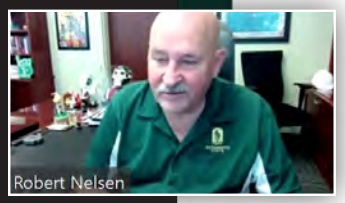
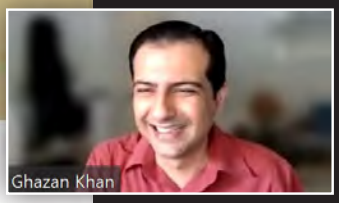
Your Link to the Department of Civil Engineering

CE CONNECTION

SUMMER 2021 | ISSUE 35

Sac State celebrates graduates with first ever "carmmencement" ceremony. | Pg. 18





Attendees and speakers meet virtually for the 12th annual 2021 Ken Kerri Luncheon | Pg. 6

INSIDE THIS ISSUE

SACRAMENTO STATE
Department of Civil Engineering

CHAIR'S MESSAGE

Dear Colleagues, Alumni, and Friends,

Another summer has come to an end and I hope everyone had a chance to take a break from the routine to recuperate while staying safe. Here at the department, we remained busy preparing for the new academic year and a unique fall semester. As I write this letter, the fall semester is up and running, and the campus has reopened. Traffic remains relatively calm during the mornings and afternoons, because the university has opted for a gradual repopulation of the campus through a mix of course modalities: in-person, hybrid, and fully online. Most of the lectures in the Civil Engineering department are being taught online, however some of labs are in-person to ensure the best possible learning opportunity for the future civil engineers. It has been exciting to see students trickle onto the campus and see life abound compared with previous semesters. It is not perfect, but it is a start. There is light at the end of the tunnel!

This summer, we met with 74 transfer students and 99 freshmen at the new student orientation to welcome them to the civil engineering program. Enrollment has remained steady during the COVID impacted times. Faculty remained busy through the summer with research, professional development, and other activities as you will read in this issue. For those looking to hire, our annual Fall Career Fair and "An Evening with Industry" events are scheduled for October 22nd and November 2nd, respectively. These are great occasions to meet our students.

Finally, I would like to use this opportunity to advertise our upcoming golf tournament on Friday, October 15 at 7:30 AM at the Bartley Cavanaugh Golf Course. To register and for more information, please visit https://www.csus.edu/college/engineering-computer-science/civil-engineering/

I hope you enjoy this newsletter and I hope to see you in-person at some point during this academic year.

Yours sincerely,
Ghazan Khan
Chair, Department of Civil Engineering

SACRAMENTO STATE
Department of Civil Engineering

Support the Department

Looking for a way to support the Civil Engineering Department? We have four different funds that enhance our ability to educate students:

- **The Ken Kerri Endowment Fund** — Provides support for faculty and student enrichment activities.
- **The CE Freshman Scholarship Fund** — Scholarships to outstanding first-year student.
- **The Graduate Environmental/Water Resources Scholarship Fund** — Scholarships to deserving graduate students in the environmental or water resources engineering areas.
- **The Department Trust Fund** — These resources support student attendance and participation at conferences and competitions, senior design project team expenses, and equipment for labs when other funds are not available.

To donate to any of these funds, go to **http://bit.ly/ceonlinedonate** and follow the directions for online donations.

- Or mail a check made out to the appropriate fund to:

  Attn: Ashley Mihok
  California State University, Sacramento
  Department of Civil Engineering
  6000 J Street, MS 6029
  Sacramento, CA 95819

- For additional questions on how to give, contact:

  Nebrisa Fish '05
  Director of Development
  (916) 278-2453
  nebrisa.fish@csus.edu

CONTENTS

Upcoming Events

October 15, 2021:

9th Annual Civil Engineering Golf Tournament
at Haggin Oaks, 7:30 am

November 2, 2021:

An Evening with Industry
format TBD

Please consider supporting the Department of Civil Engineering.

As we transition back to our in-person traditional events during the year, and on-campus classes, your dollars will be incredibly important to support the department.

http://bit.ly/ceonlinedonate

www.csus.edu/ecs/ce

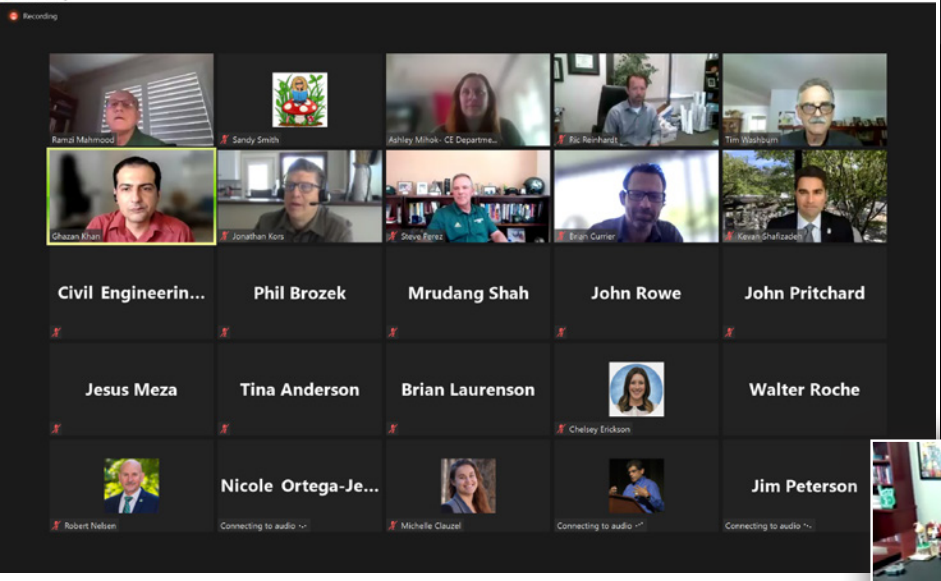
Like us, and follow us to stay up to date on current CE News and Events!

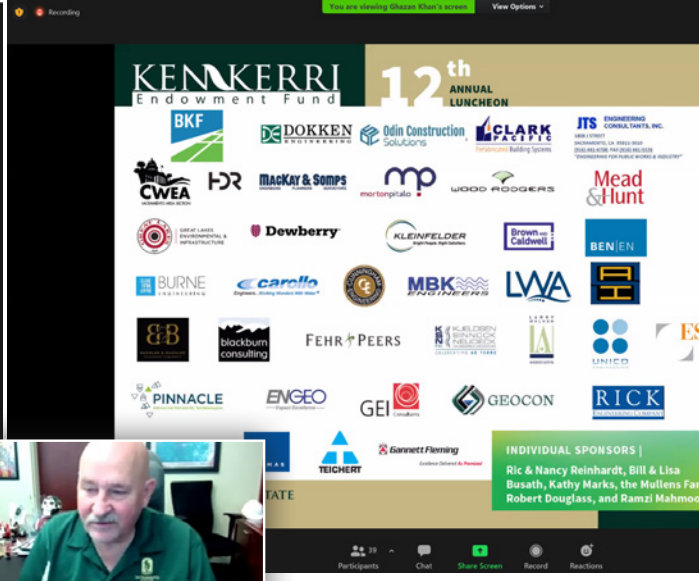
Ken Kerry Endowment Fund

Held Virtually

The Ken Kerri Endowment Fund 12th Annual Luncheon was held on Wednesday, April 28, 2021. For the first time in the event's history, the luncheon was 100% online, a necessity due to safety and health concerns amidst the ongoing pandemic.

Event RECAP



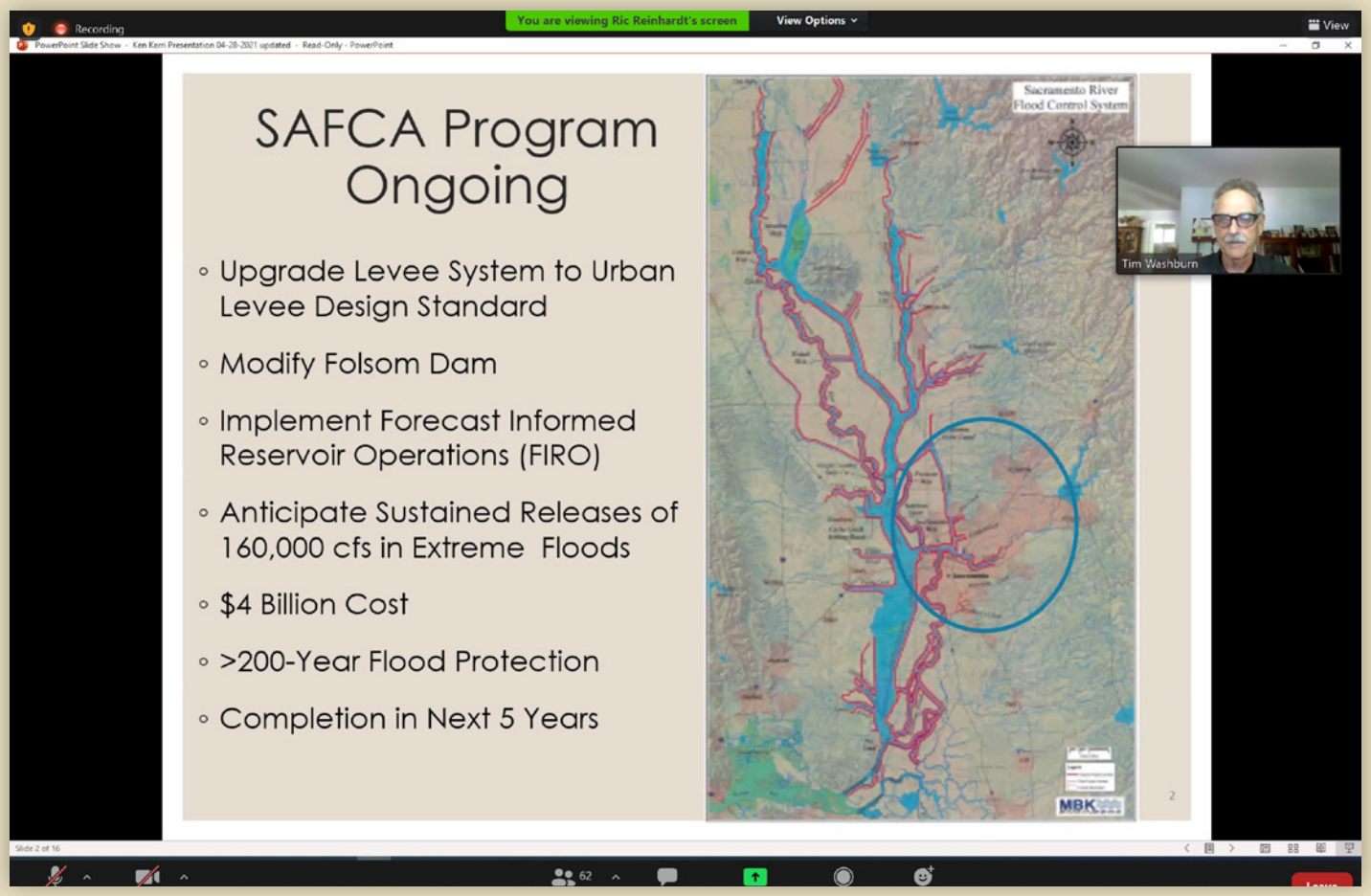


The event began with acknowledgements from Dr. Ghazan Khan, the newly-appointed Department Chair. He highlighted the importance of the Endowment Fund in attracting top students and faculty to the department, the update and purchasing of research equipment, and supporting the development of new courses to expand student knowledge. Afterwards, President Robert Nelson took time to recognize the contributions of local engineering firms in supporting the department, as did Steven Perez, Vice President of Academic Affairs, and Kevan Shafizadeh, Interim Dean in the College of Engineering and Computer Sciences.

This year's special guest speaker was Tim Wasburn, who is retired from his position as Director of Planning of the Sacramento Area Flood Control Agency (SAFCA). His topic of discussion was "Managing Water in a Changing Climate," the focus primarily on reconstruction and strengthening of the waterways of the Sacramento Valley to maintain water conservation and protect urban areas from flooding. Agencies are still responding to the devastating floods that ravaged the Sacramento Region back in 1986, he noted, and with severe weather fluctuations over the past several years, it is important to reinforce infrastructure to keep residents safe.

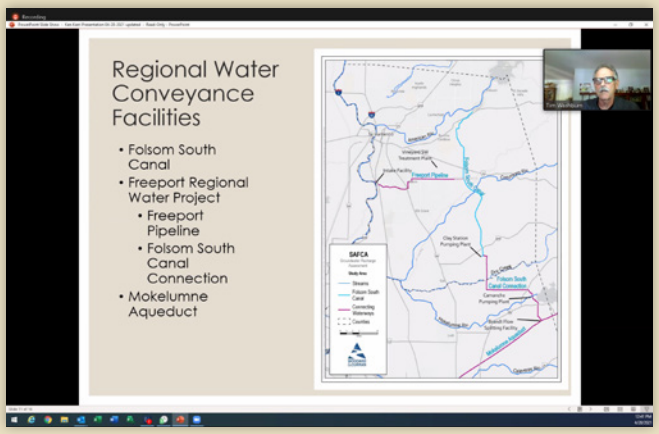
To this effect, Mr. Washburn's agency oversaw upgrades to the levee systems and improvements to Folsom Dam. This includes implementation of Forecast Informed Reservoir Operations, a system designed to utilize data from watersheds and weather forecasts to assist with decisions to release or retain water from reservoirs.

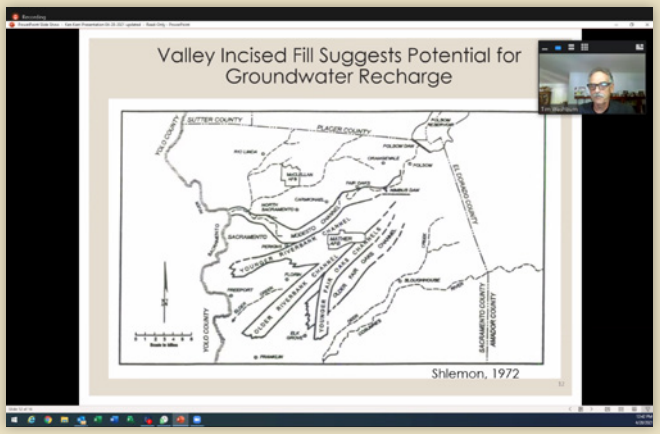
Mr. Washburn was especially pleased at being able to present his topic for the luncheon, having had his previous engagement cancelled in 2020 due to Covid.



Washburn's goal is to complete these projects within five years, at a cost nearing

$200 BILLION



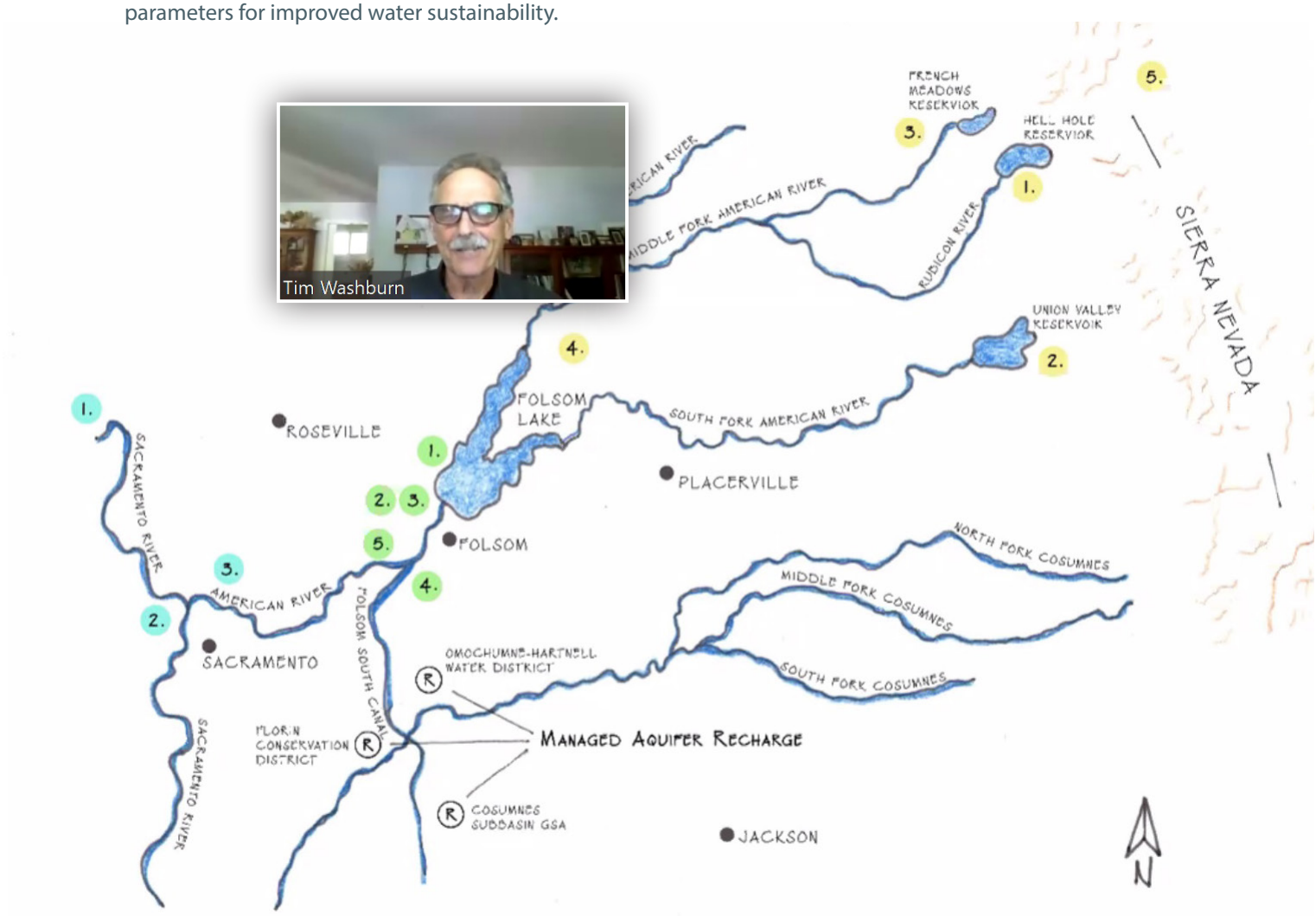


Mr. Washburn's goal is to complete these projects within five years, at a cost nearing $200 billion. For Mr. Washburn, the ends justify the means and the exorbitant price tag: the improvements have a life expectancy of nearly two hundred years or more. As updates and adjustments are made for the transportation and monitoring of water, and as conservation becomes increasingly important with each passing year, Mr. Washburn's motivation is the broader picture, focusing on long-term impact for the Sacramento region and its communities.

Further projects for Mr. Washburn include creating more reservoir space for water, widening of water bypasses in the Yolo and Sacramento County areas, and improving regional water conveyance facilities. These include improving preexisting aqueduct systems and protecting natural groundwater recharge locations, which are under threat by an explosion of housing and commercial developments. His plans for the future include teamwork amongst other major corporations, including SMUD and the Reginal Water Authority, to establish guidelines and parameters for improved water sustainability.

A question-and-answer segment followed, with Mr. Washburn speaking with both students and faculty alike. Lasting just over an hour, the event was hailed as a success. Mr. Washburn was especially pleased at being able to present his topic for the luncheon, having had his previous engagement cancelled in 2020 due to Covid.

The positive reception of the virtual luncheon demonstrates the ability of the Civil Engineering Department, and the willingness of the engineering community at large, to come together and carry on the legacy of Ken Kerri so that future engineers may benefit from his work and far-reaching legacy.



Update On CAMPUS REOPENING

Sac State is moving forward with plans on reopening campus for its Fall 2021 semester.

Prior to the beginning of summer, class schedules were posted, detailing mixed schedules for both in-person and online options, with in-person classes dependent on the current status of the pandemic in order to move forward. On July 27, 2021, University President Robert S. Nelson confirmed the intent to reopen campus. Rules and regulations regarding reopening were announced on that same day. All personnel on campus will be required to wear masks, and all students, faculty and staff will be required to be vaccinated against Covid-19, or apply for a waiver based on religious or medical grounds, by September 13th.

In anticipation of the reopening of campus, it was further announced that the Hornet Commons complex, which broke ground two years ago, will officially open and begin accepting its first student residents in August. The residence, with 284 rooms and 1,100 beds, is intended to erase Sac State's reputation as a "commuter" campus by offering out-of-area students, as well as local students, a community to grow with while completing their degree.

Dr. Ghazan Khan, the Civil Engineering Dept. Chair, confirmed plans were underway to open up as much of the College to students as possible, while maintaining awareness of safety and health. "We are going to have a mix of on-campus and online courses available," he established. "Most labs will be in person or hybrid in format. There are a few labs that will still be fully online. Lectures will be in person or hybrid, allowing students to remain online for some lectures and come to campus on other days." The goal, he stressed, is to facilitate the best possible learning environment for the students while keeping safety considerations in mind, which are paramount.

Clubs will be allowed to return to campus and utilize the classroom and labs for their activities, their outreach to new members, and for participation and preparation for special events, such as the Mid-Pacific Competition, which is currently on schedule to take place in Spring 2022. Although clubs will be allowed to hold their general meetings in person, they will have the choice to decide how they want to proceed with their meetings this fall.

In Memoriam:

DR. CHRIS TOMINE

Former Civil Engineering Department Chair Dr. Chris Shinya Tomine passed away on July 10, 2021. He was 77 years old.

Born on March 15, 1944 in an internment camp for Japanese Americans during WWII, Dr. Tomine grew up in Alameda, CA. He gradated from UC Berkeley with a degree in engineering physics, then went on to pursue a Master's degree in physis, and a Ph.D. in mechanical engineering, from Oregon State University. Dr. Tomine then moved to Sacramento to continue his career with the Civil Engineering Dept at California State University, Sacramento.

Dr. Tomine began his career at the university as a professor, but eventually worked his way up to becoming the Dept. Chair. He also spent many years as the Interim Chair of Asian American Studies as well as the Associate Vice President of Sac State. When he retired in 2008, he left behind a thirty-eight-year legacy in which he instructed students, inspired staff, and helped to bridge the gaps of diversity within the student body.

Post-retirement, Dr. Tomine pursued many varied art projects, including several for the local Buddhist temple in Alameda. To friends and family, he was well known for his cuisine skills and his musical talents.

Dr. Tomine is survived by his wife, two sons, two step-children, four grandchildren, a brother and two sisters. On behalf of the entire Civil Engineering community at Sac State, we offer his family our deepest condolences.

Photo (top): Permission for use was granted by Jeffery Kimoto.

PCI SEMINAR

Highlights Achievements

OF SAC STATE'S PRECAST BRIDGE STUDIO

The 2021 PCI Foundation Professors Seminar was held from June 2nd to June 4th in Sacramento after nearly a year of delay due to Covid-19. Initially, it was to be held on campus, but because of the University's closure, it was held in various locations around the Sacramento area.

Dr. Eric Matsumoto, PE, Professor of Structural Engineering and one of the faces behind Sac State's own Precast Bridge Studio, worked relentlessly to ensure that the conference would still occur. "We were worried it was going to be the smallest [event] due to Covid, but it turned out to be the biggest one ever," he says with pride. There were just under four dozen students, faculty, and industry professionals in attendance from across the country.

According to the Precast Institute (PCI)'s website, the purpose of the yearly event is, "to allow professors of architecture, engineering and construction management… to share best practices for teaching precast, share cutting edge precast industry design practices, and build the PCI network of professors building the future of our industry." Attendees either have, recently have, or are interested in starting up their own Precast Studios like the one found

on campus at Sac State. It is run by Dr. Matsumoto and his colleague Dr. Mikael Anderson, PE, who is the Dept. Chair for the College of Construction Management.

The three-day event included a visit to concrete manufacturing plant Clark Pacific in Woodland (who helped to host the event at their site), a tour of Sac State's award-winning Parking Structure Five, and presentations offered by industry leaders and precast institute professors.

For Dr. Matsumoto's presentation, it was important to stress the importance of mentorship to students. Involvement with the Studio allows undergraduates to engage in challenges and work alongside real-world professionals in the creation, design, and implementation of a proposed bridge. The students that fully immerse themselves in such opportunities are often recognized by companies as potential employees upon graduation. Dr. Matsumoto cited two former students as examples: both were involved with the Precast Bridge Studio and were mentored by peers currently in the industry. Not only did they both graduate and obtain jobs in their fields of interest—one in the precast industry, and one in a bridge consulting firm—they are now both in a position to give back and guide other students. This "closing the loop" gives future generations of participants the same glimpse into real-world application that they themselves were granted.

Many Sac State alumni were present for the conference, each giving testimony to those in attendance that Precast Studios are more than just a "learning tool." Their engaging format and cooperation with precast leaders in the area makes the material tangible, applicable, and authentic for the participants. "It's not just 'what you learn,'" stresses Dr. Matsumoto, "it's the people you interact with and who help you understand the industry…to make that connection."

Sac State's Precast Bridge Studio has also branched outside of the class in the form of the Precast Industry Club, which has the honor of being the only PCI club on the West Coast. While the class and the club are two distinct entities, they are linked in terms of content and extension of knowledge. "We use the club to expand the scope of the impact to students beyond the class," Dr. Matsumoto states. Officers from the club paid a visit to the conference, giving a presentation about their group's history, the importance of its activities (including many that transitioned online after in-person meetings were no longer an option), and examples of ways that members benefited from those unique opportunities.

This Fall will be the fourth consecutive year of the Precast Bridge Studio program. Dr. Matsumoto explains, "It's an immersion experience for students interested in bridge industry. We focus on precast concrete and accelerated bridge construction." Activities will include trips to facilities and workshops with software companies that create the programs used in structural design and analysis. One organization Dr. Matsumoto is thrilled to be working with this semester is CalTrans. "They won't just be doing mentorship of bridge design; they are going to hold a special session on cost-estimating and presentation." Engineering students will also collaborate with construction management students, such as they would in a real setting,

Dr. Matsumoto recognized the importance of showcasing the accomplishments of Sac State's Precast Studio during the Foundation Seminar, and highlighting the potential for success in other Precast Studios. Says Dr. Matsumoto, "I had a number of professors come up to me at the end of the presentation—multiple professors—and say how impactful it was. We felt it was very important to the industry to hear what we pioneered, and what we did it, even through Covid."

"Antiracism and Inclusive Campus Plan"

SEEKS TO INCREASE DIVERSITY AT SAC STATE

In the spring of 2021, a campus-wide plan was initiated by President Robert Nelson to combat racism and prejudice across the University. Titled the, "Antiracism and Inclusive Campus Plan," and sponsored in part by the Division of Inclusive Excellence and the College of Continuing Education, the initiative seeks to create a diverse and inclusive learning environment where all students, regardless of race, ethnicity, disability or origin, can feel welcomed and included.

The initial planning phase of this inter-department coalition was held during the 2020-2021 school year, despite the pandemic's forced limits on communication. More than eighty students, faculty, and staff engaged in dialogue regarding racism, bias, and social justice concerns. These included issues on campus as well as within the community at large. Together, members collaborated on recommendations for both short-term and long-term implementation of policies, goals, and curriculum that seek to diversity the student body, increase transparency of university functions, and engage in greater overall cultural competency.

Dr. Julie Fogarty, an associate professor with Dept. of Civil Engineering, served as the ECS representative on the Action Planning Group: Antiracism Curriculum, Pedagogy, and Assessment for Spring 2021. Her hope is that enaction of the plan will lead to greater representation of minorities in all fields of study, including the faculty that teach those subjects.

Specifically for the Dept. of Civil Engineering, she states, "This increase will hopefully lead to more integrated, diverse engineering teams to increase our profession's creativity, productivity, and ability to solve problems."

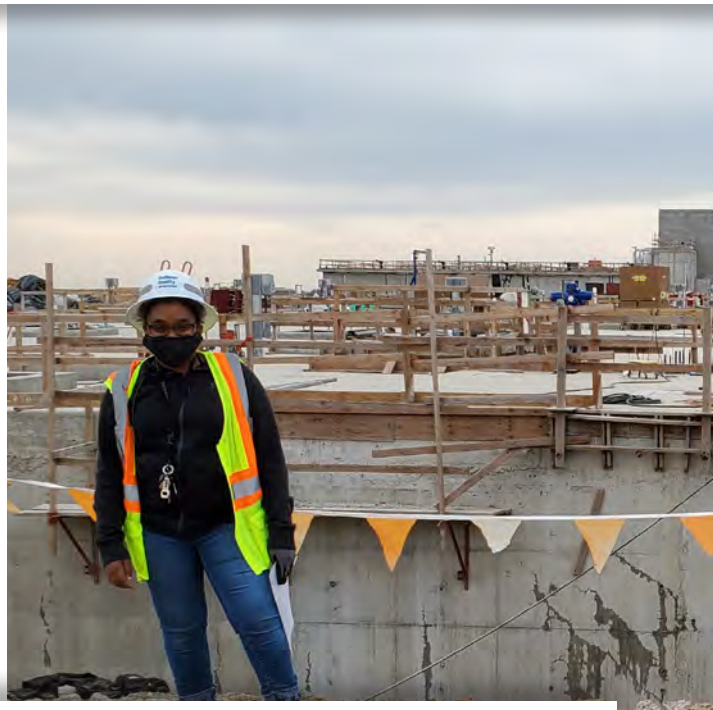
Dr. Fogarty is no stranger to activism in promoting equality within the department itself. She has helped coordinate several projects that provide students direct ways to promote Civil Engineering in younger generations, and encourage careers focused in STEM disciplines. The Writing Partners Program pairs college students with 5th or 6th grade children in Title 1 elementary schools, allowing undergraduates to communicate with the younger students about the field of engineering. The highlight is when the elementary students visit campus at the end of the year, and both the college mentor and elementary student meet and take on a project together. The Hornet Leadership Program Scholars experience, with support from the National Science Foundation, provides STEM undergrads a chance to propose and implement a project geared towards promoting STEM education amongst students at Sac State and around the region.

A third project, promoted by a STEM-NET SEED grant (from the College of Education and Natural Sciences and Mathematics), aims to understand why minority students who choose to pursue STEM subjects fail to complete their intended educational goals. Research includes investigation completed at K-12 and undergraduate levels, and interviews with current K-12 educators, students, and other influential faculty. According to Dr. Fogarty, the data gathered from surveys and interviews will help, "to identify what can be done to increase the recruitment and retention of underrepresented populations teaching STEM to the next generation."

Students, faculty and staff are encouraged to provide feedback regarding the proposed plan during the Fall 2021 Semester. Alumni, Dr. Fogarty states, are already encouraged to become mentors to current or college-bound students in K-12 programs, such as the ones listed above. She references Christian Torres, an alumnus who decided to establish a scholarship to help other minority students succeed in pursuing their careers after he struggled through undergraduate studies as only one of two students of color in his major. Dr. Fogarty states alumni support and action, especially graduates from underrepresented populations, will help, "…to increase the visibility of our profession to students who may have a difficult time seeing themselves as an engineer, and increase the accessibility for pursuing a degree and subsequently a career in Civil Engineering."

Field Trip *to* EchoWater Treatment Facility

Rosa Rios-Dominguez is a Civil Engineering undergraduate who is interested in water resources and the Geotechnical engineering field. She is currently set to graduate in the Fall of 2021. This past spring, while enrolled in "CE 164 -Reinforced Concrete Design" taught by Dr. Eric Matsumoto, she and several classmates were given the unique opportunity to visit the Sacramento Regional Wastewater Treatment Plant (operated by RegionalSan). Specifically, the students were given access to information on the new EchoWater project that is set to meet new state guidelines regarding wastewater management. Rios-Dominguez took some time to share what the experience meant for her.



Let's Talk about the facility: what did you see, what did you do, and what was demonstrated?

We started by meeting at the contractor's office where most of the prerequisite work took place and were shown a detailed presentation providing a breakdown of the entire structure (live and CAD). At the end of the presentation, we were able to discuss and ask questions about the concrete material used, the specifications used, the finalized construction schedule, and were provided access to many of the technical datasheets. From the office, we went on to tour the under-construction facility, with our main focus on the Disinfectant Contact Basin (DCB) that serves to remove smaller pathogens, viruses, and bacteria.

Were there any special safety regulations, other than wearing masks, that you had to do specifically with regards to Covid?

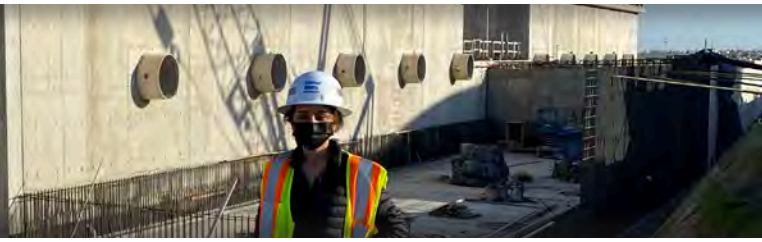
There was ample paperwork to complete and turn in due to the pandemic. Not only was my group and I exposed to the construction hazards, but we all were exposing ourselves to the virus. We took the necessary precautions by following all the CDC guidelines and still managed to see and learn a lot about the project!

What did you find most interesting about the experience?

What mattered most was to retrieve as many resources and information as possible to include it for our project report that my team and I were working on. However, it also helped to network and provide connections to students, especially during the pandemic where contact is limited. The field trip also helped when it came to my studies for my environmental class in the subject of wastewater treatment. I definitely enjoyed the tour and talking with the contractor and others on the site. I learned from this field trip and the RC class project that technical knowledge is useful for calculations and drawings, but what drives a project towards success is organization, communication, and leadership.

How did this trip influence your understanding of class material? Did it influence you in any other ways?

This field trip helped my team and I grasp the purpose of our project for CE 164. Taking pictures of the area gave us a realistic perspective of how all the small components such as drawings, calculations, scheduling, and communication could build massive structures. This material definitely helped when it came to the reinforced concrete exams, but this project mostly prepared us for Senior Project and other future projects for our careers. This experience taught us the importance of good teamwork, public speaking, communication, reliability, and perseverance. This class and project were the most difficult assignment I have encountered, but also the most rewarding.



Do you believe it would be important for future classes to visit the same facility in the future?

I do believe there is value in learning about this project, as water is an important factor not only technically but within our daily lives. The EchoWater Project was first initiated when California issued stringent treatment requirements; therefore, this prompted RegionalSan to include a tertiary level treatment that will further treat the water. The entire process is much more appealing in person when visually seeing all the mechanisms and devices utilized to manage wastewater.

Were there any special safety regulations, other than wearing masks, that you had to do specifically with regards to Covid?

There was ample paperwork to complete and turn in due to the pandemic. Not only was my group and I exposed to the construction hazards, but we all were exposing ourselves to the virus. We took the necessary precautions by following all the CDC guidelines and still managed to see and learn a lot about the project!

Is there anything else you'd like to share?

I would like to thank my team: Candice Mitchell, Kevin DiGioia, Alex Milan, and Danacka Whittington. I appreciate all the countless hours and long nights dedicated to completing this project and hope you take the best parts of this experience with you through your professional journeys. I would also like to thank Professor Matsumoto for making this field trip possible and providing us and the class guidance when we needed it most. Thank you!

Graduation

"CARMMENCEMENT" CEREMONY CELEBRATES STUDENT PERSEVERANCE

Between May 21st and 22nd, nearly four thousand students decorated vehicles and drove through an hour-long procession to commemorate their official graduation from Sac State.

The "Carmmencement," as it was fondly dubbed, replaced the traditional commencement celebration usually held at the Golden 1 stadium. Ay of the nearly 17,000 students who graduated between Fal l2019 and Summer 2021 was eligible to participate. Staff and faculty from all departments and positions lined the winding path to cheer on the graduates. Sac State President Robert Nelson was also elatedly waving to students as they drove past, overjoyed to have found a way to celebrate those that had put in so much work to graduate in the midst of the global pandemic.

"We're remembering what it's like to be a Hornet family," Nelsen said.

Bystanders waved signs as music blared, and though students and their families were socially distanced from classmates and professors, they made the most of the festivities by waving and calling out to familiar faces as they drove past. For a combined span of graduation classes that have gone through so much over the past year and a half, they were finally granted their moment to shine.

Graduates, we commend and congratulate your achievements. Stinger's Up!


Congrats
GRAD!


MADE
AT SAC
STATE

EVENT UPDATE

Our 9th Annual Civil Engineering Golf Tournament is Moving Forward!

Friday, October 15, 2021 | 7:30 am

LOCATION UPDATE!

Our tournament will be held at the Bartley Cavanaugh Golf Course.

Bartley Cavanaugh Golf Course
8301 Freeport Blvd,
Sacramento, CA 95832

Each firm will be asked to purchase a foursome, send between 1 to 4 players, and will be matched with students interested in the general area of the firm's business.

Proceeds support the Sacramento State Department of Civil Engineering.

For more information or to register please use the link below or contact Ashley Mihok at ashley.mihok@csus.edu.

Download: Sac State Civil Engineering Department Annual Golf Tournament Registration Form

Want to sponsor the event or our department?
Visit our webpage at www.csus.edu/ecs/ce for more info.

Photo: Thomas Park thomasparkart.com

Save the Date!

FOR "AN EVENING WITH INDUSTRY"

The Dept of Civil Engineering's annual "An Evening with Industry" event will take place on November 2, 2021 at 5:30 PM. The event will be held virtually online with program details to follow soon.

The guest speaker for this year's event is Roberto Aragon. He will discuss recent developments in the real estate market in the Sacramento region and the role of civil engineers play.

Those interested in participating are encouraged to register early, as spots fill fast for this event. Contact Ashley Mihok to reserve your spot: ashley.mihok@csus.edu.

SAC STATE PROFESSOR

Honored with Transportation Award

Professor Masoud Ghodrat Abadi received the Outstanding Transportation Educator Award for 2021 in a ceremony held on July 23.

Provided by the Western District Institution of Transportation Engineers (ITE), it aims to recognize and acknowledge individuals who have made an exceptional contribution to the realm of transportation education. Winners are selected based on their creativity in encouraging students and igniting their interest in this field of work, and for their contributions to the ITE itself.

Dr. Abadi's receipt of the 2021 award recognizes his contributions to students and the transportation field in two ways. First, the award acknowledges the unique ways in which he sought to engage his students after classes transferred online due to the pandemic. Dr. Abadi states that, "I did my homework," regarding new ways to interact with students. He sought to make each topic relevant by incorporating real-world examples so concepts would not seem distant and unrelated.

Slightly ironically, the reason behind the necessity for online education became the main source of relevancy chosen by Dr. Abadi: "In my engineering and statistics classes, I bring in lots of examples from Covid-19. 'So, what is a 95% effectiveness in vaccines?' 'Why do people quarantine for 14 days? Where does the 14 days come from?' 'What is flattening the curve?' These are all topics that I cover in class, but before, I'd never talk about that."

Dr. Abadi committed himself to creating engaging and interactive Zoom classes for students by utilizing breakout sessions to encourage discussion and idea sharing. "I was really impressed by how much students were able to adapt themselves to this new situation, to this new environment."

As a member of the ITE Transportation Education Council, Dr. Abadi also had the opportunity to showcase his experiences and online instruction methods in a webinar to his transportation colleagues. Titled, "How To Successfully Teach During a Pandemic: Contrasts between Audiences of College Students and Working Professionals", he addressed the challenges and difficulties, as well as the opportunities and benefits of an online curriculum.

The Award also commemorates Dr. Abadi's achievements in keeping an active the ITE club on campus, for which he is the faculty advisor. For the first few months into the pandemic, the club faced difficulties as in-person activities were nonexistent. Revitalization came part due to the encouragement from club officers, who wanted to find a way to continue activities in spite of the "new normal" of the world. Inspired by his students' motivation, Dr. Abadi was able to secure speakers who were not only willing to interact with students via Zoom, but were experts from across the country. Presenters were leaders in the Transportation industry, from as local as San Francisco to as far away as the Texas Transportation Institute. Topics ranged from automated transportation advancements to how the Covid-19 pandemic was shaping current trends and developments within the industry itself.

> *I really appreciate all the **ITE** officers. Without their help, I couldn't have kept this chapter active. I owe this great group of students for this award.*

Not one to take all the credit, Dr. Abadi recognizes the ITE club officers for the Fall 2020 and Spring 2021 semesters, who worked diligently to schedule meetings and get the word out to other undergraduates that the club was still active. "I really appreciate all the ITE officers. Without their help, I couldn't have kept this chapter active. I owe this great group of students for this award."

The greatest joy, Dr. Abadi says with pride, is being recognized along with so many other well-known academics, including peers he has worked beside and mentors he has learned from. "It's an honor that my name will be next to the names of some of these people—for example, Dr. Chris Monsere, from Portland State University and Dr. Rhonda Young from Gonzaga University. I would like to thank Dr. David Hurwitz and Mr. Patrick Marnell for nominating me for this award."

We at Sac State congratulate Dr. Abadi on receipt of this award and for making such a positive impact on his students and the transportation community at large.

Graduate Spotlight: Engaging the Enviornment with Patrick Maloney

Patrick Maloney graduated in Spring 2021 with his Master of Science in Civil Engineering, with a focus on Environmental/Water Quality Engineering. Looking for a fresh start in a new career, Maloney and his wife, Kelly, moved to Sacramento in 2019. After more than ten years in the Bay Area, they were seeking a "slower pace of life" and a chance to be closer to family. Maloney took some time to share with us his experience at Sac State, and the things that impacted him the most, from dedicated faculty, to a little newsletter that publishes three times each year…

What is your background? Did you previously pursue engineering, or were you in another field?

I went back to Sacramento State after graduating with a BS in Chemistry from U.C. Berkeley and working as a Laboratory Analyst for five years at the Marathon Refinery in the Bay Area. My initial academic interests focused on organic chemistry and small molecule discovery, and while performing quality assurance in the refinery laboratory, I became interested in air quality and environmental processes. Much of the operational work was in tandem with engineering teams. It was because of my experience working with engineers that I knew I wanted to become one. I learned to appreciate their problem-solving approaches and wanted to apply it to a career in a more sustainable engineering career field like water and air resources.

Why did you choose to attend Sac State?

Sac State drew me in via a publication called, CE Connection – Ever heard of it? In all earnest, CE Connection, the Water Seminar Series hosted by the Office of Water Programs (OWP), and the Ken Kerri Endowment Luncheon were all first points of contact for me at the university. After being out in the workforce for a few years, I knew that a strong established network would help me bridge graduate school and my new career in engineering. I could see that Sac State made a significant effort to connect students to local industry and state agencies.

What piqued your interest about your particular subject of study?

California's relationship to water is so rich and complicated, with some of our greatest challenges still ahead of us. Environmental and water resources engineering leaves so much room for advancing sustainable and practical engineering solutions. I hope to carve out a role using my technical background to carry out the essential work that civil engineers will do to tackle the challenges of climate change.

Are there any professors or faculty that helped influence your career path?

Professor John Johnston was so helpful with directing all the beginner enthusiasm I had when I arrived at Sac State. He was the first faculty member that I sat down to chat with. I was lucky enough to take his undergraduate environmental engineering class during my first year which has been foundational to my career. I would be remiss if I did not mention Professor Amir Motlagh too. He helped me sharpen and develop essential skills for taking on my graduate project and was always willing to connect when the pandemic hit. Erik Porse at the Office of Water Programs was also a huge inspiration, not only as a researcher and mentor but as an expert who is very in tune with the more subtle aspects of water policy. I even took his Water Policy in California class for fun during my last semester. I highly recommend it!

Are there any classes that have especially been influential in your academic career?

Systems Analysis of Resources Development (CE 250) help me reframe how I thought about cost benefit analysis and optimization within the world of water, engineering, and life. I also very much enjoyed my graduate level statistics class with Professor Masoud Abadi. I teamed up with Professor Abadi to take on an extra project using the data analysis skills learned in his class. We have a paper submitted to the Transportation Research Board annual meeting on the visual attention of bicyclists.

Tell me about your experience with the Office of Water Programs.

I worked as a graduate student intern with the Office of Water Programs (OWP) for my entire time at Sacramento State. The researchers there were a wonderful resource that allowed me to keep a foot in both research and industry. Projects that I worked on included a document on exploring utility resilience within the context of climate change, and more recently, a Regulatory Impact Assessment which examined the costs and benefits associated with water conservation legislation. It was a wonderful opportunity to learn more about economic impacts of policy as they relate to water conservation.

What are your plans post-graduation?

The Monday after the official end of class, I started working for Kjeldsen, Sinnock, and Neudeck (KSN) Inc., a Stockton-based engineering firm, out of their West Sacramento office. KSN provides civil engineering services for public works infrastructure, transportation, water resources, commercial, industrial, and institutional projects, serving both private and publics clients. The learning curve has been steep but very enjoyable. I am very excited to be part of dynamic, talented and fast-paced team.

Lots of life other life events are happening--my wife is pregnant with our first child and is due at the end of December (hooray!), and we just bought our first home in Land Park. I am so grateful to my wife, Kelly, and my parents for being so supportive during my time at Sac State. Going back to school in your 30s and changing careers is a daunting process, but I had so much fun, support and love along the way

Student Spotlight: Concrete Creations with Jason Dismant

Jason Dismant is a current graduate student pursuing a Master's degree in Civil Engineering. A native of Phoenix, AZ, he enlisted in the Navy after high school. He received high marks as a Submariner, and then was reassigned to the U.S. Naval Academy where he graduated in 2012 with his bachelor's degree in Physics. He went on to serve in the Armed Forces for three additional years before being medically discharged in 2015. After completing his service, Dismant and his wife, Holly, decided to move to the Sacramento region with the intention that both would attend UC Davis: she wanted to pursue a master's degree in forensic science, and he would pursue engineering.

However, Dismant began having reconsiderations after the move. He was not a fan of the proposed university's quarter-based semesters. He was also not interested in the "research" aspect of his education. "I didn't want to do research," he recalls. "I wanted to explore 'practicality.'"

Dismant took a survey class at a local community college offered by a professor that also taught at Sac State. The survey class intrigued Dismant, and with the professor's encouragement, he began to examine Sac State's graduate Civil Engineering Program. He researched faculty members and was impressed that they were all active in their respective fields. Having a variety of experienced instructors was one of the main factors that led to his decision to pursue his Master's with Sac State.

Why pursue Civil Engineering in the first place? "To me," says Dismant, "the way forces and torque act on structures makes sense me. I can picture how exerting a force on a component will affect the rest of a structure/object. It clicks; I get it. I can build models in my head and picture how it reacts to loads. That's when the light clicked, 'Yep! I'm going to be a Civil Engineer!" Originally, Dismant wanted to focus on steel design, but after taking the reinforced concrete class taught by Dr. Eric Matsumoto, his passion changed. "I could see where stresses are experienced and how concrete cracks propagate. I can sit at a computer for hours and hours designing a structure, checking equations, and analyzing the model. I love it!"

Dismant has also already begun work on his graduate project: a precast concrete canopy in the engineering quad. With graduation projected for December 2022, he wants to make sure he and the three other grad students assigned to the project have enough time to complete it. "As a student in Dr. Matsumoto's concrete design class one of the projects we had to work on was the precast concrete canopy: we had to come up with an idea and a design, a proposal, etc." After putting in nearly 160 hours of work into the design of the project, he approached Dr. Matsumoto and asked if he could help make the vision a reality. "What really drove me into this project is that I put in so much effort as an undergraduate, and Sac State has given me a chance to prove myself, so I want to give something back."

"Fellow graduate students and I did the analysis and calculations for it last semester, and now it's pretty much designed," continues Dismant. He plans on collaborating with students from the art department regarding architecture and outward design to create a structure that is aesthetically pleasing, so visitors will be drawn to it to learn more about how concrete structures are held together and react to loading. He also plans on working with construction management graduates to discuss logistics and initiation of the building phase.

One further possibility is to have QR codes imprinted on sections of the structure, allowing smart phones to display an image of the interior of the structure: what is going on inside? How do parts interlock and work together to create what is displayed before audiences?

Post-graduation, Dismant's first goal will be to get his PE license. Thereafter, he hopes to continue working at his current company, Flatiron, whose current project will continue through 2024. Afterwards, Dismant has his eyes set on Oregon.

"Ultimately, I want to design and build nuclear power plants." Dismant explains that a company in Corvallis, Oregon is patenting a new type of reactor cooling system that can cool itself without having to rely on electricity, thus preventing catastrophes such as the one seen in Fukushima roughly a decade ago. "I used to work on nuclear power plants in the Navy. I know how they operate, and I want to be able to build these safe nuclear reactors so the world doesn't have this energy crisis. These are safe and can be built anywhere, and I want to help give the world the power that it needs. Places like California need power and this is a safe way to be able to do that. I know this job is out there, and 20 years from now the job will still be there. I might as well shoot for it and 'be the one' to get it."

SACRAMENTO STATE
Department of Civil Engineering

California State University, Sacramento
Department of Civil Engineering
6000 J Street, MS 6029
Sacramento, CA 95819
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