

CONNECTION

SPRING 2013 | ISSUE NO. 10

Your Link to the Department of Civil Engineering



Cover photo by Sacramento State/Steve McKay

Save the Dates—See the stories inside!

- ▼ **April 8-12:** *[Alumni Week](#)*
- ▼ **April 10:** *[Ken Kerri Endowment Fund Luncheon](#)*
- ▼ **May 10:** *[Civil Engineering Golf Tournament](#)*



SACRAMENTO STATE
Department of Civil Engineering

CHAIR'S MESSAGE



Dear Friends and Colleagues,

Welcome to the Spring 2013 edition of our alumni newsletter CE Connection. As you read this issue, I hope you will be proud of the work done within the Department by our outstanding students, faculty and staff.

The Department maintains strong ties with its alumni and with the civil engineering community, yet alumni and industry leaders continue to ask how they can become more involved with the program. I would like to use this opportunity to inform you about the different ways you or your firm can become more actively involved in our program:

Alumni Week – Every April, alumni are matched with civil engineering courses and scheduled as guest speakers to discuss trends in their field and lessons learned after college. (See page 4.)

Ken Kerri Endowment Fund Luncheon – The highlight of Alumni Week is the annual Ken Kerri Endowment Fund Luncheon, which brings together members of the civil engineering community to support student scholarships and special faculty-student projects. (See page 4.)

Golf Tournament in May

The first annual Civil Engineering Golf Tournament was launched last year as part of April's Alumni Week but was held in May due to rain. This year, the golf outing, which includes lunch, is scheduled to begin at 8 a.m. on May 10 at Mather Golf Course.

The cost is \$125 per person. To learn more details or to sign up to participate, please contact Neysa Bush at nbush@csus.edu or 916-278-6982.

Golf Tournament – Every May, the Department welcomes golfers of all skill levels and industry sponsors to participate in a golf tournament to support scholarships and Department activities.

Senior Design (CE 190) Clients and Technical Mentors – Every semester, the senior design project seeks both project clients and technical mentors who help provide guidance and evaluate the work of small groups of graduating seniors. (See page 6.)

Civil Engineering Seminar (CE 1A) Guest Speakers – Every semester, guest speakers introduce students to the different disciplines and career opportunities within the field of civil engineering.

Evening With Industry – Every fall, the Department seeks panelists and industry sponsors to take part in this unique interaction between students and industry. (See page 5.)

Professional Student Organizations – Student chapters meet monthly and seek both guest speakers and hosts to discuss or tour local projects. These organizations also have teams that would welcome professional guidance on activities related to annual competitions.

Engineering Career Fair – Every March, the College Career Services Center hosts a career fair that brings together employers seeking to improve or expand their workforce and students looking to fill those needs.

Contributions to CE Connection – If you have a story idea or can share information about what you or other alumni are doing, we want to hear about it. Send photos if you have them!

Advisory Committees – The Department meets regularly with local leaders in the civil engineering industry who volunteer their time to provide guidance to the program and to help plan industry events.

Part-Time Instructors – The Department constantly seeks qualified temporary or part-time instructors who can meet the time commitment and demonstrate enthusiasm for civil engineering while helping meet student demand in the program.

Donors – If you are unable to contribute your time, you can still support the program through a donation. The easiest method is through the Department website (just click on the link that says “Support the Department” and designate that your gift go to the “Civil Engineering Department”).

If you have any questions or would like information about how to get involved with anything I’ve described above, please do not hesitate to contact me by phone at (916) 278-5248 or e-mail at kevan@csus.edu. I would enjoy hearing from you, and I thank you for your support.

Sincerely,

***Kevan Shafizadeh, PhD, PE, Chair
Department of Civil Engineering***

On the cover...

As the Fall 2012 semester came to an end, Gilbert Penales was one of 55 Civil Engineering students who crossed the stage to get their bachelor's degrees. Four students graduated cum laude (with honor), and one each magna cum laude (with great honor) and summa cum laude (with highest honor). In addition, seven students completed their master's degrees in Civil Engineering.

Alumni Week: Kerri Luncheon To Feature Bay Bridge Engineer, Volunteers to Speak in Classes

The lead Caltrans engineer for the \$6.3 billion Bay Bridge project will offer insights on the 11-year construction process at this year's Ken Kerri Endowment Fund Luncheon. The annual event brings industry professionals, students and faculty together to share information and network.

The luncheon will take place at the midpoint of Alumni Week on Wednesday, April 10 from 11:30 a.m. to 2 p.m. in the Sacramento State Alumni Center. Tickets, which are \$25, can be reserved by contacting Neysa Bush at 916-278-6982 or nbush@csus.edu.

As a senior bridge engineer for Caltrans, Dr. Brian Maroney, PE, led a team working on innovative approaches for reconstructing the Bay Bridge even before the project was officially launched in 2002. The project became necessary after a section of

the bridge collapsed during the 1989 Loma Prieta earthquake. The replacement span is engineered to withstand the largest earthquake expected over a 1,500-year period.

Over the past decade, the bridge project, one of the most expensive construction projects ever undertaken by the State of California, has stirred both controversy and admiration. It is the largest self-anchored suspension bridge in the world. The official opening is expected to take place in time for Labor Day this year.

The luncheon, which supports the Ken Kerri Endowment Fund by encouraging contributions (please see box for how to donate), is the highlight of Alumni Week, April 8-12. During the week, alumni and other professionals return to campus to offer students in a number of classes a real-world perspective on civil engineering careers and options.

Rick Liptak, PE, President of Dokken Engineering, is already organizing volunteers to speak to different classes throughout the week.

"Speakers are encouraged to talk about their college education experience, their professional history, and the major projects they have been involved with," Mr. Liptak says. "And I encourage them to bring pictures – the students always ask to see photos of the projects we work on."

Those interested in volunteering to speak in civil engineering classes during the week of April 8 are encouraged to contact Mr. Liptak at rliptak@dokkenengineering.com or 916-858-0642. He works to pair speakers with classes related to their expertise.

"I remember when I sat in classes that alumni spoke to – all I could think was, 'Wow, this person has a job,'" Mr. Liptak says. "In a down job market, it is especially important for students to hear from those of us in the profession and to understand the opportunities available to them."

Donate to Endowment

The Ken Kerri Endowment Fund is used by the Civil Engineering Department to enhance the education of students. You can add your support to this worthy cause by:

Sending a check made out to the Ken Kerri Endowment Fund to the Department of Civil Engineering, Attn: Neysa Bush, California State University, 6000 J Street, Sacramento CA 95819-6029.

Going online to www.ecs.csus.edu/ce and clicking on "Support the Department" to use a credit card to donate. Please be sure to designate your donation for the Ken Kerri Endowment Fund.

Evening with AN INDUSTRY

Fall Event Attracts Record Number of Participants

As keynote speaker Joseph Countryman, PE, provided insights about flooding hazards in the Central Valley, An Evening with Industry hit its own high-water mark. The ninth annual event, which provides an opportunity for professionals and students to network, drew a record crowd of close to 200 attendees.



Sponsored by 14 professional private companies and public organizations, the evening kicked off with a presentation by Mr. Countryman, who is a member of the Central Valley Flood Protection Board. Shortly after he joined the Board last April, it adopted a flood protection plan designed to improve public safety, ecosystem conditions, and economic sustainability in the valley.

To answer the question of why a new strategy for flood control is needed, he walked the audience through the history of the original Sacramento River Flood Control Project, a joint federal/state initiative authorized in 1917. Spurred by the 1907 and 1909 floods on the Sacramento River, engineers designed what they believed would cope with these “record” floods. Unfortunately, later events made clear that the Feather and American Rivers were a much bigger threat for the area and far better protection was needed.

Despite this shaky beginning, Mr. Countryman said, the project has been a great success at protecting people and property because of additional steps taken over the years, such as building large dams upstream. Today, with new knowledge about the risks and a different

sensitivity to environmental concerns, stakeholders are moving forward with efforts to improve flood control and enhance safety.

Mr. Countryman’s talk was followed by a panel of local professionals who answered student questions about career paths and options. Participants included Sacramento State graduates Brian Poole, BS 2001, PE, U.S. Army Corps of Engineers; Nicole Bieniek, BS 2010, Geocon Consultants; Steve Lynch, BS 2007, Granite Construction; Fran Borcalli, BS 1964, PE, AG, a private consultant; and Rob Burns, BS 2008, MS 2011, PE, Caltrans. Also on the panel was Heather Yee, PE, TE, a graduate of Cal Poly, San Luis Obispo who works for the Sacramento County Department of Transportation.



Evening with Industry Sponsors, Fall 2012

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| MBK Engineers | Kleinfelder |
| Magnus Pacific | Dokken Engineering |
| Granite Construction | Geocon Consultants, Inc. |
| Miyamoto International, Inc. | Wood Rodgers, Inc. |
| US Army Corps of Engineers | City of Sacramento, Dept of Utilities |
| HDR, Inc. | |
| Sacramento Regional County Sanitation District | Carollo Engineers |
| | Shannon & Wilson, Inc. |

Student Takeaway from CE 190: Teamwork and Confidence

This is the second in a series of articles about CE 190, the senior project class. In the last issue, we looked at why CE 190 is an important capstone course. The story for this issue reflects the experience of three student team leaders in CE 190 in Fall 2012. In our next issue, we will hear from industry professionals who volunteer as mentors in the class.

The seniors who enroll in CE 190 know they are just a semester away from collecting the Civil Engineering degree they have worked so hard for – and they know that CE 190 will challenge them to bring together everything they have learned in a single, practical, hands-on project. What they walk away with depends, in many ways, on how much they throw themselves into the work.

The Fall 2012 cycle of CE 190 comprised two classes taught by Dr. Matt Salveson and Dr. Ed Dammel that focused on seismic retrofitting and rehabilitation of the Department of Motor Vehicles (DMV) headquarters in Sacramento. Students were placed into teams to respond to a mock request for proposals (RFP) by preparing and presenting bid and design proposals to their “clients” and the public.

Students who led three of the CE 190 teams say they came away with an appreciation for the importance of teamwork, as well as a better understanding of their own capabilities.

“CE 190 is a great opportunity to get a feel for what the industry is like in the working world,” says Nick Graves. “You learn how to work with team members under stress, in coordination with working professionals and other groups. And you gain a lot of insight into how you need to approach projects.”



The most valuable lessons for Nick came from managing a team. He quickly found that some students were self-motivated while others needed more hands-on management.

“You need to be open to the fact that everyone works differently,” he said. “You have to learn how to pick up on cues from different people on what is the best way to manage them to get the work done.”

Since Nick’s post-graduation job is with the Calaveras County Department of Public Works, the private sector perspective of the team’s assignment has not been immediately relevant for his work. The lessons about teamwork and communicating with industry professionals, however, have remained with him.



Marvin Marshall, another team leader, knew from the beginning what he wanted to get out of the CE 190 experience. The DMV project was a structural engineering one and he is more interested in transportation engineering, having spent five years interning in the City of Sacramento’s Department of Transportation. So rather than become immersed in

technical structural details, he pursued the team leader role to learn more about managing projects.

An earlier class, Civil Engineering Professional Practice, had familiarized him with the concepts and jargon of project management. CE 190 was a chance to implement those concepts and see how the process worked from an initial proposal to a final submittal. He hopes the skills he learned come in handy at his new job in the Land Development group at Kimley-Horn and Associates.

“I came away with a newfound respect for project managers,” he says. “Managing people is hard work. When it comes to the technical aspects of the project, anyone that took the classes we did and graduated could do the work. But leading people,

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seeing the big picture and getting everything to come together is really tough.”



The question of leadership was central to Jennifer Ramponi’s decision to take on the project management role for her team.

“I actually didn’t know if I was going to be a good leader, and this was an opportunity to see what the role would be like,” she says. “You have a lot of responsibility because if anything falls through the cracks,

the project manager has to step in and pick up the slack.”

The experience showed her that project management can be enjoyable and something that she would like to pursue in her career. She says it also gave her the confidence to do well in job interviews. Currently, she is an assistant transportation engineer for Drake Haglan & Associates in Rancho Cordova.

“Overall, CE 190 was a really good class,” Jennifer says. “It helps prove to yourself that you can stand up and make a good presentation to the general public about a project. It was nerve-wracking and very difficult – but also very rewarding when we got it right!”



Sac State Team Scores 4th SEA OCC Win

For the fourth time in five years, a team of Sacramento State civil engineering students took first place in the annual design competition sponsored by the Structural Engineers Association of Central California (SEA OCC). The students outscored their counterparts from UC Davis (who won in 2011), University of the Pacific and Chico State.

The structure the students built achieved the highest maximum force capacity load during testing – just barely beating University of the Pacific. With that win accounting for 80 percent of the overall score, they also had to do well in the design presentation phase to keep competitors from edging past them.

They succeeded, winning \$1,000, a plaque and valuable recognition for both themselves and the department. The members of this year’s winning team were Chris Ellicock, Adam Youngson, Nick Hamann, Alban Gjongecaj, Max Hardy and Vandalist (“Liz”) Kith.

Their assignment was challenging, according to Dr. Benjamin Fell, PE, who has coached teams each year since joining the Sacramento State faculty in 2008.

“The structure looked somewhat bizarre because the squad was given a 7-foot-by-2-foot envelope in which to build, plus a rectangular opening on the left that had to be clear of any members,” he said. “There were also time constraints and minimal building material, so plywood was used in place of the steel nail plates that would commonly be used at wood-to-wood member connections.”

It was the third year in a row that Sacramento State has hosted the competition – “a nice opportunity for us to showcase our facility,” Dr. Fell says.

SEA OCC winners stand by their winning design.

ALUMNI SPOTLIGHT

Pamela Creedon: One Passion, Multiple Careers

As Executive Officer of the Central Valley Water Quality Control Board, Pamela Creedon, PE, BCEE, is in a pivotal position to protect California's water. The organization that she leads may be one of only nine regional boards in the state, but it is by far the largest, covering 40 percent of the state's land area and stretching from Oregon to the northern tip of Los Angeles County. The board provides oversight for half of the state's water supply, as well as drinking water for 25 million Californians.

Her current post might come as no surprise to students who remember her at Sacramento State. Water resources engineering was a passion for Ms. Creedon, so when she graduated with her Civil Engineering bachelor's degree in 1979 she thought she knew what she wanted. However, her career path took several side trips before she stepped into the water quality leadership role in 2006.

"I was very engaged in college in the student chapter of ASCE and other activities, and when I graduated I had many different career opportunities," Ms. Creedon explains. "I had fallen in love with water, so I went into water resources engineering with a private firm. But I did not enjoy it as much as I thought I would, so soon I started a career with Chevron."

Nine years at the Chevron Corporation gave her plenty of management training and experience, but less practical engineering experience than she wanted. When she started a family, she consulted with her former



Pamela Creedon

professor, Dr. Ken Kerri, about a possible career change.

"I had been away from hard engineering, so the question really was did I have the ability and enough confidence to start over; I didn't even have my engineering license," she says. "It was through Dr. Kerri's counsel that I decided to leave Chevron in 1989 and start over in water quality."

Ms. Creedon found a job at the Lahontan Regional Water Quality Control Board in Victorville and eventually migrated to the Central Valley board. Once there, she became a graduate student at Sacramento State in 1992. She worked full time, first for the board, then for private consulting firms and later for the board again – all while attending classes part time. She earned her master's degree in 1996.

"It was tough, but also a lot of fun," Ms. Creedon says. "It is a good experience to go back to a campus and be around all of that young energy. The curriculum had really changed and expanded, so it was a wonderful time, even if it was challenging."

At the same time, she became involved in Sacramento State's Environmental Engineering and Water Resources Graduate Program Industrial Advisory Board as a student representative. Today, she remains on the board as an industry professional. She sees it as an important way to bring industry perspective to the academic world.

"When I came out of school, I had skills that people wanted," she says. "It is important to keep education for students focused on that. I've been very happy at every step of my career with what I've been able to do – and the foundation for me to be able to do it all was Sacramento State."

Lab Experience Helps Attract Next Generation of Civil Engineers

When more than 100 fifth graders from Howe Avenue Elementary School visited Sacramento State in December, they got an early taste of what higher education is all about. That “taste” included Jolly Ranchers candy, Bubblicious gum and pretzels once they arrived in the Structural Engineering Research Laboratory.

It wasn't the treats that got their attention, however. Dr. Eric Matsumoto and nine Civil Engineering undergraduates led the fifth graders in a series of hands-on activities and demonstrations that kept them engaged and excited. They learned that concrete canoes float, conducted tension tests with Twizzlers licorice, and witnessed an explosive concrete cylinder test.

The students also competed with each other in a shake table contest, constructing a multi-story building weighed down with candy and gum. The winners were the ones whose structures survived the simulated earthquake – and their prizes were the treats.

“Our Civil Engineering students put on quite a show,” says Dr. Matsumoto, “It took a lot of preparation, but it was extremely worthwhile. The elementary students needed to see that they have great opportunities for their future, and they were clearly excited to learn about civil engineering. Just as gratifying was watching our undergraduates nurturing the next generation and enjoying every minute of it. Smiles were on everyone’s face.”

Under a program put together by Dr. Chia-Jung (Claire) Chung in Sacramento State’s College of Education, the students also toured the library, the athletics facilities and the Music Department. “The program is intended to plant a ‘seed’ in the students’ hearts and help them understand the rich potential for their futures,” said Dr. Chung. “The Civil Engineering lab was a highlight for the students and teachers. After the shake table competition, several students told me they want to be engineers!”

The students’ experience in the Civil Engineering Department stayed with them long after the visit was over, according to their teacher, Teresa Burke.

“They had no idea what the word ‘engineer’ meant, but today they use it in their speech with a comfort that is promising,” she wrote to Dr. Matsumoto



in a letter of appreciation. “You touched so many students by connecting complicated concepts to pretzels and candy! They not only learned a great deal, but they had such fun doing it.”

Dr. Matsumoto, who conducted a similar session several years ago, is not the only professor involved in educating young students about civil engineering as a potential profession. For the past two years, Dr. Benjamin Fell has conducted workshops for junior high and high school students to expose them to what being a civil engineer means.



Students

ASCE Awards...

Sacramento State took home three student awards and scholarships from the ASCE Sacramento Section banquet in September. Ashley Moran was named Outstanding Student, while Adam Youngson was honored for Professional Service and Stacy Turner won an award for academic achievement.



Stacy Turner, Ashley Moran, Adam Youngson display their ASCE awards.

Transportation Symposium...

Reaa Ali was the one student selected by the Civil Engineering Department to receive a stipend to attend the 18th California Transportation Foundation (CTF) Transportation Education Symposium last November. She was one of 36 students invited to attend the interactive event, which gives students an opportunity to meet with state transportation leaders, enhance their understanding of the professional field, and get career advice.



Reaa Ali is greeted by Heinz Heckerth, CTF founder and emeritus director.

WTS Scholarship...

When Women in Transportation held their awards and scholarship dinner in December, a Sacramento State student was among the honorees. Ariana Castillo was given the Molitoris Leadership Undergraduate Scholarship.

Research Awards...

Civil Engineering Department students brought home two out of four university-wide awards by the University Student Research Symposium. Luke Fuson was one of two winners in the graduate category and Max Hardy was one of the two undergraduate winners



Student Research Symposium award winners Luke Fuson (CE Graduate) and Max Hardy (CE Undergraduate) pose with winners from other departments, Jessica Bean and Jasmine Stewart-Oliver.

Department Scholarships...

Five students have been awarded Civil Engineering Department scholarships. Blake Dolve won both a Henry T. Roche Scholarship and an Engineering Scholarship; Eduard Egov won the Thomas J. Richards Scholarship; Ashley Moran won both the Gencorp Foundation, Engineering and Computer Science Scholarship and a Henry T. Roche Scholarship; Christian Carleton and Grant Maxwell each won an Environmental Engineering and Water Resources Scholarship; and Alban Gjongecaj won an Engineering Scholarship.



NEWS & NOTES

Faculty

Winning Professors...

Dr. Matt Salveson received the Jonathan Burdette Brown Education Award at the ASCE Sacramento Section banquet in October 2012.



Dr. Benjamin Fell received the Outstanding Scholarly and Creative Activities Award from the College of Engineering and Computer Science. Members of the Civil Engineering faculty have received this college-wide award two years in a row.

Dr. Fell accepts the Outstanding Scholarly and Creative Activities Award. - photo by Sacramento State/Steve McKay

DBIA Grant...

In October 2012, Dr. Karen Hansen received a \$4,000 grant from the Western Pacific Region of the Design-Build Institute of America (DBIA) to support the organization's Sacramento State student chapter. In November, four student members used part of the funds to attend the DBIA National Conference and Expo in New Orleans. The student chapter also hosted a series of Building Information Modeling (BIM) workshops taught by industry professionals for students.

Alumni

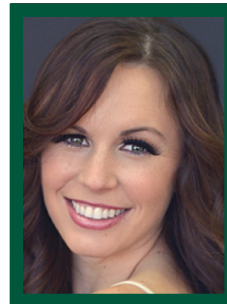
2004 – Steven Kline, BS, PE, won a Young Professional Award from the California Water Environment Association



in January. Steven reports the award was for "taking the initiative to organize and manage tours for a sustainability tour of Sierra Nevada Brewery, Cache Creek Casino's MBR treatment plant and Anheuser-Busch's anaerobic digester system." Steven graduated in Fall 2004, obtained his PE in 2008, and will be graduating from Sacramento State's master's

program this semester. His master's project is a literature review of anaerobic digestion of food waste and other organics, a topic that has become of high interest to meet aggressive landfill diversion goals.

2009 – Since graduating in 2009, Lindsey Shelton, BS, PE, had been working at Dokken Engineering in their



transportation division on a variety of projects, including the Kings Commercial Core Improvements Project, which is a streetscape and pedestrian safety and mobility project, and the Homewood Bicycle Trail Project. Last April, Lindsey obtained her PE license and moved to Omni Means, Ltd. in Roseville. There she is a Project Engineer working

on the Rocklin Road/I-80 interchange, the SR-104 Roadway Widening and other projects.

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2008 – Keith Jukes, BS, serves as Secretary for the ASCE Sacramento Section. In September 2012, he was honored as Drury Butler Officer of the Year at the annual banquet.

2007– Gabriel Apgar, BS, PE, has been working at HDR as a wastewater/water design engineer in



San Diego since graduation. His work includes design and construction services for various pipeline, pump station, and treatment plant projects, as well as condition assessment for wastewater infrastructure. He earned his PE in the summer of 2010, and in 2012 he became

certified by the National Association of Sewer Service Companies (NASSCO) in the Pipeline Assessment & Certification Program (PACP), Manhole Assessment and Certification Program (MACP), and Lateral Assessment and Certification Program (LACP). He has worked on several notable projects, including the Pala Casino Treatment Plant, a wastewater project that won the 2009 Design-Build Project of the Year. He also worked on a Central Basin Municipal Water District project that included the design of 25,000 linear feet of recycled water pipeline in Southeast Los Angeles County, a wastewater pump station assessment in Hawaii, and a water reclamation plant expansion in Orange County.



2005 – Samsor Safi, BS, MS, PE, has returned to Sacramento State to teach a hydraulics lab as he continues his career with the Sacramento Area Sewer

District. He joined the district in 2008 and is now Project Manager for multiple sewer pump stations throughout the Sacramento area. After earning his bachelor's degree in the fall of 2005, he worked at Verizon Wireless before taking a position with

Willdan Engineering in 2006. Samsor earned his PE in 2010 and his master's degree at Sacramento State in fall 2011. Working with Dr. Saad Merayyan as his master's degree advisor, he developed a model for groundwater banking using GMS with MODFLOW software. On the personal front, Samsor and his wife had a daughter, Zaynab, in 2011.

1981– Thomas G. Tracy, BS, PE, joined URS Corporation in October 2012 as the Transportation Group Manager for URS' Central Valley Region. Tom's primary responsibilities will be cultivating and maintaining regional client relationships, business development, and management of transportation projects in the region. Tom has very recent experience managing multidisciplinary teams on large-scale projects, including an assignment as a Regional Manager with the Program Management Team for California's high-speed train project and Design Manager for the Alaskan Way Viaduct and Seawall Replacement Project in Seattle, Washington.

Tom and his wife Lori make their home in Rocklin, California, with their four-year-old daughter, Amelia.

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