senior Joe Miller, president of Cal Poly’s student chapter of AGC, said “The AGC Construct Conference offers a unique atmosphere for students to engage in conversations and develop relationships with industry members. Attending the seminars offered valuable knowledge and unique perspectives from talented individuals.”

Jack Ritchie, a sophomore, added, “This conference was an incredible networking experience for us students because of the vast amount of companies that are affiliated with the association. By attending this conference, we had the opportunity to expand our knowledge of the construction industry on multiple fronts. We met with current executives and high-level employees to learn exactly what companies are looking for in students, and we got to share what we students look for in companies.

“In addition,” Ritchie continued, “we got to attend many breakout sessions to learn about the future of the construction industry, emerging construction technology and how to be influential leaders. This helped me as a young student learn valuable information for my future.” ■





▲ 2021 Career Fair statistics report the benefits for both students and recruiters.

They're Back

Department's Career Fairs Return to In-Person Events

More than 100 companies and 600 Cal Poly students attended — in person — the Construction Management Department's fall 2021 and winter 2022 career fairs, hosted by the California Center for Construction Education (CCCE) at the Alex Madonna Expo Center in San Luis Obispo.

The events were the first in-person career fairs after a two-year hiatus. "The benefits of having in-person recruitment opportunities were obvious to everyone present," said CCCE Program Manager Rachell Smith. "Students showed great enthusiasm, and their feedback after the career fair was incredibly positive."

The recruiting companies were also pleased, reporting high levels of satisfaction with student preparation, networking connections and overall outcome. "These career fairs exceeded expectations, resulting in both the students and recruiters feeling successful in their endeavors," Smith said.

Due to high demand and popularity, the CCCE hosted the fall 2022 career fair at Alex Madonna Expo Center again, this time over the course of two-days, Oct. 26-27. The fair was split into industry sectors to provide more intimate conversations between recruiters and interested students. ■



Roofing Challenge

Students make the finals in national Roofing Alliance competition

A team of Cal Poly construction management students came in third place in the Construction Management Student Competition sponsored by the Roofing Alliance, the foundation of the National Roofing Contractors Association.

Cal Poly's team was one of seven to enter the competition and one of five finalist teams chosen to travel to New Orleans to give oral presentations. The students were charged with completing a roofing project for a five-level 18,000-square-foot hotel on Bourbon Street in New Orleans.

CM Department Head Jeong Woo said the competition provided a valuable

▲ The Cal Poly team — invited to New Orleans to give an oral presentation — included (from left): Steven Zheng, Chance Giessinger, Claire Peters, Nathan Horst and Nick Reeves.

learning experience for the students. "This was a meaningful event for us to learn more about roofing construction and diversify student opportunities in the roofing industry," he said.

Cal Poly's team included co-captains Nathan Horst and Steven Zheng, as well as members Claire Peters and Nick Reeves and alternate Chance Giessinger. ■



Celebrating 50 YEARS

Department marks a milestone with banquet, mixers, golf and more

The Construction Management (CM) Department welcomed approximately 250 alumni, students, faculty, staff, family and friends to its 50th anniversary gala celebration, held May 13-14, 2022.

To commemorate the milestone, the department last fall kicked off a yearlong series of programs and activities, including class reunions, alumni mixers and the 50th anniversary campaign.

The culminating celebration in May included a banquet that attracted more than 200 people, a golf game and winery tour. A ceremony and alumni panel

▲ More than 200 guests attended the banquet, among them (from left) Conner Averit, Gavin Griffin ('20), Luke Edward, Mehul Neurekar and Elaina Ryan.

discussion were held to honor alumni and faculty who have impacted the CM Department over the years.

The department also invited the former students who comprised the first competition team to win the inaugural Associated Schools of Construction (ASC) student competition in 1988. They included Jon Foad, president of Rudolph & Sletten; Dave Eichten, president of Pankow;

Alan Laurlund, senior vice president of XL Construction; Keith Parsons, now retired from his post as former executive vice president of Whiting-Turner; and Jim Rodger, former head of the CM Department. Team member Dave Rogers wasn't present, as he could not be located.

"These stellar alumni started building a reputation for excellence that continues to this day," CM Department Head Jeong Woo said.

Those alumni, along with the team captains from the 2022 competition,

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FIRST PLACE TEAM
1st Annual CM Competition
January 1988



Jim Barland, coach Jim Rodger
Dave Rogers, Keith Parsons, Jon Foad, Alan Laurlund, Dave Eichten



IN ALL CAPS, 12-18



▲ Team members who won the inaugural ASC student competition in 1988 participated in a panel discussion with 2022 graduates and ASC team captains. From left: Dave Eichten, Jon Foad, Alan Laurlund, Keith Parsons and former CM Department Head Jim Rodger, with Carter Melick, Jane Runte, Amanda Schrader and Sophie Harrington.

◀ CM Department Head Jeong Woo welcomes his predecessors Al Hauck and Jim Rodger, and Joannie Brown.



▲ June 2022 graduates and former team captains (from left) Carter Melick, Jane Runte, Amanda Schrader and Sophie Harrington joined the 1988 winning team onstage for a panel discussion.
▶ Ryan Brown ('11) enjoys the celebration.

CONTINUED FROM PAGE 12

held a panel discussion during which the panelists discussed their most memorable times at Cal Poly, how they prepared for career success and the greatest lessons they learned.

Participating team captains — all June 2022 graduates — were Jane Runte, Sophie Harrington, Amanda Schrader and Carter Melick.

Four projects completed by four different student groups were presented as a way to showcase the anniversary theme, Celebrating Student Success. The projects and the students involved with them included: Skip the Grid with Sydney Sitton and Heather Sailor (see Page 20); De Mattei Student Lounge by Dara Lin (see Page 4); College of Architecture and Environmental Design Support Lab Concrete Slab by Nathan Horst and Steven Zheng (see Page 6); and Girls Build Summer Academy with Sophie Stewart (see Page 17).



“These students were selected not only because of what they accomplished but because of how they worked with others,” Woo said. “They expanded Learn by Doing to ‘Learn by Doing together.’ Their passion and energy made a huge difference in their projects.”

The 50th anniversary celebration had been delayed two years because of the COVID-19 pandemic, but that didn’t dampen attendees’ enthusiasm.

“Our anniversary celebration was a great opportunity to honor our history, celebrate our present and envision our future,” Woo said. ■



▲ Top: Katie Love ('19) catches up with the other happy hour guests.
▲ Casey Olsen ('04) and Kristin Pollard chat with CAED Dean Christine Theodoropoulos and Professor Emeritus Matt Wall.
▶ Sandra Rodger (left) and Jennifer Montoya visit.
▶ Ryan DelaRiva ('08) and Erich Klemme ('12) share a laugh.



◀ Harrison Woods (*19) mingles at the gala.

▼ Attendees look for familiar faces in the display of historic class photos dating from 1974 to the present.





- ▲ Top: Academy participant Brooklyn Clemens hones her sawing skills.
- ▲ Lindsey Hatcher, executive director of the Home Builders Association of the Central Coast, has Sonora Clemens' attention as she wires a lamp.
- ▶ Academy participants tackle a framing project with assistance from Alex Perez, a volunteer from the Southwest Regional Council Of Carpenters. From left: Ella Pontius (foreground), Molly Berkeland and Sonora Clemens.

INSPIRING A CAREER PATH

Stacy Kolegraff leads activities designed to attract, support women in construction

“So amazing!” “Totally awesome!” Those are just a couple comments shared by students who attended the 2022 Girls Build Summer Academy, led by construction management Assistant Professor Stacy Kolegraff, a longtime champion of women in construction and the trades. In addition to the academy, Kolegraff organized the 2022 VEST Hackathon.



GIRLS BUILD SUMMER ACADEMY

Nine girls from throughout San Luis Obispo County attended the inaugural camp, held on campus for girls entering ninth through 12th grades and recent high school graduates. The camp was developed by Cal Poly students and faculty in collaboration with the local Home Builders Association of the Central Coast and its Professional Women in Building chapter.

“We packed a lot into those five days,” Kolegraff said. “Each day was split into different activities. Mornings featured a discussion about different career opportunities. Then the girls participated in hands-on activities, learning to use a chop saw, table saw and skill saw. They framed a wall, created forms and lamps, soldered copper pipe and created copper roses and poppies.

“By the end, they all had personal

protective equipment, a tool bag and multiple tools, including hammers, tape measures, screwdrivers, utility blades and pencils — all at no cost.”

Kolegraff said the highlight of the week was watching the girls’ confidence grow. “Several of the girls had some building experience or were very artistic, and they became leaders or supporters of the others. By Thursday, they were confident using all the tools, had feelings of accomplishment and realized that they could do everything that was asked of them.”

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◀ Assistant Professor Stacy Kolegraff.

▼ Campers and volunteer helpers (from left): Southwest Regional Council of Carpenters members Jonathan Duran and Alex Perez; campers Molly Berkeland, Ella Pontius, Sonora Clemens, Kasey Contreras, Maile Sipes, Madeline Blasingame, Evie Spence Kasperovich and Scarlett Spence-Gravell; and Brookfield Properties’ Jennifer Mulligan.



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VEST (VERIFYING EVERYONE’S SAFETY TOGETHER) HACKATHON

The two-day event, held on campus in April 2022, was created in response to a student’s senior project that purports an overwhelming number of construction workers — mostly women — do not have proper-fitting safety vests, leading to unsafe situations and a loss of confidence on the job site.

“The goal was to develop safety gear that acknowledges, is designed for and provides safety for a variety of body types,” Kolegraff said.

- ▼ Each team kept a journal, noting project details.
- ▼ On day one, Hackathon participants assessed the current safety vest design and teamed up to create a better one.

“The event encouraged industry members to work alongside students to develop better, safer, functional and appropriate safety vests.”

Kolegraff worked with Kylie Parrotta, assistant professor in the Social Sciences Department, to organize the event, which attracted 45 participants, including 25 industry members, some faculty and students. In addition, CM seniors Cole Bernabei, Oliver Leograndis, Amanda Schrader and Sophie Stewart helped organize and run the event as their senior project.

The first day, the participants discussed the problem and inspiration behind the event, and teams were created.

On day two, “We cut up existing safety vests, made changes, sewed new designs,” Kolegraff said. “At the end of the day, we judged the vests and came up with winners in three categories: Best Features, Most Creative Design and Crowd Favorite.”

According to Kolegraff, the highlight of the event was “getting together with such a diverse group of people to solve a problem. There was a great collaboration between all the participants and great energy in the room.” ■



THANK YOU, INDUSTRY SUPPORTERS

The VEST Hackathon was funded entirely by industry supporters PCL Construction, Radians, Webcor, SC Builders, Whiting-Turner, Western Allied Mechanical, Brookfield Properties, Cahill Contractors and Millender White, as well as individual support from three employees of Gilbane Building Co. and one DeWalt employee.

The Girls Build Summer Academy was partially funded by a \$100,000 HELP grant from the National Housing Endowment under two separate initiatives: supporting and encouraging more women to join the industry and partnering with local high schools to help train skilled workers.

In addition, many local firms and CMAC members served as guest speakers or volunteers at the summer academy, including Sprig Electric, Rosendin Electric, Precision Services Inc., Williams Homes, SESLOC, Kitchell, Brookfield Properties, Southwest Regional Council of Carpenters and Cumming Group.



◀ Team members — all from industry — get to work, using the materials provided to tackle the challenge. From left: Kristin Pedersen, Hillary Mitchell, Chantrel Triay and Shaelyn McHugh.



▲ Ian Thomas ('18) and Lindsey Rowland, both of Whiting-Turner Contracting Company, collaborate on sewing their team's vest.

◀ Teams submitted their vest redesigns and specifications for review by the judges.

◀ Emily Gonzalez ('21) dons a vest for team review and adjustment.



EMPOWERING

Skip the Grid project brings solar-powered electricity to Arizona's Navajo Nation

“Imagine if you didn’t have running water or electricity and then everything changed,” suggested recent construction management (CM) graduate Sydney Sitton (’22).

That’s the scenario Sitton observed during spring break last year while working as a team leader to bring electricity to 11 families living in the Navajo Nation near Red Mesa, Arizona.

The area encompasses over 17 million acres and about 175,000 residents, many of whom have no running water and limited access to power. Sitton and a team of like-minded individuals are helping to change that for the Diné, the indigenous name for the people of the Navajo Nation.

She and fellow CM students Heather Sailor, Ryan Schacherbauer and Connor Avrit signed on to the first-year project — coined Skip the Grid — that is providing solar-powered electricity

to homes at no cost to the owners. The project involves a coalition of partners, including SOLV Energy, Heart of America, Goal Zero and Dometic, plus an interdisciplinary group of Cal Poly students and faculty members in construction management, electrical engineering, mechanical engineering, graphic communication and political science.

CM Department Head Jeong Woo and Assistant Professor Joe Cleary served as advisors. Sitton got involved in the project while “on the hunt” for a senior project. “I was serving as Joe Cleary’s teaching assistant, and he approached me about the project,” Sitton



▲ Top: CM Assistant Professor Joseph Cleary and recent CM graduate Ryan Schacherbauer install solar panels on a home in Red Mesa, Arizona.

▲ Cal Poly team leader Sydney Sitton (’22) and fellow Skip the Grid volunteers joined the effort to provide electricity to residents.

▶ The first installation took four hours, but the team has streamlined the process to 45 minutes.



- ▲ Top: Red Mesa community liaison Mylo Fowler offers a traditional Navajo prayer before work begins.
- ▲ Besides solar panels, the team installs a refrigerator, mounts interior lights, tests the system and instructs residents how to use it.



▲ Left: Heather Sailor runs wiring from the solar panels to a battery to provide electricity to the home.

▲ Top middle: SOLV Energy representative Jessie Klemme installs the battery that will power the refrigerator, interior lights and additional appliances.



▲ Heather Sailor shows residents how to use the refrigerator, emphasizing that hearing a "click" ensures it's closed.

▲ SOLV Energy's Jessie Klemme mounts interior lights powered by the new system.

recalled. "It fit me and my personality so well. I couldn't believe it just landed in my lap.

"Some of the Navajo people have lived their entire lives disconnected to basic necessities we take for granted," Sitton continued. "Families that want to be hooked up to the power grid must wait years. We hoped to provide an alternative by installing individual units to allow people to gain access to the internet, build connections, start their own businesses."

Heart of America, a nonprofit organization that works to achieve education equity, identified the homes of school-age children to have the 400-watt solar panel system, battery, refrigerator and lights installed.

The project proved challenging. "This was the first year of a very complicated project," Sitton explained. "Figuring out the logistics — the schedule, getting everyone on board — and going into it blind were difficult. But my team of students were go-getters. We rolled with the punches, stood up and took day each as it came. And it was so rewarding."

Cleary added, "Working in a remote location without a preinstallation inspection and limited information can be very challenging. Following the first installation day, the students led their own effort to evaluate, assess and plan for the remaining installations. Their improvement on the second day was nothing short of extraordinary."



CM students and faculty have recently completed service projects in Ghana, Ecuador and Belize. “The Skip the Grid project gave our students an opportunity to make a tremendous impact to a community much closer to home,” Cleary said.

And Learn by Doing is at the center of it all. “If there ever was a Learn by Doing project, this was it,” Sitton said. “By no means did we do a perfect job, but we were encouraged to step into the unknown with the guidance of our partners. Gratitude has been the biggest takeaway from this project.”

Sailor has taken the reins now and is planning to lead another team of students to the Four Corners region in spring 2023.

“We will take around 20 students to complete even more installations,” Sailor said. “To prepare, we will test our systems, improve our installation techniques and refine our construction logistics to be as efficient as possible. Last year, improved prefabrication techniques brought our installation times from four hours per house to 45 minutes. Our team is excited for this humbling, one-of-a-kind experience.

“One of my favorite things was seeing how the lights, refrigerator and battery impacted the homeowners’ lives,” Sailor continued. “Every family was grateful that their children would have light to do their homework in. These installations have a dramatic positive affect on everyone’s lives.” ■

▲ The interdisciplinary team of Cal Poly students and faculty celebrate completion of the project with the residents, community liaisons, and SOLV and HOA representatives.

ALUMNI NEWS

The Construction Management Department enjoys getting news about its alumni, listed here in chronological order. We welcome your updates about new jobs, promotions, retirement activities, relocations, marriages, births and more. Please contact project coordinator Jenay Reynolds-Sibbach at 805-756-6385 or jreyno00@calpoly.edu.

RETIRED AND ENJOYING LIFE

Stephen R. Newburn ('81) welcomed his second granddaughter, Isla Shea Smith, on Dec. 8, 2021. This milestone followed his recent retirement as vice president from Webcor Builders. Newburn enjoys retirement, which allows him more time to spend with family and friends, fishing, traveling and catching up on projects around the house.

RISING IN THE NORTHWEST

Kraig O'Connor ('06) was promoted to president of R&H Construction in March 2022. During his 16-plus years with R&H, O'Connor has held a variety of positions, including project engineer, project manager, senior project manager and director of operations. He has led large-scale projects in the Northwest, including several in Portland's evolving Slabtown District and Pearl District, as well as R&H's headquarters' renovation and the Aviation Gin Distillery. O'Connor leads all operations, legal and field teams for the Oregon-based general contractor with an annual volume of about \$240 million. He has been an active member of the Safe From Hate Pledge, is on the board of the Northwest Chapter of the Associated General Contractors of America with a focus on recruiting future craftspeople and construction professionals,



▲ Retiree Stephen Newburn and his wife, Candice, visit the Beacon Hill area of Boston, Massachusetts, in June 2022.

► Kraig O'Connor was promoted to R&H Construction president in March 2022.

has been a member of Cal Poly's CMAC (Construction Management Advisory Council), and recently joined the SafeBuild Alliance, a cross-industry collaborative focused on zero incidents through sharing best practices, safety lessons and resources with all who seek to be leaders in safety. O'Connor has long been proud of the education that Cal Poly provides, and he looks forward to more opportunities to help promote the construction industry as a dynamic, safe and inclusive profession.





IN MEMORIAM

Peter Kang Lee, 26

In April 2022, the Construction (CM) Management Department dedicated a bench in memory of alumnus Peter Kang Lee ('17), who passed away on May 30, 2020, from brain cancer. Located in the Founder's Plaza by the CM Department, the bench was funded by alumni and members of Zeta Beta Tau, the world's first and largest Jewish fraternity, and by Whiting-Turner, the company Lee was working for when he passed away.



CAREER BUILDING IN L.A.

Ally Forster ('19) is an assistant superintendent for PCL Construction in Los Angeles. As an intern in 2018, Forster worked on the \$1.4 billion West Gates at Tom Bradley International Terminal project at the Los Angeles International Airport. The five-level concourse adds 1.7 million square feet of space to the airport. She assisted with the processing of submittals and RFIs, schedule maintenance and change order management. In 2019, PCL hired Forster as a full-time field engineer. She worked on the Southwest Campus Apartments, a 368-unit student housing project that will provide housing for nearly 2,500 UCLA students. As the project progressed, Forster transitioned into an assistant superintendent role and oversaw the exterior envelope and progression of the building interior. She recently completed the demolition of a 60,000-square-foot theater and neighboring tenant spaces for a major entertainment client and is now overseeing the exterior envelope and site utilities for the new UC Los Angeles Chargers' Headquarters and Training Center in El Segundo, California. ■



◀ Ally Forster's work as an assistant superintendent for PCL Construction in Los Angeles currently involves overseeing the envelope and site utilities for the new Chargers' Headquarters and Training Center in El Segundo, California (below).



A Welcome Boost

2021-22 scholarship recipients benefit from industry partners' generous support

Each spring the Construction Management Department is proud to award deserving students scholarships to help offset the cost of their education. At the end of the 2021-22 academic year, the department awarded 27 scholarships totaling \$94,713 to 24 students. These scholarships are intended for the 2022-23 academic year, even though they were announced in spring 2022.



This figure includes the 2021-22 and 2022-23 William Cosko and James Hearn Scholarship, which is awarded in the fall. This scholarship is the only one designed to assist incoming construction management freshmen or transfer students. The scholarship was created in 2015 and awards \$5,000 annually to be split equally among up to five students.

In fall 2021, \$2,500 Cosko Hearn scholarships were awarded to Dayana Flores Reyes and Elija Stennett, and in fall 2022, the scholarships were awarded to Ryan Delalio, Manuel Gonzalez, Joey Massey, Samuel McClintock and Jack Pollin, who each received \$1,000. ■

- ◀ Bruce Daseking, McGuire Hester's executive vice president of business development, awards the Beavers Heavy Construction Scholarship to Tony Ibarra (left) and Jake Torres.
- ▼ Department Head Jeong Woo awards the Blair Tulloch Memorial Scholarship to (from left) Samuel Wong, Taylor Mcclurg and Enrique Duran.



2021-22 SCHOLARSHIP RECIPIENTS AND DONORS

Scholarships are listed alphabetically by last name of the first donor, with recipients following alphabetically.

Beavers Heavy Construction Scholarship

\$4,500 each: Aliza Arif, Jayson Downs, Tony Ibarra and Jake Torres

Kris Cello Scholarship

\$1,800: Simon Ingram

Don Chapin Company Scholarship

\$6,000: Edward Anthony Pascua

William Cosko James Hearn Scholarship

\$2,500 each (fall 2021): Dayna Flores Reyes and Elijah Stennett; \$1,000 each (fall 2022): Ryan Delalio, Manuel Gonzalez, Joey Massey, Samuel McClintock and Jack Pollin.

Hayward Lumber/Edgar Contreras Memorial Scholarship

\$1,000: Aracely Berber

Paul Matt Scholarship

\$2,163: Simon Ingram

Allen and Nancy Minton Scholarship

\$25,000: Jorge Lara-Gonzalez

Mitchell Family Scholarship CHF

\$1,100: Luka Kosor

Ryan Companies Scholarship

\$2,375 each: Nicholas Diaz and Jake Weiss

Blair Tulloch Memorial Scholarship

\$4,500 each: Enrique Duran, Taylor Mcclurg, Isaac Rubio and Samuel Wong

Vinnell Foundation Scholarship

\$2,500 each: Jack Byrne and Robert Byrne

Bob Yoder Nicholas Diaz Scholarship

\$950 each: Enrique Duranand and Samuel Wong



It's A First

Construction management students on winning team in inaugural campus multidisciplinary real estate competition

Construction management students were among a team of Cal Poly students who won first place in the inaugural Cal Poly Real Estate Student Competition, held on campus early this year.

Hosted by the College of Architecture and Environmental Design and the Orfalea College of Business, the competition aims to provide students an opportunity to enhance their education, gain professional development experience and develop a network of industry professionals.

Through creative Learn by Doing activities, students demonstrate their ability to apply book knowledge to real-life practice while fostering a better understanding of the real estate development process and the many facets associated with the successful execution of a development project.

For the 2022 inaugural competition, each team assumed the role of a developer challenged with selecting a parcel of land

and preparing a proposal to develop the property, including site examination and site plan, regulatory evaluation, sales and marketing, preconstruction and construction management plans, and financial and risk analyses.

The teams had approximately two months to complete the proposal.

“The main goal of the competition is to provide students with learning opportunities and professionalize Cal Poly’s real estate programs,” said CM Department Head Jeong Woo. “Opportunities to work on real projects and to be evaluated by industry practitioners give Cal Poly students a competitive edge in the marketplace.”

In all, 30 Cal Poly students majoring in construction management, architecture, business, city and regional planning, and civil engineering competed in the competition. The winners were honored at an awards ceremony in March. Each team member

▲ **Competition participants (from left) include: Ryan Molina of Carmel Partners, business student Garret Billhofer, Ryan Guthrie of Mill Creek Residential, CM student Catie Dines, Josh Hoffmann of Carmel Partners and CM students Luke Terrio, Sydney Sitton and Alex Domine.**

won \$500 for first place, \$300 for second place and \$200 for third place.

First-place winners were CM students Catie Dines, Alex Domine, Sydney Sitton ('22), Greta Stout ('22) and Luke Terrio ('22) and business student Garret Billhofer.

Students earning second place were CM student Natalie Hodgson, civil engineering student Vy Vu ('22), city and regional planning senior Abby Weizer, and business major Michelle Morosin.

Coming in third place were CM students Evan Cheung and Madison Lightfoot; business seniors Matthew Barron, Melanie Nutting and Shae Vomund, and architecture and psychology senior Marisa Martineau. ■

Top Trophy Winners

Students take home 10 awards — more than any other team — in ASC regional competition

Ten out of 12 Cal Poly student teams won either first- second- or third-place awards at the 33rd annual Associated Schools of Construction (ASC) Region 6 and 7 Student Competition.

The competition, held in February in Sparks, Nevada, is one of the largest construction management student competitions in the nation. This year's competition attracted 1,300 students on 180 teams from 53 universities.

The Cal Poly Commercial, Design Build, Heavy Civil and Mixed Use

▼ Construction management students celebrate their victories outside the Nugget Hotel in Sparks, Nevada, after the Associated Schools of Construction Region 6 and 7 awards ceremony in February 2022.

teams competed against students from California, Hawaii, Oregon and Washington. Cal Poly's eight remaining teams competed against universities from throughout the U.S. in the Integrated Project, Mechanical, Virtual Design and Construction, Sustainable Building, Preconstruction, Project Management, Electrical and Concrete Solutions categories.

This year 96 Cal Poly construction management, architectural engineering, architecture and civil engineering students competed. Cal Poly's teams won more trophies — by far — than any of the other competing schools.

"The results of this competition show the power of Learn by Doing

together," said Construction Management Department Head Jeong Woo. "How could I ask more of them? I'm so grateful to see my students have fun, learn a ton and rise to the top."

Teams are given problem statement materials and are expected to complete several tasks related to the problem, including project estimating, scheduling, site logistics, safety and quality management planning. Teams must adhere to specific time frames, deadlines, schedules, locations and conditions, and they have only 14 to 16 hours to complete and submit their proposal package. Students also present their proposal to a team of industry professionals who serve as judges. ■



2022 ASC REGION 6 AND 7 WINNING TEAMS

The team members listed are construction management majors, unless otherwise noted.

First Place

Mechanical: Thomas Camargo, Jack Dasch, Ryan Duca, Carson Ernst, Brett Jones, Ryan Schacherbauer; and alternates Braden Deck and Daniel DeSoto.

Preconstruction: Mitchell Alandt, Kieran Barker, Gavin Beadle, Ryan Preciado, Jane Runte, Jack Sampson; and alternates Sofia Amalfitano and Edgar Pena (architectural engineering).

Sustainable Building: Jacqueline Badal, Bella Crafton, Simon Ingram, Hailey Lancaster, Oliver Leograndis, Cade Rees; alternates Olivia Pisani and Gianna Rocca (architectural engineering).

Virtual Design and Construction: Kannen Caldwell, Evan Cheung, Enrique Duran, Maxwell Eisner, Harley Holbrook, Carter Melick; alternates Mason Canton and Kyle Passey.

Second Place

Concrete Solutions: Thomas Collins, Jennifer Knickerbocker, Brendan Peers (architectural engineering), Thomas Rogers, Jackson Thomas, Sierra Williamson; alternates Andy Abdelnour and Jack Ritchie.

Design Build: Catie Dines, Alex Domine, Sydney Sitton, Greta Stout, Luke Terrio, Sophia Wang Emma (architecture); alternates Gage Davenport and Ryan Manesh.

Integrated Project: Kiana Dehpanah, Timothy Kanu (architectural engineering), Nicholas Lew, Dara Lin, Julia Ralston, Samuel Wong; alternates Calvin Clauson and Audrey McGowan.

Mixed Use: Keagan Coyne, David Holmes, Anna Knutson, Kevin Jagers, Jake O'Balle, Chloe Riddlespurger; alternates Reed Aitken and Teddy Koffman.

Third Place

Commercial: Nick Campbell, Robert Dasch, Tyler Giddens, Joseph Miller, Chris Montero, Sophie Stewart; alternates Ryan Fehrenbach and Jake Pizzifred.

Heavy Civil: Gus Coluccio, Morgan Conway, Nicholas Forbes (civil engineering), Michaela Denny, Henry Miller, Jake Torres; alternates Brendon Duran and Jake Ornellas. ■

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BELLA CRAFTON **SERVICE TO THE DEPARTMENT AWARD**

Bella Crafton said her choice of a major was “a bit of a shot in the dark,” however, her decision to attend Cal Poly was not.

“Cal Poly was my No. 1 choice,” she said. “I had grown up visiting the area and loved the ‘outdoorsy’ community, and I had heard about Cal Poly’s amazing construction management program, so it was a perfect fit.”

And Learn by Doing was a large part of that perfect fit.

“I feel that it is the only way to effectively learn,” Crafton said. “In this major especially, it is beneficial to actually experience what is typically taught in a textbook. From summer internships to lab classes where we mix concrete and build sheds, this philosophy has truly prepared me to feel competent and confident starting my career.”

During her undergraduate years, she was involved in a variety of activities, including working as a CCCE (California Center for Construction Education) ambassador. “I organized recruitment opportunities for summer internships and the Carpenters Apprentice Program,” she said. “I was able to network with our awesome industry partners and encourage students to take advantage of all the opportunities the department provides.”

She is also grateful for the friends she has made. “I’ve have loved all four years at this school,” she said. “I’ll remember the bond created with my graduating CM class. After four years of classes, competitions and clubs, we’ve gotten pretty close.”

Crafton, who was raised in Orange County, California, is working as a project engineer at Webcor in San Francisco.



Bella Crafton



Carson R. Ernst

CARSON R. ERNST **OUTSTANDING LEADERSHIP AWARD**

Cambell, California, resident Carson R. Ernst followed his uncle’s lead to Cal Poly’s Construction Management (CM) Department. “My uncle graduated in 2002,” Ernst said. “I chose Cal Poly after touring it and seeing the department’s great balance of business and engineering.”

It was the right choice for Ernst, a natural leader whose commitment extended beyond the classroom. He twice served as president of the student chapter of the Mechanical Contractors Association of America and once as co-president of the Associated Students of Construction Management.

“My goal as a leader is to elevate others’ abilities, and I often connect people to unique resources and ideas to do so. I will forever be thankful for the ability and opportunity to serve and speak for our community; recognition of my service is rewarding and encouraging.”

Ernst is quick to point out that he got as much as — or more than — he gave. “I’ve been inspired and touched by the unique family of CM students and faculty,” he said. “I’ll always remember our warm conversations. I’ll miss the mass of people who are at a similar place in life. It’s inspiring to be around others who not only want to grow, change the world and make things happen, but who also have the time, energy and dedication to do so.”

Before settling into his career as a project engineer for Blach Construction in Santa Clara, California, Ernst toured the U.S. “By the time I begin working, I will have visited Arizona, New Mexico, Texas, Oklahoma, Kansas, Colorado, Utah, Nevada, Oregon, Washington, Idaho, Montana and Wyoming,” he said.

Every year, the Construction Management Department bestows the Outstanding Senior Award on students who have demonstrated remarkable dedication and commitment. Below and on the following pages, we profile (in alphabetical order) those students honored in 2022.

HAILEY LANCASTER **SERVICE TO THE DEPARTMENT AWARD**

Hailey Lancaster's lifelong interest in the built environment — and San Francisco's skyscrapers — led her to Cal Poly's Construction Management Department.

She is lavish in her praise. "I fell in love with Cal Poly when I toured," said the San Mateo, California, native. "I adore the town and everything there is to do in SLO. Cal Poly's academics are outstanding, and I was honored to attend."

While Lancaster's Cal Poly memories are mostly favorable, she admits it was challenging to stay engaged during the pandemic shutdown. "I had a hard time staying focused with online school during COVID," she said. "I missed in-person class, heading to the CM building and collaborating with my classmates and professors."

Back on campus, though, her commitment and hard work helped her earn an Outstanding Senior Award. "I graded three different classes for two professors over the course of three years," she explained. "I proctored several exams for professors and assisted in any way I could. I always said 'yes.' I spent some time working for the CCCE (California Center for Construction Education), helping with info sessions and designing the department's website."

She appreciates Cal Poly's hands-on learning and knows that the construction industry does too. "I've grown tremendously through Learn by Doing, and companies regularly express how impressed they are by students' readiness for the industry. Learn by Doing is extremely applicable to real-world scenarios."

After enjoying a summer of travel, Lancaster joined NOVO Construction in the Bay Area as a project engineer.



Hailey Lancaster



Dara Lin

DARA LIN **OUTSTANDING SENIOR AWARD**

Dara Lin might be an overachiever. She not only earned two degrees — one in construction management (CM) and another in architecture — while maintaining the highest grade point average in the CM Department, she did it in five years, the shortest possible time to earn a bachelor's degree in Cal Poly's architecture program.

"I started as an architecture major, and I loved the combination of art and spatial reasoning, but I also wanted to know how to build," Lin said. "I wanted to look at any building and be able to visualize how it was put together, as if I had X-ray vision."

And so began her interest in construction management. "I took a few construction management courses and was struck by how everything — cost, time, quality, safety — was utterly rational," she said. "I think having the two perspectives made me both a better designer and a better builder."

Lin admits that she hit some rough patches as a student, too. "I wanted to do so many things and do them well," she said. "I had to accept that I couldn't max out on every one of those things, and that good enough was good enough."

The double major somehow found time to design the new De Mattei Student Lounge and Collaboration Hub (see Page 4), which includes new interior furnishings, a new lighting and acoustic scheme, and custom millwork.

Lin, who was raised in Boston, began work as a junior designer and project engineer at Design Draw Build in Oakland, California.

ITZELL RUIZ
OUTSTANDING LEADERSHIP AWARD

When Itzell Ruiz had difficulty finding mentorship and support as a first-generation Latina student at Cal Poly, she got creative.

“Professor Eric Brinkman and I created a community for Latinx construction management students through a club, Community and Student Achievement (CASA),” she said. “I quickly learned how important this club was, not only for me, but for all the students who identify as underrepresented and struggle with finding a sense of community. I’m so proud of what this club has become through the incredible work of all the CASA members who took leadership to help build this inclusive space. I’m excited to see how it will grow throughout the years.”

Ruiz, who was raised in Orange County, California, started as an architectural engineering major, but after taking a few CM classes, was drawn to the major.

“The CM Department and Department Head Jeong Woo had a big impact on my decision to switch majors,” she said. “The faculty and students are so supportive, inclusive and genuinely care about student success.”

As an undergraduate, Ruiz served as a Poly Rep ambassador, giving campus tours to prospective students and supporters and sharing her personal college story.

Ruiz also founded and served as president of CASA as well as a member of the Design Build Team that competed at the Associated Schools of Construction International Competition.

She was honored to receive an Outstanding Senior Award. “I’m beyond grateful for my club advisors Eric Brinkman and Stacy Kolegraff, who guided me throughout this process and throughout my college career. Although I am sad to leave Cal Poly, I’m excited to begin my job as a field engineer at Turner Construction in Los Angeles.”



Itzell Ruiz



Jane Runte

JANE RUNTE
MOST VALUABLE PLAYER AWARD

Competitions are a mainstay for many construction management students, and that’s especially true for Jane Runte, who was introduced to one on her very first day of classes.

“In Ed Boucher’s Construction Materials and Assemblies class, he has this competition in which he makes a concrete sample on the first day of class, and on the last day, students guess what PSI it got to over the 10 weeks,” Runte recalled. “The student who guesses the closest gets \$20. I won! This was the end of fall quarter, so I was getting sick of dorm food. I used the money to ‘DoorDash’ Chipotle.”

That’s just one of Runte’s fond Cal Poly memories. She also remembers feeling “very supported” by the CM Department, which led her to want to contribute.

“Teachers were always checking in and helping us network,” she said. “There were always events going on, and the upperclassmen helped us understand course material.

“I wanted to keep the tradition going, so I got involved through clubs, competition teams and working for the department,” she continued. “The more I worked, the more engrained CM became in my day-to-day life. I loved giving back and helping where I was needed.”

Runte served as captain of the Preconstruction Team that competed at the Associated Schools of Construction competition, was a student ambassador for the California Center for Construction Education (CCCE) and was a member of the Roofing Alliance Competition.

It wasn’t all work and no play. Runte said finding that balance was difficult at first. “It’s hard to choose studying over going to the beach with friends,” she said. “But in the end, I struck the right balance and got a great education and lifelong memories and friends.”

Runte is now a project engineer for Whiting-Turner in San Diego.

RYAN SCHACHERBAUER **'BEHIND THE SCENES' AWARD**

As a student, Ryan Schacherbauer spent many hours helping the Construction Management (CM) Department, not because it was expected of him, but because he genuinely enjoyed it.

His efforts paid off. The department awarded Schacherbauer a Behind the Scenes Award — a unique award designed just for him. “The things I did for the department came from more of a support role,” he said. “I honestly was not expecting to receive any award. I enjoyed being involved in multiple clubs and barbecuing for the department’s student chapter of the Associated Schools of Construction Management.

“I was surprised to learn that I won the award, but I also was very grateful that I could make a big enough impact that my efforts were noticed,” he continued. “Overall, it was a great way to end my time at Cal Poly.”

The construction industry was a natural choice for the Davis, California, native, who has always enjoyed building and working with tools. Cal Poly, with its Learn by Doing method, was a perfect fit.

“I like how Cal Poly prepares students for work after school, especially in construction,” he said. “Working with the materials and tools is key to learning how to construct buildings and the systems that are within them.”

While an undergraduate, Schacherbauer served as “grill master” for the Associated Schools of Construction Management barbecues and was a member of the Mechanical Team at the ASC Student Competition in Reno.

When COVID-19 prevented Schacherbauer from participating in the construction labs on campus, he filled the gaps with summer jobs, working two summers at Murray Co., a mechanical contractor located throughout Southern and Northern California. Now he is a project engineer in its San Leandro office.



Ryan Schacherbauer



Sydney Sitton

SYDNEY SITTON **PROJECT MANAGER OF THE YEAR**

Sydney Sitton found the perfect outlet to channel her passion for sustainable construction: the Skip the Grid project, whose mission focuses on providing access to clean, affordable off-grid energy and improving the quality of life for families of the Navajo Nation.

Access to electricity and running water there is not guaranteed — a problem that was exacerbated by the pandemic. The Skip the Grid project involved a coalition of partners, including an interdisciplinary team of Cal Poly students, working together in Red Mesa, Arizona, to provide solar-powered electricity to homes at no cost to the owners. The team installed photovoltaic energy systems with refrigerators and lights for 11 families, thus providing a roadmap for future installations. (See Page 20.)

One of Sitton’s fondest memories as an undergraduate is taking part in the project and meeting the families that were to benefit from it. “It was incredible to see them realize the comfort and security they now had access to with a solar-powered refrigeration system,” Sitton said.

Sitton also kept busy as captain of the Cal Poly Real Estate Competition Team, member of the Design-Build Team that competed in the Associated Schools of Construction Student Competition in Reno, a member of the National Electrical Contractors Association Green Energy Competition, and the construction lead for Team Fiji, Engineers Without Borders.

Not all of her memories are fond ones, though. Sitton said she will not miss “cramming 21 units in a quarter my sophomore year. That was rough!”

Sitton, who hails from Huntington Beach, California, said that she is also happy to not be “juggling two jobs, working on my senior project, competing in competitions and training for triathlons. My senior year was definitely a challenge,” she said. “However, I would not change it for the world, as it helped me learn so much about myself and my goals in life.”

PAYTON STROUT
SERVICE TO THE DEPARTMENT AWARD

Although Payton Strout graduated just last spring, she's already looking forward to returning to Cal Poly and the Central Coast.

"I love San Luis Obispo; it's the cutest town," she said, citing one reason she choose to attend Cal Poly. She also picked it, she said, because it is the perfect distance from her home in Danville, California, and "it's the best school for my major."

While Strout admits there are many things she will miss — like living within a one-mile radius of her friends and hiking "Madonna Mountain" (Cerro San Luis) — she carries with her memories to last a lifetime.

"I have a long string of amazing memories," she said. "Delirious late-night study sessions, the friends I made who later became my roommates and teaching the Introduction to Construction Management class my senior year.

"That was one of the coolest things I've done," Strout continued. "Seniors rarely mingle with freshmen. Freshmen are so enterprising, so excited. It re-ignited my passion for learning and for the CM Department. After four years, it's easy to lose enthusiasm for classes and become eager to graduate. Teaching sparked my love of learning. I know that I made an impact on the students, but they had an even greater impact on me."

Her advice for students includes getting involved, befriending teachers and asking for help. "Do as much as you can and do it well. Make good impressions. Don't be afraid or intimidated. If you got into Cal Poly, you're probably smarter than most."

She served as president of the Associated General Contractors Club and team co-captain at the National Association of Home Builders Competition.

Strout is an incoming project engineer at Carmel Partners in San Francisco.



Payton Strout



Maggie Swanson

MAGGIE SWANSON
OUTSTANDING LEADERSHIP AWARD

When Maggie Swanson was 14, she knew she'd end up at Cal Poly.

"I got dragged along on a college tour with my older sister when I was 14, and I knew it was the place for me," said the Sacramento native. "It was unlike any other school I'd visited. The beach, the mountains, the weather, the people."

From that point on, she did what she could to turn that dream into reality.

Her fondest memories about Cal Poly are from her time in the Construction Innovations Center. "Nothing put a smile on my face like walking to the CM building, smelling tri-tip, hearing country music, seeing the flag and everyone's smiling faces in the courtyard," she recalled. "It was a sense of community that I'll likely never be able to beat."

As an undergraduate, Swanson served the Associated Students of Construction Management as a board member, secretary and, along with CM student Carson Ernst (see Page 27), co-president.

"I believe that Carson and I made ASCM stronger coming out of the pandemic than it was going in," she said. "We devoted countless hours to making a comfortable, inviting, upbeat and energetic environment for CM students. My goal was to give back to the department that gave so much to me."

She was gratified to learn she had won the Outstanding Leadership Award. "I was so proud of Carson and my board. I could not have made as big an impact without their dedication to the club and the department."

Swanson also served as an education ambassador for the California Center for Construction Education (CCCE).

Now living in San Francisco, Swanson is a project engineer at Swinerton Builders.

JACKSON THOMAS MOST VALUABLE PLAYER AWARD

Like many of his Cal Poly peers, Jackson Thomas chose to study construction management because his family has ties to the industry, and he has a fascination with building.

“I’ve always enjoyed building things and solving problems — two very important parts of the CM major and industry,” said the Pleasant Hill, California, native. “And I chose Cal Poly because of the reputation of its construction management program and its location. I loved San Luis Obispo when I visited before applying.”

As a student, Thomas served as captain of the Concrete Team that competed at the Associated Schools of Construction Student Competition, Region 3 and Region 6-7, and was an ambassador for the California Center for Construction Education.

Although Thomas admits that he struggled with time management during his first few years in college, he did finally find a balance — and the time to assist in the planning, setup and execution of CM’s 50th anniversary celebration.

“The anniversary celebration was an amazing event,” Thomas said. “It was a great time for students and industry members to celebrate the success of the program. Graduates of all ages were able to partake in the celebration.”

In his next chapter as a project engineer for Webcor Concrete in San Francisco, Thomas said that he won’t miss taking tests and exams. But he will



Jackson Thomas

miss “the community aspect of school. I enjoyed having my friends and peers around me,” he said.

He feels that Cal Poly prepared him well to tackle the challenges of the construction industry. “Learn by Doing is important, especially in construction because it’s such an experience-based industry,” he said. “Being able to learn through activities and hands-on experiences helps students further grasp the information and course materials.” ■

LEARN BY DOING ENSURES DAY-ONE READINESS

Cal Poly’s Construction Management (CM) Department proudly turns out graduates who are Ready Day One to work in the construction industry. Along with their diplomas, students pack a skill set that includes leadership, problem-solving, technical knowledge, plus communicating and participating effectively in an interdisciplinary team environment. Thank you, students, faculty and industry partners, for your commitment!



2023 ACTIVITIES

APRIL 13-15

Cal Poly Open House, Cal Poly.
<https://orientation.calpoly.edu/>

APRIL 14

Real Estate Student Competition, Cal Poly.

MAY 9

CMAC All-Hands Meeting, Cal Poly.

JUNE 9

Construction Management Senior Banquet and Scholarship Awards Ceremony, SLO Brew Rock, San Luis Obispo, Calif.

JUNE 10

Associated Students of Construction Management Golf Tournament and Wine Tasting, Avila Beach Golf Course, Avila Beach, Calif.

JUNE 18

Spring Commencement, Cal Poly.
Check for updates at
<https://commencement.calpoly.edu/spring>.

SUMMER (DATES TBD)

Carpenters Apprenticeship Celebrations, Northern and Southern California locations TBD.

SUMMER (DATES TBD)

CMAC Mixers, locations TBD.

JULY 17-21

Girls Build Summer Academy, Cal Poly.

OCTOBER 18-21

Associated Schools of Construction Region 3 Competition, Downers Grove, Ill.

Visit construction.calpoly.edu for updates regarding these and additional activities.

▼ Spring 2022 wine tasting tour.



Welcoming New Faculty

Assistant professor, lecturers share academic, industry expertise with students



Assistant Professor
Vineeth Dharmapalan

VINEETH DHARMAPALAN

Assistant professor

Cal Poly’s Construction Management Department welcomed Vineeth Dharmapalan to an assistant professor position in fall 2022, following his service as a postdoctoral scholar in the university’s Civil Engineering Department.

He came to Cal Poly after earning his doctorate in civil engineering from the University of Texas at Austin. At Cal Poly, he’s teaching the Fundamentals of Construction Management and Construction Management and Project Planning courses.

Teaching is a good fit for Dharmapalan, a self-avowed “people person” who likes helping others. “I like the idea of helping students, and setting them up for success is particularly satisfying,” he said.

He also finds satisfaction in teaching because “it instills an eagerness to learn and be challenged, it allows me to share my passion for the subject with students and to pass on the knowledge and skills.”

Dharmapalan was drawn to Cal Poly for its Learn by Doing culture. “I feel it’s vital for students to not just learn the theory but to also apply those concepts practically,” he said.

He hopes his students remember him as “someone who instilled in them a curiosity and an eagerness to learn. My major takeaway is for the students to think critically when solving problems inside and outside the classroom,” Dharmapalan said.

In addition to his doctorate, Dharmapalan holds a bachelor’s degree in civil engineering from the University of Mumbai, an M.S. in statistics from the University of Texas at Austin and an M.S. in civil engineering from Oregon State University.



Lecturer Michael Brennan

MICHAEL BRENNAN

Lecturer

Michael Brennan’s (Industrial Technology, ’01) resume shows a professional on the way up, earning the rank of captain in the U.S. Army Corps of Engineers before joining Greg Moore Construction Inc. in San Luis Obispo.

When Brennan started teaching in Cal Poly’s Construction Management (CM) Department in winter 2021, it wasn’t his first job at Cal Poly.

He returned to his alma mater in 2010 as a planner/estimator/scheduler for University Housing, moved to Facilities Planning and Capital Projects as project manager before being appointed chief engineer for Facilities Operations. Ultimately he was promoted to associate director of FPCP while also serving as director of the Veteran Success Center.

Brennan then moved across the country to lead Facilities Design and Construction at State University of New York (SUNY) New Paltz, where he also earned an MBA.

Then it was back to the Central Coast as director of Construction Management for the Wallace Group, a multidisciplinary engineering design firm in San Luis Obispo, before returning to Cal Poly to teach.

Although he has a wealth of industry experience on and off campus, this is Brennan’s first foray into teaching — something he had wanted to do.

“As an officer in the Army, I spent a lot of time with soldiers teaching and mentoring them as a leader,” he said. “I missed that experience. I now get to teach and mentor the next generation in the industry. Cal Poly’s CM program has an outstanding reputation for producing quality professionals. Construction management can be very hands-on; it is a natural fit for Learn by Doing.”



Lecturer Mark Montoya

CORRECTION

In the spring 2022 issue of Construction Innovator, we mistakenly reported that faculty member Andrew Kline was granted tenure. Last year Kline transitioned from a lecturer position to an assistant professor position, which is the pre-tenure phase of the tenure-track at Cal Poly. The department is excited to have Kline continue in this new role.

MARK MONTOYA

Lecturer

It could be argued that although Mark Montoya ('84) enjoyed nearly four decades in industry, he never really left Cal Poly.

"I've been involved in the Construction Management Department for decades," Montoya said. "Former Department Head Al Hauck asked me over 10 years ago if I would be interested in teaching. I told him I couldn't because I liked money too much," he joked.

Montoya worked for Morley Builders in Santa Monica, California, for 30 years, mostly as vice president, residential division manager. He then joined Snyder Langston, spending seven years as vice president, multifamily.

In spring 2022, he started teaching at Cal Poly. "Technically I'm a part-time lecturer, but I currently teach four classes and it's my full-time job. I love it," he said.

Montoya is clear that he didn't retire from industry. "I consider this a pivot from industry to a whole new career," he said. "I turned 61 and thought it was the perfect time for a new challenge."

In addition to teaching, Montoya co-advises CASA (Community and Student Achievement), the department's student club seeking to promote diversity and inclusion and supporting Latinx CM students. Montoya is a first-generation college graduate who wanted to give back.

And give back he has. In addition to being a generous donor, Montoya served on the College of Architecture and Environmental Design (CAED) Dean's Leadership Council for nine years and was a founding member of and served two years as CMAC's (Construction Management Advisory Council's) first president in 2014-16. In 2004 he was named the CAED Honored Alumnus.

"I wouldn't have had the career that I had if I hadn't gone to Cal Poly," Montoya said. ■

Switching to Semesters

Cal Poly to align with other CSU campuses

Cal Poly — the only California State University campus to follow the quarter system — has been directed by the CSU Chancellor's Office to switch to semesters, beginning in fall 2026.

The switch is being implemented to align with all other CSU campuses as well as with study abroad and internship programs. "A majority of study abroad programs follow semesters, so students who want to participate either study abroad in fall or miss both winter and spring quarters to study abroad," said Construction Management (CM) Department Assistant Professor Joseph Cleary. "That can possibly delay graduation."

Semesters also better align with many summer internship programs, student competitions and professional conferences.

"Even though the annual academic schedule is changing, the CM Department will continue to deliver the same innovative, high-quality student-centered, world-class Learn by Doing education it is known for," Cleary added. "We will continue to prepare students who are ready to lead and meet the needs of the construction industry on day one."

To get ready, the CM Department is drafting the framework for the transition. The Transition Committee will gather faculty, industry and student input to create a plan for approval by the CM Curriculum Committee to be presented to the full faculty for approval. Upon faculty approval, the plan will be presented to the College of Architecture and Environmental Design Curriculum Committee and then to the Academic Senate.

"Our vision for switching to semesters is to make our curriculum more innovative, effective and accessible to all, including for transfer students from two-year colleges," said CM Department Head Jeong Woo. "I am very excited to see thoughtful recommendations from a wide array of conversations on how to improve the CM curriculum, and I'm looking forward to working with the Transition Committee to develop a new picture of Cal Poly's CM program." ■



Applauding Our Faculty

Construction management students excel with their guidance and expertise

Dear CAED Community,

Under the guidance of expert faculty, students engaged in various enterprising projects this past year. From assisting the Navajo Nation by installing solar collectors that bring refrigeration to family homes to reimagining and redesigning the safety vest to combat the adverse effects of wrong-fitting vests on a diversifying workforce, our students were scaffolded and championed by construction management faculty.

Faculty members work year-round to foster student talent and transformation by putting students first. They are role models who build pathways for student and alumni success. Ceaselessly, they educate, coach and open doors to new challenges and innovations.

Moreover, students are keen to be involved at Cal Poly because of the encouragement and inspiration they receive from faculty. In this issue, we share the story of Dara Lin, a 2022 Outstanding Senior Award recipient, who with the support of faculty and input from clients, designed our newly inaugurated De Mattei Student Lounge and Collaboration Hub, a welcoming space for students to study and collaborate.

Faculty thoroughly cherish those moments when a former student reaches out to tell them that their teaching made a difference. In the coming year, I invite you to join me in thanking all our dedicated faculty who make the Construction Management Department's Learn by Doing experiences and achievements possible.

As always, thank you for all that you do to make the many differences that sustain the excellence of the College of Architecture and Environmental Design and our construction management programs.

All my best wishes for the new year,



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



“In the coming year, I invite you to join me in thanking all our dedicated faculty who make the Construction Management Department's Learn by Doing experiences and achievements possible.”

Comments and content contributions are welcome for Construction Innovator, an annual publication of Cal Poly's Construction Management Department. Please contact **Project Coordinator** Jenay Reynolds-Sibbach at 805-756-6385 or jreyno00@calpoly.edu. **Content manager:** Department Head Jeong Woo **Writing and copy editing:** Jo Ann Lloyd | **Publication design:** Shirley Howell | **Photography:** Owen Main; Josef Kasperovich; and courtesy photos.

Celebrating Your Success

... AND ENSURING IT FOR CURRENT AND FUTURE STUDENTS

IT'S A WONDERFUL FEELING — celebrating years of academic and personal achievement as you walk down the aisle to 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.

Donate now to our Construction Management Fund for Excellence by scanning the QR code. If you are interested in making a more personalized gift, please contact Department Head Jeong Woo at 805-756-5493 or jwoo21@calpoly.edu.

Thanks for your support!



► Sophie Harrington ('22) attended CM's 50th anniversary gala in the spring.



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Career-Building Blocks

Wielding hand and power tools, San Luis Obispo County high school girls hammered, sawed and soldered their way through wall framing, bench building and other construction-related activities during the 2022 Girls Build Summer Academy at Cal Poly. The inaugural camp, coordinated by the Construction Management Department, aims to inspire participants to pursue careers in the construction trades. Standing next to Alex Perez, a volunteer from the Southwest Regional Council of Carpenters, visiting toddler Rae Smith (left) appears to be riveted and ready to join in. Read about the camp on Pages 16-17.