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Dear Friends and Colleagues,

This is our first summer edition of CE Connection, which will allow us to share the good news about everything happening on campus in a timely manner. For example, the academic year ended with a record number of graduating seniors in Civil Engineering: 61. We wrapped up the year with a successful Ken Kerri Endowment Luncheon, and our ASCE students hosted a spectacular Mid-Pacific Conference. Hope you enjoy reading the articles about these events in this issue!

For me personally, the end of this academic year was capped with a wonderful meeting at Dokken Engineering with a number of our alumni (a special thank you to Rick Liptak for allowing us to use Dokken facilities). We had a fruitful discussion with the alumni about how to get them involved with our Department. The feedback and willingness to be involved was overwhelmingly positive, and the participants were forthcoming with ideas on how to get other alumni involved.

I am hoping to continue visiting alumni this summer. If you would like to arrange for a meeting in your workplace, please let me know. The Department will be happy to host lunch for participants in these meetings.

Since I became Department Chair in 2003, one of my objectives has been to engage the professional community and alumni in the Department's activities. The Department has achieved this objective with a number of events, such as the Evening with Industry, the Ken Kerri Luncheon, and publishing this newsletter.

If you have not yet had a chance to become involved, or if you want to increase your support for the Department, there are a number of avenues:

1. Donate to the Department (click on Support the Department at www.ecs.csus.edu/ce/)
2. Be a guest speaker in classes
3. Share your experiences with the students during Alumni Week in April
4. Become an evaluator for a senior project team
5. Hire our students as interns in your organization
6. Speak to our students at their monthly ASCE student chapter meeting
7. Participate in student-driven activities
8. Encourage other alumni to be involved.

Let us know if we can help you get started in any of these endeavors by emailing us at ceconnect@ecs.csus.edu.

Enjoy your summer!

Ramzi J. Mahmood

Ken Kerri Luncheon Draws Crowd for Isenberg Water Talk

More than 120 people turned out in April at an annual luncheon to honor Professor Emeritus Ken Kerri and hear former state legislator Phil Isenberg discuss the challenges involved in dealing with California’s water problems. Among other remarks, Isenberg encouraged civil engineers to seek a more active role in advising policy makers on the practical realities of addressing water issues.

Isenberg drew laughter with his observation that finding a solution to the State’s perennial water shortage is difficult because it is much easier to say “yes” to people than to actually provide what they want. He said this is particularly so when a finite natural resource is involved.

He noted that the State has made progress in the past few years, however. By adopting co-equal goals of creating more reliable sources of water for all Californians and protecting the Delta water system, the Legislature has set a framework for balancing competing needs.

Other important steps Isenberg identified were a commitment to relying more on science-based facts and a push to have regions become less reliant on Delta diversions by increasing their own self-sufficient water sources. Isenberg’s speech was the highlight of the annual luncheon, which is an opportunity for alumni, industry professionals, faculty and students to network. Ramzi Mahmood, chair of the Civil Engineering Department, said the luncheon is one of several events that encourage a closer connection between the academic world and the professional community – a relationship that strengthens the Civil Engineering program and benefits the industry as well.

Those in attendance also heard an update on the status of the Ken Kerri Endowment Fund, which has raised $70,000 to date to support teaching and learning in the Civil Engineering Department. So far, the fund has provided grants totaling about $5,000 to professionals, faculty and students to present their work at conferences. The fund’s steering committee has set an intermediate goal of raising $100,000 by the end of 2011, on the way to a long-term goal of $250,000.

To donate, please go to www.ecs.csus.edu, click on Support the Department, click on “here” in the Ken Kerri give-a-gift section, and use a credit card. Be sure to select Ken Kerri Fund in the Gift Designation space.

You may also send a check made out to the Ken Kerri Endowment Fund to the Department of Civil Engineering, 6000 J Street, Sacramento, CA 95819-6029, ATTN: Neysa.

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Students Host a Lively Mid-Pac

With 11 universities and almost 400 students competing, the 2011 ASCE Mid-Pacific Regional Conference provided three days of non-stop action in April. As the Mid-Pac hosts, students from Sacramento State’s Civil Engineering Department expanded the focus beyond the traditional events, adding concrete bowling, a tug-of-war, horseshoes, and other opportunities to network and have fun.

UC Berkeley fielded the largest team at 92 students and came in first. The University of Nevada/Reno (UNR) and the University of the Pacific ranked second and third, respectively.

While Sacramento State did not make it into the top rankings for overall points, the students had their moments in the spotlight, including:

- Placing first in the concrete canoe races for both the Coed Final Sprints and the Men’s Slalom/Endurance Race. Overall, Sacramento State came in second in the races, trailing UNR by less than two points. The canoe’s design was ranked fourth out of eight universities competing in the event.
- Earning top points in the Water Treatment competition for the required written report and tying for second in points awarded for presentation. However, with the most expensive structure produced by nine competing campuses, Sacramento State’s overall score suffered from a low ranking in the cost category.
- Winning third place in the Daniel W. Mead Student Contest with an entry by Dexter Early-Rogers. The assigned topic for the 2,000-word essay was “Ethics and the ASCE Report Card for America’s Infrastructure”.
- Placing fourth out of nine competing campuses in the Steel Bridge Competition.

Water Treatment Team Invited to National Challenge

The Sacramento State ASCE Water Treatment Team won a rare invitation to compete at the national Water Environment Federation (WEF) Wastewater Challenge. The team was one of 12 nationally whose application was accepted for the competition, which was held in Sacramento at WEF’s annual Residuals and Biosolids Conference on May 22.

The team placed tenth. Team co-captain Kristen Martin said the experience will help the team compete more successfully next year.

“Our faculty advisor, Dr. John Johnston, was instrumental in our success this year, putting in many hours advising the team and providing valuable feedback on the design, report, and presentation,” Kristen says. “The team learned a lot through the design process and considers this year a huge success, and is already making plans to improve on our design for next year.”

Besides Kristen, team members instrumental in the team’s success included David Harden (Captain and Build Team member), Justin George (Design Report Chair, Build Team member, and 2012 Co-Captain), Kevin Varnum (Build Team member and 2012 Co-Captain), Joel Shinneman (Build Team member, Treasurer, and Presenter), Blake Dolve, Joe Fair, Nick Hamann, Doumon Kashkooli, Matt Hoang, and Josh Marston (Secretary).

Dr. Ken Kerri, Professor Emeritus at Sacramento State, was one of the judges at the competition.

Sacramento State’s Water Treatment team competed at both the Mid-Pac Conference and the Water Environment Federation’s National Challenge.
Program Attracts Second-Career Students

Some students graduate from high school and immediately head for college to pursue their dream of becoming a civil engineer. Others, however, take an alternative path that may include different careers, military experience or even another major before deciding that civil engineering is where they belong.

The Civil Engineering Department at Sacramento State attracts these second-career students with the program’s emphasis on practical skills and hands-on learning. In return, the students bring a wealth of real-world experience to their studies, as well as maturity and discipline that make them solid prospects for internships and post-graduation jobs.

CE Connection interviewed three second-career students about their decision to go into civil engineering and their perspective on Sacramento State’s program.

Kristen Martin: From Recipes to Designs

As a graduate of the California Culinary Academy in San Francisco, Kristen Martin spent several years working in restaurants in San Francisco and Sacramento before deciding she needed a more challenging career.

“My parents are both engineers, both Sacramento State alumni, so that was the last thing I wanted to do when I graduated from high school,” she says. “I went to culinary school and became a chef. But after awhile I was bored; I knew I needed a career that was more challenging, and also one that provided better pay and benefits.”

Her mom, a mechanical engineer, recommended civil engineering as the answer. Kristen followed her advice and quickly settled in at Sacramento State, taking every opportunity to get involved in student organizations, competitions, and internships. This year, she co-captained the water treatment team for Mid-Pac, and she has interned at both the Regional Water Quality Control Board and the Department of Water Resources.

“I feel very privileged to be in a program that has such a strong culture of practicing the profession while still in school,” she says. “There’s really no better way to learn than to just start doing it. Every single class, the teachers have pushed students to network, to get a job, to get scholarships. It creates a culture where students are expected to do hands-on projects from the very beginning.”

In addition to enjoying the project-oriented culture at Sacramento State, Kristen adds, “I didn’t expect engineering to be so much fun!”

Kristen is interested in both water resources and geo-technical engineering, but plans to stay flexible about her future career so she can take advantage of whatever opportunity comes along. Besides her parents, her biggest supporter is her 5-year-old son, who showed up so often for water treatment practice sessions that he became an honorary team member.

Kevan Forbes: From Retail to Math to CE

As a teenager, Kevan Forbes’ first love was music, but he quickly realized success would require more talent than he had. So for several years after high school, he went to college part time but mostly worked in retail, becoming a supervisor for two different departments at Office Max.

When he decided to look beyond the retail world, he returned to college full time in 2002. Numbers and logical skills had always been his strength, so he majored in mathematics, graduating from Sacramento State with his bachelor’s degree in 2006. Unfortunately, jobs were scarce for mathematicians who neither wanted to teach nor conduct research.

So in 2007, Kevan returned to school, took an Introduction to Engineering course — and loved it. After taking lower division courses at Sacramento City College, he transferred to Sacramento State to complete his second bachelor’s degree, this one in Civil Engineering. This time, he expects the job market to be more welcoming.

“Sacramento State’s program is geared particularly well for prepping students for actual jobs,” he says. “For instance, the senior project requires students to do a real job with a real project report — pretty close to the work you will be doing in the field once you are hired.”

Another aspect of the program that he values is the strong emphasis on writing and oral communication skills throughout the coursework.

“Communication skills are absolutely essential to working successfully as a professional engineer,” Kevan says. “Whether you are talking to your boss...”
or a client, good communication skills save time because you can get the job done right the first time, instead of having to go back and forth to clear up misunderstandings."

Between senior classes and acting as the concrete canoe competition chairman for Mid-Pac this year, Kevan has had a busy final semester but is now focusing on the next step: getting a job. A prior internship gave him experience with environmental assessment and reclamation, and he is also interested in geotechnical engineering. His first choice, however, will be "anything involving traffic management"—just the sort of challenge where math skills are needed.

Adam Youngson: From Construction to Iraq and Back

It would not have been surprising if Adam Youngson had pursued a degree in construction management. After all, he spent about 10 years working in construction, including a deployment by his Army Reserve unit to Iraq where he poured concrete and framed buildings for Camp Victory at the Baghdad Airport.

But after starting in construction management at community college, he found that he really enjoyed the physics and math aspects of civil engineering. He changed majors, and then transferred to Sacramento State in 2010. He plans to graduate in the fall of 2012.

"I like the program at Sacramento State because it gives you a lot of exposure to the industry," Adam says. "And the faculty is very good at motivating students. It's much easier to be motivated as a student because the classes are relevant and the teachers are focused on exactly what I want to do."

Adam's interests lean toward geotechnical or structural engineering. He hopes to get an internship with the U.S. Forest Service or the Army Corps of Engineers, preferably with a job that will take him outdoors.

"I have had jobs the past few summers doing estimation, so that has been my first foray into office work," he says. "But I like to work outside—I don't want to be stuck in an office, doing calculations all the time."

Kevan Forbes continued:

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—Adam Youngson

John Johnston continued:

The professor provided an academic lesson in the morning, and the students organized their own hands-on competition in the afternoon to reinforce what the boot camp recruits had learned. The result? A team that performed more successfully at Mid-Pac than in recent years and that was invited to the Water Environment Federation National Challenge.

Student success, whether at Mid-Pac or in other endeavors, is something that the professor focuses on. As part of his workload in the Civil Engineering Department, he spends about 40 percent of his time at the Office of Water Programs where he conducts storm water research projects for Caltrans. His research there creates opportunities for students. Half a dozen students are employed currently on various Caltrans projects, and 10 graduate students have tackled storm water problems in their master's degree projects.

Before completing his doctorate at UC Davis in 1991, Professor Johnston worked for the Army Corps of Engineers as an environmental engineer, deciding to jump to academia when he could see "nothing more sophisticated than septic tanks into the foreseeable future."

"Fresno's engineering community is pretty small, and the opportunities to participate in external projects are limited," he says. "I wanted to be able to stay connected with industry and keep current with the field. With all the private firms and public agencies that are nearby, I believed Sacramento would have far more opportunities to participate—and that has been true beyond what I expected."

Professor Johnston lives in Davis, where his wife Chris is a citizen volunteer with the Cool Davis Initiative to lower the city's carbon footprint. His son, Joe, a California Institute of the Arts graduate, is an animator in Southern California. His daughter, Kathleen, is a student at Humboldt State.
Michael Penrose: Going to the Source of Good Engineers

In his job as Director of the Transportation Department for Sacramento County (known as SacDOT), Michael Penrose, PE, works with many well-trained civil engineers. He’s always pleased to note that many of them are graduates of the Sacramento State program.

“Sacramento State produces really good engineers, with a program that provides a strong combination of theory and practical training,” he says. “Having that program available to our region is extremely valuable.”

As a graduate of the Civil Engineering master’s degree program at Sacramento State, Mr. Penrose knows what he’s talking about on a personal level. His early roots were not in the Sacramento area, however. He earned his bachelor’s degree at San Jose State in 1985 and began looking for a job, following the common practice at the time of gaining work experience toward his professional engineering license before returning to college for a master’s degree.

When he could not find employment in the San Francisco Bay Area, he turned to Nevada City Engineering, a general engineering services company owned by his cousin. After obtaining his PE, he segued to Placer County, making good use of his structural engineering background in his assignment of working on bridges.

By 1989, he was ready to try his hand at his own business, doing both engineering and land development. But when the housing market slowed in the early 90s, he made another switch, landing at Sacramento County in 1991, where he has now been for 20 years. During the same time he was shaking up his career, he decided it was time to re-enter the academic world and obtain a master’s degree.

“I thought about the incredibly competent engineers I had run across in my work, and I soon realized that many of them were graduates of Sacramento State,” he says. “Add to that the fact that the program can be completed on a part-time basis so students can continue with their jobs, and the decision was easy.”

In 1993, he earned his master’s degree. Almost a decade passed before he became involved on campus again, this time at the suggestion of his Sacramento County boss who thought it would be a good idea for the county to be represented on the Civil Engineering Program Industrial Advisory Committee (CEPIAC). Mr. Penrose was quickly put to work on several committees, and eventually became CEPIAC chair for two years.

“The Civil Engineering Department was looking for private and public industry involvement,” Mr. Penrose says. “It’s really a great partnership, with industry providing support and input to make the program even stronger. I like being involved because the Civil Engineering program is a great asset for all of us in the area – and it is also a lot of fun!”

Ladies Auxiliary: 50 Years and Going Strong

Two Sacramento State students have reason to be grateful that the ASCE Ladies Auxiliary Group is still active after 50 years of monthly lunches. Ashley Moran and Vandalist Kith each were given $1,000 scholarships at the Ladies Auxiliary event in May.

Ashley, who will graduate in Spring 2012, is an intern at the Department of Water Resources in the dams and canals section. She is interested both in water resources and geotechnical engineering. Her goal after graduation is to enlist as an officer in the U.S. Air Force and to eventually earn her master’s degree in Civil Engineering.

Vandalist, who came to the United States from Cambodia five years ago to get a civil engineering degree, will graduate in Fall 2012. Her interests are in water resources and structural engineering. Her long-term goal is to launch her own business to help other countries deal with substandard structures that are in danger of collapsing in earthquakes, hurricanes, and other natural disasters.

In presenting the awards to the two students, Anna Rita Neuman, the group’s treasurer and scholarship chairwoman, noted the Auxiliary has granted $47,100 in scholarships over the past 31 years.

Each year, the Auxiliary provides two scholarships. One is funded through membership dues and other fund-raising activities and the other provided by Wayne and Cheryl Samarzich in honor of their mother, Helen, who was an active member of the Auxiliary for many years. Both were present at the lunch.

Among other anecdotes about the Auxiliary’s early beginnings, the history touched on the changing economy over the years. When the group was launched in the Fall 1961 to support local civil engineers, the dues were $3 per year and the lunch cost $1.75. Today, the dues are $15 per year and the lunch tab for May was $21 each.
NEWS & NOTES

Students

SHPE Wins at Stanford…
A team from Sacramento State’s Society of Hispanic Professional Engineers won first place in the Regional Leadership Development Conference at Stanford, while another squad placed third. The contest challenged undergraduate teams to propose a new product and marketing plan for their own business. The Original Engineers (Ariana Castillo, Sergio Tapia, and Bryant Ho) each received an Xbox for first place. Their product, Sustain-A-Plug, featured a device to reduce wasted electricity through a vampire load. Lijafe (Jasmine Franco, Lisseth Anaya, and Felix Ortiz) received iPod Shuffles for third place. Their product, Stroke Away, included a chip device that can be worn in hats around head or on the wrist to monitor brain waves and caution users when approaching heat stroke.

Construction Management Takes Three Firsts…
Students in the Construction Management program took six awards, including three first-place trophies, at the Associated Schools of Construction Region 7 and Open Problems (National) competition in February. National awards were won by the Electrical (first-place finish), Mechanical (second) and Determining Project Risk (third) teams. Regional awards went to the Heavy Civil (first), Multi-Family (first) and Design-Build (second) teams. In addition, four students garnered wins in the all-day Alternates Problem portion of the competition: Stacy Wilson, Max Hardy, Courtney Golze, and Michael Kumar.

The teams were sponsored by the Sacramento Construction Management Education Foundation and coached by project managers, engineers, and superintendents from the construction industry and program faculty members.

Four Win ASCE Awards…
Four students were recognized at the regional American Society of Civil Engineers (ASCE) awards banquet in February for their contributions to the ASCE student chapter. Kristen Martin and Ashley Moran were both awarded Alfred R. Golez Scholarships. Joseph Whaley was presented with the Academic Achievement Award, and Jesse Ogren won the Professional Service Award.

Students Cross the Finish Line…
In May, 61 students received their bachelor degrees in Civil Engineering, and 37 received them in Construction Management. In addition, eight students earned master’s degrees.

Faculty

Grant for Electrical Contractor Study…
Professor Justin Reginato has received a $46,000 grant to analyze the adverse impact of portability restrictions that keep electrical contractors from bringing their own work crews when they win project bids in regions outside of their home base. His research, which will include interviewing electrical contractor home office staff and field personnel, is expected to quantify the costs due to lack of portability. The study is funded by ELECTRI International, the research arm of the National Electrical Contractors Association (NECA).

Faculty win Teaching and Service Awards…
Sacramento State’s Faculty Senate presented its outstanding Teaching, University Service, and Community Service Awards in April. This year’s recipients included two professors in the College of Engineering and Computer Science: Professor Benjamin Fell for his Outstanding Teaching and Professor Mikael Anderson for his Outstanding Community Service.

Alumni

CE Connection shares news about alumni from across the years. If you would like to be included in the next issue, send information to ceconnect@ecs.csus.edu. (Note: Unless otherwise indicated, graduates received bachelor degrees in Civil Engineering at the end of the academic year specified.)

Miyamoto Disaster Relief Fund Established
Kit Miyamoto, PhD, PE, SE (MS ’97), has created a nonprofit organization to address the need for quick action in countries that have suffered a natural disaster. Miyamoto Global Disaster Relief will fill in the gap between when a disaster occurs and when other aid organizations are able to ramp up their support.

“We will reach the schools and homes that might not be a priority for larger aid organizations,” Dr. Miyamoto says. “We will be on hand to offer help to people directly after the event and, in doing so, we will save lives.”

Dr. Miyamoto and his engineering firm, Miyamoto International, have been heavily involved in relief efforts in Haiti and Japan following massive earthquakes in both countries.

More information can be found at: http://www.miyamoto-relief.com/about/
Among his activities while at Sacramento State, Dr. Ewadh served as a guest lecturer in the Transportation Engineering (CE147) course, where he delivered a lecture about roadway classification according to the American Association of State Highway and Transportation Officials (AASHTO), the standard also used in Iraq.

Additionally, Dr. Ewadh made plans to work with Professor Shafizadeh to research vehicle conflicts at signalized intersections. He also participated in a meeting of the University Transportation Advisory Committee, attended a webinar on changes to the federal Manual on Uniform Traffic Control Devices (MUTCD) and learned about Sacramento’s new regional transportation monitoring network, STARNET.

“Dr. Ewadh’s visit was mutually beneficial for everyone involved,” said Professor Kevan Shafizadeh. “The hope is that communication and collaboration can continue between the civil engineering faculty in Kerbela, Iraq and at Sacramento State.”

Students Recommend Campus Transportation Improvements

The long line of cars trying to access Parking Structure 1 (PS1) Sacramento State, especially during the morning commute time, has probably left drivers wishing that something could be done to improve traffic circulation. With the help of Civil Engineering students in Transportation Systems (CE148), campus transportation officials now have recommendations and supporting data in hand that address the issue.

PS1, located at the corner of State University Drive West and Sinclair Road near the campus tennis courts, is a popular destination for vehicles entering the campus from the north entrance. In fact, the line of vehicles waiting to enter the structure has been reported to stretch back as far as the J Street entrance to the campus.

As part of a class project, students collected a full day of data (6:30 a.m. to 7:30 p.m.), including the number of vehicles entering and exiting the parking structure and traffic counts at different points leading to the parking structure. The students also conducted a brief intercept survey of PS1 users to learn more about the parking duration and use of the structure.

The students analyzed the data and made recommendations, which were later presented to campus transportation officials by Professor Kevan Shafizadeh, including:

- Allowing all PS1 users to access both entrances to the parking structure. (Currently, one of the two entrances is restricted only to faculty and staff users.)
- Providing improved pedestrian and bicycle access further south of the parking structure, so that people on foot or on bikes who enter the campus from the west through the Hornet Crossing tunnel (including those people who use the 65th Street Light Rail Station or reside at the East Side Lofts) can access the campus core area without delaying vehicles entering PS1.
Alumni Week Draws Professionals to Campus

Many Civil Engineering students got a chance to hear from industry professionals in a number of classes during Alumni Week in April. The presentations help students understand their career options and provide them an opportunity to network with a variety of local engineering firms and public agencies.

Arranged by Rick Liptak, PE, President of Dokken Engineering, the Alumni Week participants included:

- From Dokken Engineering, Steven Johnson, PE ('04), Lindsey Rankin, EIT ('09), Rob Burns, EIT ('08), and Rebecca Neves, PE ('04).
- From Jacobs Engineering, Theron Roschen, PE ('86).
- From the Federal Highway Administration, Steve Pyburn, TE, PE ('89).
- From Mark Thomas & Company, Lance Schrey, PE ('87).
- From CH2MHIll, Ed Winkler, PE ('79).
- From David Evans and Associates, John Rocanova, PE.

Stephen Pyburn, PE, TE (Federal Highway Administration) talks to students in CE148.

John Rocanova, PE (David Evans & Associates), talks with CE147 student Kristen Martin after his presentation.