In August, the department used funds from the CEE Trust to sponsor the workshop Advancing Socio-Hydrology, a New Science of People and Water. Socio-hydrology is a new discipline that studies the interactions between water and people.

Organized by CEE professors Murugesu Sivapalan, Ximing Cai and Megan Konar and offered in collaboration with the Beckman Institute’s initiative Social Dimensions of Environmental Policy, the workshop drew international experts on the topic of freshwater security from a variety of disciplines in the natural sciences, social sciences and the humanities.

“I was the one (along with two other delegates to our workshop) who coined the term ‘socio-hydrology’ last year, and this was a culmination of several years of effort to look at the water issues facing the world in the emergent Anthropocene, or at the impact human activities have had on Earth’s ecosystems,” Sivapalan said. “The human footprint is now very strong and cannot be ignored.”

The workshop was one of a series on a variety of new topics, sponsored by CEE, designed to encourage innovation in emerging areas—and made possible by gifts to the CEE Trust Fund.

Photo: Participants are pictured in the Beckman Institute. Seated are, left to right: CEE Assistant Professor Megan Konar; Associate Professor Ashwini Chhatre, U of I Department of Geography and Geographic Information Science (GGIS) and Political Science; CEE and Geography Professor Murugesu Sivapalan; CEE Professor Ximing Cai; and GGIS Professor Jesse Ribot.

Give today.
Visit cee.illinois.edu/alumni/gift or contact John Southwood, jfswood@illinois.edu, (217) 300-5480.
Quo Vadimus?/Amr S. Elnashai
Benito Mariñas named Interim Head
CEEAA alumni board celebrates 50 years
Preparation/Tracy Lundin (BS 80, MS 82)
The Undergraduate Experience in CEE at Illinois
  Project-based learning puts students to work
  Backpack to Briefcase fosters professional development
  Global Leaders programs offer international experience
  CEE Job Fairs connect students, recruiters
  Flipped classes enable better student/teacher interaction
  Research Experience for Undergrads: Three Students’ Stories
  CEE Student Committee enhances undergraduate life
  Student organizations key to Illinois experience
Student organizations listings
Meet the future of CEE at Illinois: 14 new faculty members
Department news
In memoriam
Alumni news
Sponsored research
Old Masters: James J. Doland
Corporate and foundation donors
Individual donors
Parting shot: Winter storms, dedicated students
Our undergraduate program is outstanding in every respect. It has always been very deep; now it is both deep and broad. Our research portfolio stands out head and shoulders above all other engineering departments at Illinois, even those who are much larger than us. The vibe, the rhythm, the magnificent melody that roams our buildings, our minds and hearts, our faculty, staff and students, is audible and most enjoyable.
The formal target tenure-system faculty number of 50 was set in discussions with the Dean of Engineering and his team in late 2009–early 2010. We were at that time about 43 tenure-system professors or fewer, and there was a suggestion that our finances could not structurally support a larger size faculty. We expanded, and we can – indeed we have to – expand further. We are on an upward spiral in the faculty-finance-technical footprint space.

Sustaining the momentum of change in the department could prove more trying than initiating change. And sustaining the freshness and excitement of the current calls for proposals that we have been using to stimulate change requires imagination and versatility. Sustaining the momentum of the educational programs and research enterprise also requires reimagining the front office role and structure, to provide the necessary enrollment, student affairs and research management bandwidth, as well as the level of fiscal rigor and accountability that befits the top CEE department in the nation. Developing an integrated vision for the next 20 years is essential, whereby we define our contribution to the global society, and the resources needed to not only consolidate our current lead, but also to become the worldwide milliarium aureum of civil and environmental engineering discovery, learning and engagement. If we manage to navigate the changes in the College of Engineering, and make the most of the new resources associated with big data and bioengineering, where we absolutely naturally have a major role to play, if we manage to address the space, size and sustainability issues, CEE at Illinois will reign supreme for many years. The prize is in sight, closer than it has been in the past few decades, and no other department in the nation is better equipped for the relatively short journey.

Benito Mariñas named Interim Head

Professor Benito Mariñas is serving as interim head of the Department of Civil and Environmental Engineering since the departure of former department head Professor Amr S. Elnashai in January. Elnashai was named Dean of Penn State’s College of Engineering.

Mariñas has been a faculty member in CEE since 1995. He holds an Ivan Racheff Professorship of Environmental Engineering. He has played several important leadership roles in CEE, including serving twice as chair of the Environmental Engineering and Science Program and chairing the department-wide faculty search committee for three years.

“I am honored to have been selected to lead our CEE department during this interim period,” Mariñas said. “I am excited about starting to work with the CEE faculty, staff, students, alumni and friends, and our counterparts at the rest of the College of Engineering and campus to continue our journey in the path of excellence and programmatic innovation that our departing CEE head Amr Elnashai has established.

I am most grateful to Amr and other former department leaders for their encouragement and offers of support as I transition into this new role.”

As a leading expert in water quality control, Mariñas has made significant contributions to the drinking water industry. His pioneering work on the inactivation of parasites has influenced federal regulations on surface water disinfection using ozone and chlorine dioxide. In his roles as director of the National Science Foundation Science and Technology Center WaterCAMPWS and director of the College of Engineering’s Safe Global Water Institute, Mariñas has brought together several interdisciplinary teams working on the development of sustainable approaches to provide safe water and sanitation to communities in developing countries that lack these basic services.

“Benito exemplifies all the qualities that are at the core of our department—excellence, rigor, dedication, integrity and vision,” Elnashai said. “He also has the experience, as a leading researcher and educator, and as one of the founding members of the CEE Management Committee, to lead the department through the transition between my departure and the tenure of a new permanent head.”

Mariñas will serve as interim department head until a permanent head is selected and in place. The committee for that search will be named in early 2014.

pee.illinois.edu/faculty/benitomarinhas
Department celebrates 50-year anniversary of CEE alumni board

CEE alumni returned to campus September 6-7 to celebrate the 50th anniversary of the founding of the CEE Alumni Association (CEEAA) board. The celebration began Friday night with a reception in the M.T. Geoffrey Yeh Student Center. On Saturday the department hosted a pre-game brunch at the Activities and Recreation Center, followed by the football game against Cincinnati, at which CEE alumni enjoyed the game together in a reserved block of seats.

To mark the occasion, the current CEEAA board established a scholarship to be awarded each year to a student with a record of service to the department. To make a gift in support of this scholarship, please contact John Southwood, Director of Advancement, jfswood@illinois.edu, (217) 300-5480.

For more photos and information, visit cee.illinois.edu/50years_celebration.

CEE Professor Emeritus Marshall Thompson, left, and James Hanlon.

Students (l to r) Nishant Makhijani, Ryan Chan, Marika Nell and Athena Patras help out at the entry table for a cocktail reception Friday night.

From left, Paul Koch and John Carroto. ▲ CEE Assistant Professor Dan Work (left) and Professor Emeritus Barry Dempsey. ◀ From left, former CEE department head and dean of engineering Dave Daniel, Vicki Olson, Joseph Abruzzo and Gabriel Wiede.
Preparation

By Tracy K. Lundin, P.E., (BS 80, MS 82)
President, CEE Alumni Association Board of Directors

If you are reading this article you are most likely an Illinois CEE graduate, likely employed in or retired from a career in civil engineering, and somewhat likely to wonder who the old person with the gray hair is that you see in the mirror every morning. When I look at the byline photograph on this page I see version 3.0 of somebody. However, I can still visualize version 1.0 catching frisbees on the quad or hunkered down in the reading room of the graduate library studying for one of Professor Mesri’s soil mechanics finals.

Version 3.0 knows how well my CEE education prepared me for dealing with the professional twists and turns, challenges and opportunities that every career encounters. Version 1.0 had no idea of the importance that the days in Urbana would play in future upgrades and the varied and unique professional experiences that would accompany these upgrades. If you are a version 2.0 or greater, I suspect that you might echo these sentiments.

This edition of the CEE magazine focuses on the CEE undergraduate experience and the innovative ways that the department is preparing students for later upgrades to version 2.0 and beyond. Innovative preparation is particularly important in the modern world as the rate at which change occurs is ever increasing. I would argue that the CEE department has consistently retained its position as either the top-rated or one of the top-rated departments in the country because of the constant attention paid to the preparation of students and the importance of consistently employing outstanding and innovative professors.

So, why is all this important to you? If you are version 1.0, you should know that your CEE education will likely make you better prepared than a civil engineering student attending another university. You can help yourself by participating in CEE activities available to you — but don’t forget about the life-skill benefits of taking a writing class or a basic accounting class. In addition to potentially valuable experiences, these activities can also forge life-long relationships.

If you are a version 2.0, you are likely experiencing some of the many professional responsibilities, challenges and opportunities that you will encounter in your career. By now you probably are starting to have some sense of the impact your time in Urbana has had, and will continue to have, in your still unfolding career. You may feel that your CEE experience has given you a bit of an advantage over your professional colleagues. If this applies to you, it is time to start to consider how to give something back to the place that molded you.

If you have achieved a version 3.0 or 4.0 upgrade, you are in the second half of your career and/or retired and have come to know and understand the advantages that your CEE degree has given you. The CEE Alumni Association website (cee.illinois.edu/alumni) offers suggestions of how you can participate in events, volunteer your time or provide financial support to the department. Take a chance and rekindle your relationship with your Urbana experience.

Interested in serving on the CEEAA Board of Directors?

The CEE Alumni Association Board of Directors celebrated its 50-year anniversary in September. If you’re interested in serving the department as a board member, fill out an online application at cee.illinois.edu/alumni. For more information, contact John Southwood, jfswood@illinois.edu, (217) 300-5480.
Project-based learning puts CEE students to work benefiting campus and community

By Leslie Sweet-Myrick
In CEE’s project-based learning courses, students’ classroom expands into the campus and community, and everyone benefits. By introducing real problems that need to be solved, instructors provide students with a real-world perspective. Students learn how to think like engineers – how to collect data, make decisions, serve clients and everything in between – and campus and community-based clients get innovative recommendations at no cost to them.

For the graduate-level course “Sustainable Urban Systems,” which is entirely project-based, Professor Barbara Minsker sends out a call for projects to community partners and the students assemble into groups to work for the selected clients.

“The idea is that the students come into the class with methods under their belt, and they need to figure out how to address these projects with the methods they already know,” Minsker said. “They learn, through...
their projects, about sustainability and resilience and how to scope and carry out a project.”

The class’s most recent projects, four of which were for local clients, included looking at options for recycling wastewater generated from de-icing fluid at O’Hare International Airport; addressing stormwater on the property of the International Society of Arboriculturists based in west Champaign; assessing the performance of Champaign’s John Street watershed with regard to storm water management; studying the feasibility of putting a greenway (bike or walking path with greenery) between the Carle campus and downtown Urbana; and considering green and LEED features, including a green roof and options for bringing natural light in, for a classroom at Champaign-based Prosperity Gardens.

To finish the semester, the students give a final presentation, to which the clients are invited, and produce a final report.

Nicole Bridges, executive director of Prosperity Gardens, a community gardening project, said the students show true passion for their work.

“Specifically they offered me ideas for innovative ways to recycle water, beyond rain barrels, and for solar technologies,” Bridges said. “I also appreciate how they have been able to work within our means – we are a poor non-profit, and they understand that. The students are extremely inquisitive and professional, and I can tell they have developed a vested interest in our gardens.”

Minsker admits her class isn’t easy.

“The experience is fairly overwhelming for some of the students. But many of them will be going into consulting, so this project-based work is very similar to what they will be doing,” she said.

Project-based learning had historically been isolated to CEE’s graduate-level courses until fall semester 2013 when a new course, CEE398 “Project Based Learning in Civil Engineering,” tested the idea out on sophomores, allowing them to explore and propose solutions to civil engineering challenges that face the University of Illinois campus community.

“The theme is how we, as a campus community, can be more sustainable with regards to civil engineering, whether it is saving energy or re-using waste products,” said Professor Jeff Roesler, the course’s coordinating instructor.

Roesler said the new course was the vision of Jack Dempsey, the retiring director of the campus Department of Facilities and Services (F&S) and also one of the course instructors.

“Dempsey always wanted to teach a course on sustainability and already had a general outline,” Roesler said. “He wanted to connect campus needs and issues with academics and was looking for a ‘home’ for this course. We agreed CEE was the logical place.”

Roesler and Dempsey worked with the College of Engineering’s Academy for Excellence in Engineering Education (AE3) to set up the course format and were able to get some funding from its Strategic Instructional Initiatives Program. CEE398 has multiple facets, the core of which is a semester-long group project.

Starting with week one, the class brainstormed ideas for the group projects, and they broke into groups based on their interests. Their projects included assessing the actual energy efficiency of the LEED-certified Business Instructional Facility, the first LEED-certified building on campus; exploring the feasibility of using algae feedstock to produce biofuels; and collecting and reusing rainwater or gray water (secondary water sources).

The class also includes a series of field trips to campus sites such as the wastewater treatment plant, the ECE building currently under construction, Boneyard creek, and the Abbott power plant, as well as case study discussions, which are led by instructors across campus.

“Each case study has a different theme and demonstrates that there are regulations to follow besides just needing to be technically competent,” Roesler said. “Through the field trips and case studies, they see various aspects of civil engineering that they can identify with – or not identify with. Students becoming passionate about what they may want to do is one outcome of the course.”

The students also are encouraged to innovate.

“One of the things we purposely communicated to all assisting instructors is not to tell the students that they can’t do something a certain way,” Roesler said. “We intended to step back and allow the
Landing a great job is just the first step in the often challenging transition from campus to workplace, so CEE is preparing its students for the professional world with a comprehensive series of development seminars.

The Backpack to Briefcase Seminar Series, often led by alumni, builds on the professional development activities CEE previously offered in cooperation with the alumni board, such as the resume review night and “CEE Life in the Real World,” which involved alumni speaking to students about engineering specialties. The recently enhanced lecture series follows the natural career path progression, from understanding what employers are looking for to negotiating benefits.

“We had the job fairs as stand-alone events for many years, but it was up to the students to figure out how to prepare,” said Breanne Ertmer, former alumni relations coordinator at CEE, who conceived the idea for the series along with John Kelley, former director of advancement. “I think the Backpack to Briefcase series has made CEE students more polished and more aware that it takes more than just that one-day effort to get that internship or job.”

David Byrd (BS 01, MS 06), a member of the CEE alumni board and a senior project manager at Bulley and Andrews, General Contractor in Chicago, has helped with some of the seminars, including the resume workshop, interview workshop and the alumni panel.

Amanda Caldwell-Jacques, a CEE sophomore and a student in the class, agreed on the value of exposure to real-world projects.

“It’s been wonderful to visit so many local sites directly relating to primary concentrations in civil and environmental engineering,” she said. “As a sophomore, these field trips have helped me solidify my primary decision. We have incredible access to several professors and facilities from several departments. Overall, the class has been a great experience to learn outside of the typical classroom setting and course structure.”

Roesler also declared the inaugural class a success and foresees it being continued, and even expanded, in the future.

“It fills a huge hole in the curriculum,” he said. “Sometimes students don’t know what they would actually be doing as a civil engineer until junior or senior year. Eventually this could become a required course for our sophomore civil engineering students.”

“Backpack to Briefcase series offers students professional development for job-hunting and beyond”

BY LESLIE SWEET-MYRICK

Panelists discuss “Negotiating Salary and Benefits” in October. From left, they are Teresa Cardador, assistant professor in the School of Labor and Employment Relations; Bethany Florek, human resources manager at Greeley & Hansen; and Lauren Stites, Senior Assistant Director of Engineering Career Services. CEE graduate student Jeremy Kaiser, discussion facilitator, is at the podium.
“Students are sometimes so engrained in their studies they don’t understand the importance of creating a great resume and presenting themselves appropriately to employers,” Byrd said. “The seminars are helping students understand how companies look for their employees. I see students get frustrated for not landing the jobs, but the seminars help them realize the process takes much more than being qualified and having good grades. The firm wants them to be a good fit with its culture, and the firm is picking them on these things as well. I see the seminars providing students with a much better understanding of the process.”

Ertmer said approximately 100 students attend each seminar. Registration is required, and some faculty members have incorporated the seminars into their coursework. Following each seminar, students enjoy pizza and an opportunity to network.

“They’re very good turnouts,” Ertmer said. “The students really like it. They really are seeking that connection with the alums and the corporate representatives. They want to learn what they can do to really make a difference in their job search.”

Alex Lakocy, CEE senior, attended all of the seminars in their inaugural year.

“It was tough to try and navigate my first job hunt without having these seminars as resources,” he remembered.

Specifically, Lakocy said he used to struggle with talking to recruiters at fairs, but he found the seminar titled “Recruiters: What they Want to Hear” particularly helpful.

Scott Trotter (BS 90), president of Trotter & Associates, speaks to students about interview skills in “Powering Through the Interview” in October.

“Prior to that seminar, I never felt like I made a lasting impression on the people I spoke with,” Lakocy said. “But I learned it is important to think about your ‘elevator pitch,’ which is summing up your qualifications and experience in a 30-second speech. Working on my elevator pitch and practicing in front of a mirror, as the recruiters suggested, really helped me become more comfortable at career fairs, and I ended up getting an internship offer from my top-choice firm.”

Additional seminars meant to help students after they get an offer include topics such as “Negotiating Job Salary and Benefits” and “What to Expect in the Workplace.”

Lakocy said he’s heard good reviews on the seminars from other students.

“From what I’ve heard, everyone has really appreciated these seminars,” he said. “They have cleared up the whole job search process for students at all levels. In particular, we appreciate how the seminars aren’t just lectures – they are interactive workshops, which makes them so much more useful.”

The students, however, aren’t the only ones benefitting from the seminars.

“It gives the alumni a chance to come back to campus because many of our alumni do want that experience – to give back to the students and to really affect the student experience,” Ertmer said.

The seminar series is planned during the summer for the following fall. Representatives from the companies who participate in the department’s Corporate Partners Program get invited first, but the department is always looking for more people to get involved. If you are interested in participating in a future seminar, contact Celeste Bragorgos, celeste@illinois.edu, (217) 333-6955.

For more information about the Backpack to Briefcase series, visit cee.illinois.edu/b2b.
Growing Global Leaders programs offer students international perspective

BY LEANNE LUCAS

The Global Leaders program in CEE is a small but growing program that has a big impact in the lives of students. The concept, to provide students with a background in global issues in their chosen field and prepare them for practice or research in an international arena, has been expanded from its initial implementation in Construction Management to the department’s new cross-disciplinary programs.

Global Leaders in Construction Management (GLCM) began in 2005. The tenth class was admitted in the fall of 2013, and there are now 51 alumni, 10 working overseas. Brent Young is the director of GLCM, a position he has held for four years.

“A construction project site can be a very intimidating place,” said Young. “It’s a high-energy culture with a lot of pressure. A student that goes through the full GLCM program meets a huge cross-section of people and visits a variety of sites. That kind of experience, over and over, is what gets the student ready. They get technical instruction in the classroom, but once they see it in the real world, it all makes more sense.”

Students are admitted to the class their senior year and remain with the program two years, through a master’s degree. During that time they make two international trips (in January) and two domestic trips (in March). They also make day trips each semester, so over the course of two years, they visit anywhere from 20 to 40 construction sites.

In January of 2013, a trip to Turkey gave the students some classic “real-world” experience – roll with the punches. When Young began planning the trip, his focal point was a visit to the construction site of the Marmaray tunnel, a railway tunnel underneath the Bosphorus Strait that creates a link between the Asian and European shores of Istanbul.

“This was an iconic project costing billions of dollars,” said Young, “It was very interesting from a technical point of view, as well as a cultural and historical standpoint. But while we were able to observe an engineering marvel, instruction on the technical details was difficult due to the language barrier.”

Instead, a visit to the Izmit Bay Bridge, a suspension bridge under construction, became the high point of the trip.

“This bridge will be the fourth longest suspension bridge in the world when it’s finished,” said Young. “We spent a day visiting the Izmit Bay Bridge, a suspension bridge under construction, and saw the sea dredger that will excavate for the foundations of the bridge towers for the Izmit Bay Bridge in Altinova, Turkey. The students visited many different construction companies and projects including airport and subway expansion projects, multiple reinforced concrete high-rises, a soccer stadium, and both Olympic Park and Olympic Village.

Four GLCM students at the Blue Mosque in Istanbul in 2013: (left to right) Liz Tewolde, Zorina Disheva, Ana Lucuta, Amna Mahmud.

Students are shown a sea dredger that will excavate for the foundations of the bridge towers for the Izmit Bay Bridge in Altinova, Turkey.

The Global Leaders in Construction Management students capped off two weeks of construction site tours and Brazilian cultural experiences in January with a visit to Christ the Redeemer on Corcovado hill in Rio de Janeiro, Brazil. The students visited many different construction companies and projects including airport and subway expansion projects, multiple reinforced concrete high-rises, a soccer stadium, and both Olympic Park and Olympic Village.

The SRIS Global Leaders the Chennai Metro Rail construction site. Professors Minsker (front) and Peschel are at right. Photo: Jorge Flores
It’s so important for our students to understand how doing civil and environmental engineering in another country is vastly different from the United States. They need to have a global perspective. It will make them more attractive to employers, and they will be more successful in the long run because they have that exposure.

Students in the program were required to attend a half-semester class before the trip to learn about sustainability and resilience, and Indian culture. They were divided into four teams; two teams worked on projects in transportation and two on projects related to water. They planned and defined the scope of their projects, and learned about Indian culture during visits to local heritage sites. After the trip, each team completed independent study projects, supervised by a faculty member with expertise in that area.

Minsker and Research Assistant Professor Joshua Peschel traveled to Chennai, India, with their students in January of 2013. They first toured rainwater harvest-
Flipped classes enhance learning, increase student-teacher interaction

BY LESLIE SWEET MYRICK

Your memories of college likely include a blur of classroom lectures and long nights of homework. Using technology and an innovative teaching method, students in CEE's new "flipped" class will watch pre-lecture videos on their own time and complete many of the assignments traditionally known as "homework" during class time, when they have access to feedback from the instructor and their peers.

“The hope is that students come to class more prepared and ready to apply fundamental concepts, and that the classroom becomes more interactive,” explained Larry Fahnestock, associate professor in civil engineering and rotating assistant dean for the college’s Academy for Excellence in Engineering Education (AE3). Fahnestock’s new administrative role has inspired him to flip CEE460, a steel structures design course, which he has taught to juniors and seniors since 2006.

“The AE3 office thinks about how we innovate in education and how to go beyond the standard lecture format. How can we better engage students and teach in new ways that will really enhance the learning experience? The flipped classroom has had successful results around the college, particularly in physics,” Fahnestock explained.

Fahnestock will pilot CEE’s first fully flipped class during spring 2014, but some CEE faculty, such as Professor Praveen Kumar, have already experimented with the pre-lecture component.

“I asked my students to watch a 15- to 20-minute video of key concepts before class and answer three or four basic problems based on the video before coming to class. I hoped this would better prepare them for the material to be covered in the class and would open up more time to discuss problems in class,” Kumar said.

Jeffrey LaHucik, a senior in transportation and a student in Kumar’s class, admits he was initially a skeptic but ended up appreciating the concept.

“At first I was not a fan of this style because I thought it might require more of my time outside of class. However my mind was quickly changed since Professor Kumar was able to work more examples during class, which was very helpful for completing the homework, and answer more questions without having to rush through the lecture,” LaHucik said.

Another student of Kumar’s, Megh Patel, junior in construction management, said the concept also worked well for him.

“I could play the video over and over until I understood the material,” Patel said. “And the repetition in class helped me to strengthen and remember important concepts.”

In his upcoming flipped classroom, Fahnestock hopes the students won’t feel like they are doing more work.

“The net [amount of] work for the student shouldn’t be increasing, it should be shifting. There will be more content learning before class, and then in class there will be more problem solving so there will be fewer take-home assignments,” he said.

Fahnestock’s redesigned CEE460 will focus on the types of hands-on problems he always wished he had more time for.

“My students always appreciated when I presented in-class problems based on a building I designed as a practicing engineer,” Fahnestock said. “It’s informal, hands-on and interactive. In the coming semester, I’ll actually be using this building as the key-stone of the course. They will analyze and design many different parts of the building, and they will get to see how all the pieces, to some degree, fit into the context of the complete building.”

Like Kumar, Fahnestock will use pre-lectures, which will be housed on the course website, to cover fundamental concepts. He can produce these lectures in his own office using software that allows him to record his voice over a slide presentation.

“There are things we need to understand before we can get to application. I would like to push that stuff to the pre-lecture so they can get the concepts and then in class we can work examples,” he said.

After viewing the pre-lecture, the students will take a short quiz, so Fahnestock can see what they understood and what he should review. In addition to having more time for solving problems in class, Fahnestock is excited about the opportunity to present more open-ended problems.

“We want to be teaching our students not just to solve clean-cut, defined problems, but how to wrestle with more realistic problems, so I’m hoping to incorporate these more in the coming semester when they will have the opportunity to use their creativity, get real-time feedback from other students, and have me and the TAs there for guidance.”
CEE’s Research Experience for Undergraduates (REU) program is growing, offering more and more students the chance to participate in research. The department contributes $2,000 for a student’s semester in the program — $1,500 to the student and $500 to the supervising professor. Students spend at least 10 hours per week on the research for 12 weeks during the fall and spring semesters. They must devote at least 20 hours per week for six weeks during the summer break. At the end of their participation, they must turn in a final product, such as a report, presentation or newly developed software code. The department’s goal is to fund 40 undergraduate students per year in the REU program. Alumni giving to the REU program has made many of these positions possible.

Research Experience for Undergraduates

“I enjoyed everything about it.”

BY NAO NISHIO, CEE JUNIOR

As a junior focusing in Transportation for my primary and construction materials for my secondary concentration, this fall I had the great pleasure of participating in the Research Experience for Undergraduates (REU) program. I conducted research on an historical review of commuter rail energy consumption trends in the United States under Senior Research Engineer C. Tyler Dick, P.E., and Graduate Research Assistant Gio DiDomenico.

The main part of my work involved gathering data from the National Transit Database (NTD), compiling the data from 1997 to 2011, and characterizing each commuter rail. I also analyzed historical changes in various system properties and efficiencies. This research is part of a larger research scope aimed at comparing energy efficiency of passenger rail systems to competing modes of travel. Overall this research will provide insight into which systems will be used in case studies for future research.

This was my first time getting involved in a research project here on campus, and I enjoyed everything about it. The work covers a topic I really enjoy learning about. Within the transportation engineering program there are three possible concentrations: facilities, systems and railroad transportation engineering. This research is the closest thing to my interest since it involves passenger rails and environmental concerns. I consider myself pretty lucky to have been able to work in a research area that I am interested in.

The best part of this research is that it can take place anywhere in the world; I just need my laptop with me! The flexibility of this research has enabled me to manage my time efficiently on top of my course loads and involvement with multiple student organizations — Alpha Omega Epsilon Engineering Sorority, American Railway Engineering and Maintenance-of-Way Association (AREMA), Engineers Without Borders, Engineering Career Services and the New Student Program. Being able to do research without interfering with my academics or sacrificing my other passions is something I appreciate as an undergrad.

Throughout the semester I saw personal growth in managing my time, and I have increased my knowledge in railroad transportation engineering. The materials taught in class relate to the research, and I have seen a tremendous increase in my motivation to learn in class. Through participation in the REU program, I’ve realized that research is an important factor that supports our sustainable development. I have begun to think about pursuing a master’s degree after graduation. As an ambitious freshman, I wanted to attend graduate school here, but my first two years showed me the opportunities that industry had waiting for us, and I considered jumping on that bandwagon after attaining my bachelor’s degree. Through the REU program, as well as discussions with my advisers, professor, students and even alumni from the railroad engineering program, I’ve changed my mind about higher education. This experience touched me in many ways, and now I am committed to continue learning in this field.
Research Experience for Undergraduates

“The knowledge I take away from my research opportunities will make me a better engineer.”

By Donovan Holder, CEE Senior

I am a current senior in the civil engineering department, pursuing a primary in structural engineering and a secondary in geotechnical engineering. Originally from Belize, Central America, I moved to the United States in pursuit of a degree in engineering.

Through my time here at the University of Illinois I have had the opportunity to help on several structural engineering research projects. I became involved with undergraduate research my junior year when I had the opportunity to work with Professor Daniel Kuchma and graduate research assistants Andrew Mock and Anahid Behrouzi. The project was a multi-year research effort designed to develop tools to enable performance-based earthquake engineering (PBEE) of concrete shear walls. Specifically I assisted with the large-scale experimental testing of two C-shaped structural walls at the NEES MUST-SIM facility in Newmark Civil Engineering Laboratory. This allowed me the opportunity to learn about concrete shear wall design, the performance of concrete lateral systems in mid-rise structures, and the need for PBEE in society today.

Thanks to my undergraduate research work at Illinois, I obtained a research internship at the University of Washington under the supervision of Professor Dawn Lehman, a CO-PI of the shear wall project. The project with Dr. Lehman involved research on developing a method of using concrete-filled tubes in accelerated bridge construction. My main focus on the project was to study the composite action of concrete-filled tubes due to varying steel tube types and concrete core mixes.

Now as a senior, I am working with Associate Professor Larry Fahnestock and Professor James LaFave on their current research endeavor to analyze and develop conclusions from data gathered during their reconnaissance trip to Moore, Okla., following the devastating tornado in May 2013. This research initiative was funded by a CEE Rapid Response Grant, which is used to learn about infrastructure failures that could guide future research and improve public safety. On this project my main focus is to analyze the behavior and performance of steel-framed buildings that experienced moderate to severe non-structural damage and localized structural damage.

My undergraduate research opportunities have challenged me and taught me concepts that are constantly applicable in the civil engineering field. My research experiences have enhanced my understanding of key engineering ideas taught in class, as well as allowed me the unique opportunity to see how the course material I am learning in my academics is used to come up with solutions to current structural engineering challenges.

Besides the educational development I receive from my research experiences, knowing that the work I am doing will positively contribute to the global understanding of civil engineering construction practices gives me great pride and drives me to excel in work assigned to me on each research team. Research tends to get rigorous at times due to the constant trial and error that comes with it, but in the end I know the knowledge I take away from my research opportunities will only make me a better engineer in the future.

CEE student Donovan Holder, center, presents his research to Professor James LaFave, left, and Associate Professor Larry Fahnestock.
Research Experience for Undergraduates

“It gave me another talking point at the CEE career fair, which led to a summer internship at a highly regarded structural engineering firm in Chicago.”

By Alexander Lakocy, CEE Junior

As a second-semester junior in CEE, I was approached by Professor John Popovics, who asked whether I would be interested in a Research Experience for Undergraduates (REU) project for the semester. At this point in my college career, I had solid grades in most of my core classes, plenty of extracurricular experience through the Steel Bridge team, and some work experience as an intern for a construction firm the previous summer. I had done well for myself, but there were several key things missing from my college experience—a connection with professors in the department, an internship at a structural engineering firm and a well-defined idea of what I wanted to do after graduation. My research last spring in the REU program helped me to re-focus my education by allowing me to work closely with professors, design and conduct an experiment, and discover a passion for research.

This project was a preliminary study of how to measure the effects of Alkali-Silica Reactivity (ASR) damage within concrete specimens. The experiments used a non-destructive evaluation (NDE) technique called resonance frequency vibration testing to detect the extensive cracking networks associated with ASR-induced damage. The tests were performed through a series of laboratory experiments using different concrete specimens exposed to harsh conditions, which were intended to accelerate ASR damage. At the end of the project, analysis of the data demonstrated that cracking due to ASR damage actually causes the resonance frequency of concrete specimens to decrease, which is detectable using the vibration tests that were performed.

Throughout the duration of the project I had lots of interaction with the project adviser, Professor Popovics, as we shared ideas about how to design the experiment, what materials to use and how to measure the damage within the affected specimens. However, I was also given the freedom to work on many aspects of the project on my own. I designed and constructed the tank to house the specimens alone, and I performed the majority of specimen casting and testing by myself (with occasional guidance from some of the graduate students). All in all, the project taught me quite a bit about how various NDE tests work, as well as some of the chemistry behind concrete degradation mechanisms. The most important lessons for me, though, were about what it’s like to conduct graduate-level research. It’s almost never as glorious as it sounds—it seemed like the work I did required almost as much reading and writing as it did experimentation. At the same time, the experience was very valuable. It gave me the opportunity to present at a conference last summer. It introduced me to a professor who would become like a second adviser for me. It gave me another talking point at the spring CEE career fair, which led to a summer internship at a highly regarded structural engineering firm in Chicago. Most importantly, it helped me to discover that I want to pursue research as a graduate student—something I would never have found out without that experience.
CEE Student Committee enhances undergrad life

BY ENJI PAUL PAPAZISI, CEE SENIOR

Get involved.” Throughout all my years at Illinois, that has been the most frequent advice given to underclassmen and prospective students by upperclassmen and faculty. Joining organizations can help students learn more about engineering, broaden their professional networks, make friends, and just have some much needed fun. However, the large number of organizations available can be overwhelming to underclassmen, especially those who are uncertain what disciplines they want to focus on. Also, many of these organizations do not always allow students to be in charge of their management until they are voted onto the board at the end of the year. One organization that empowers students to act from the start is the CEE Student Committee (CSC). I became involved with CSC during the second half of my freshman year, making it the first organization I joined in college. Like most, if not all, other members of the committee, I believe it has been one of the most beneficial experiences at Illinois and has had a tremendous effect on my professional development.

The goal of CSC is to aid the CEE department in enabling students to network with each other, professionals and professors. Each fall semester, the committee organizes a Freshmen Kickoff Event. During this event, freshmen are given an informal setting to talk to upperclassmen about anything they wish to know while enjoying some free pizza in the crane bay. Also, each CEE student organization hosts a booth at the event. While attending this as freshman, I got advice about courses, found out more about the organizations I was interested in and met the people I consider my best friends today. This event also allowed me to meet a few of the professors who would teach my CEE classes. Because of this, I was able to make a connection with a professor and be offered a research position as early as my sophomore year.

More recently, the committee has been hosting CEE Social Hours every Wednesday which gives students an opportunity to network with a CEE professor over appetizers at a local restaurant. Though these were not around during my underclassmen years, I have been attending the social hours this year. During each one, I get a very rewarding feeling answering questions students have about CEE disciplines, or job and research opportunities in the department.

To help in getting connected with professionals, the committee organizes a Networking Event on the night prior to each CEE Job Fair. This event creates an informal setting in which students can be introduced to the recruiters they will be speaking to the next day, learn a little more about the companies they work for, and gain insight as to what skills they look for in candidates they wish to hire. During the last hour of the event, students and recruiters participate in a meet-and-greet dinner in which they can have more of a one-on-one interaction, allowing students to make a great first impression and differentiate themselves. This has proven to be exceptionally helpful to students in being offered an interview and, ultimately, getting a job offer. In my personal experience, this event was crucial to my obtaining my internship for the past two summers. I was fortunate enough to be in charge of organizing the event during the spring of my sophomore year and served as a company liaison of my future boss. This allowed me to get a lot of one-on-one time with the recruiter while also learning more about the company and what was expected from their employees. Equipped with this knowledge and a great first impression, I was able to feel more comfortable talking to recruiters at the job fair and could more effectively present my qualifications.

These events are only three of the numerous ones that CSC conducts for students throughout the academic year. Being a part of the committee has allowed me to grow professionally, make a ton of long-lasting friendships, and, most importantly, gain insight into how the CEE department works. While the committee works mostly to benefit the students, it also is a great resource for the department as a whole. Through its interaction with Professor Liang Liu and academic adviser Becky Stillwell, the committee aids the department in understanding what CEE students like about the department and what changes they would like to be instituted. In my mind, this interaction has been the most rewarding aspect of being a part of CSC because it has allowed me to make a name for myself within the department. This has enabled me to make a class of 100 students feel like one of less than 30 students. Though I was worried about getting lost in a big lecture hall when I first came to college, my participation in CSC has made CEE feel like a smaller, welcoming environment. In other words, CSC has transformed the CEE department and its students into my family away from home.

The CEE Student Committee, including Paul Papazisi, right, and Mike Roggeman, left, helped create a video called “Stuff CEE Students Say.” Point your smartphone’s QR reader at the code to watch the video or view it at youtube.com/watch?v=PvSa0Dii6_g
Student organizations key to the Illinois CEE experience

BY NISHANT MAHIJANI, CEE SENIOR

Recently, I shared the stage with David Gottfried, the founder of the U.S. Green Building Council (USGBC), and Stephen Ritz, Founder of Green Bronx Machine, at the Greenbuild International Conference and Expo in Philadelphia. I had been asked to participate because of my long involvement with the USGBC student chapter here at Illinois. During the panel discussion, David asked me this question: “Nishant, what advice do you give to other students involved in the sustainability movement?” My reply: “Get involved in the community and take advantage of the resources available to you.”

I believe it was my educational experience at the University of Illinois, and particularly my experience with student organizations, that has given me that perspective. I got involved with the U.S. Green Building Council (USGBC) Students four years ago as a freshman. USGBC Students is an organization that promotes the Leadership in Energy & Environmental Design (LEED) building standard and provides opportunities for students to learn more about sustainable infrastructure through general meetings and site tours. My values resonated very closely with the organization’s mission, so I started to give my time and energy to the organization, eventually becoming president in 2012.

As president, my primary goal was to increase our membership base by offering a variety of events. This goal helped me create relationships with the strong base of CEE student groups such as the American Society of Civil Engineers, the Structural Engineers Association and the Construction Management Association of America, as we all shared a common purpose – educating and giving relevant life experiences to the CEE at Illinois students. This passion to create a positive change for the students has helped me and other student leaders in CEE grow as individuals and leaders. We hold ourselves to high standards and are driven by passion, hard work and the determination to succeed. These organizations give us opportunities to cultivate our networking skills and develop professional etiquette.

As a senior, I feel it is important to recognize and acknowledge the support I have received in the last four years, especially from the CEE department. In addition to giving us an excellent education, our department faculty and staff are always looking out for us and offering opportunities for growth. The support from the department to attend conferences, lectures and networking events gives us a unique opportunity to seek out alumni and industry professionals to advance our organizations. Furthermore, they also give us an opportunity to seek mentors from the industry and create long-lasting relationships with them.

As a member of USGBC, I am a part of a community of highly motivated young people – students and emerging professionals – who inspire me through opportunities for growth in their workplaces and communities. This community is unique to USGBC, and I consider myself lucky to be part of this social change. Today, with support of the CEE department, USGBC Students hold numerous events through the Green Apple Initiative, to educate and inspire children and adults to view sustainability and sustainable design with a new eye.

In addition, during my time in CEE at Illinois, I have also had the opportunity to give back and serve as a mentor for freshmen through a position as an Engineering Learning Assistant and involvement in the CEE Student Committee Mentoring Program. My other student organization involvements have included Alpha Phi Omega National Service Fraternity and the Student Sustainability Committee. These involvements have enhanced my education in numerous ways and helped me make the most of my Illinois experience in ways I will never forget.

These involvements have enhanced my education in numerous ways and helped me make the most of my Illinois experience in ways I will never forget.
American Concrete Institute
The American Concrete Institute (ACI) Student Chapter promotes student interest in all aspects of concrete. During monthly meetings, our members gain perspective from industry and academic guest lecturers who discuss unique challenges facing concrete in laboratory and other environments. The student chapter is affiliated with ACI-Illinois, the professional liaison chapter located in Chicago. This year, our members have the opportunity to attend ACI Conventions in Phoenix during the fall semester and in Reno during the spring semester. We also operate the popular Concrete Coasters and High-Strength Concrete Competition exhibits at Engineering Open House. For information, please contact aciuiuc@gmail.com.

American Railway Engineering and Maintenance-of-Way Association
The student chapter of the American Railway Engineering and Maintenance-of-Way Association (AREMA) celebrated its five-year anniversary in fall 2013. We educate students about the railroad industry and transform their interest to passion. Earlier this year, our members visited the CTA workshop in Skokie, Ill., to learn about CTA car manufacturing. This visit concluded with a fun ride in a new CTA line train. Later this year, 48 student members will attend the Railway Interchange conference in Indianapolis. The conference will have student members giving technical presentations and provide many current and networking opportunities for them. Our activities also include general meetings with presentations by industry professionals as well as social activities such as cookouts and broomball. For more information, contact Scott Schmidt at aremauiuc@gmail.com.

American Society of Civil Engineers
The ASCE Great Lakes Regional Conference competition will take place on campus April 11-12. More than 500 students from 18 schools in Wisconsin, Illinois and Indiana will compete in eight competitions, including Concrete Canoe and Steel Bridge. For the concrete canoe competition, students design and construct concrete canoes and compete for a spot to attend the national competition. In the steel bridge competition, students design and fabricate a steel bridge before the competition and, at conference, load their bridge and also do a construction time trial. Each school will compete for a spot in the national competition. The other six competitions are only regionally based but are important to the winner of the overall conference. The materials competition will test two precast concrete cylinders under compressive loading. A quiz bowl will test teams of students on their knowledge of various civil engineering disciplines. The surveying competition will have students use surveying equipment to plot the terrain at a location. A technical paper will require a student to write a persuasive paper on a given civil engineering topic and present it during the conference. For the environmental and mystery design competitions, the rules have not been officially released. The top three finishers in each category receive a plaque and in some cases financial awards. To compete, donate or volunteer for the conference, contact Mark Keller at keller31@illinois.edu.

Concrete Canoe Team
The Boneyard Yacht Club (BYC), the Illinois concrete canoe team, is a group of multidisciplinary engineering students who grow into their roles as professional engineers through a year-long project designing and building a concrete canoe. BYC’s mission is to create critical thinkers, knowledgeable practitioners and devoted leaders. As the founding organization of this ASCE-sponsored event, and as the host of the Great Lakes Regional Conference 2014 (April 10-12), BYC will be displaying the pride of the Illini. With a membership of 40 students from different engineering disciplines, we believe we have the diversity and the breadth to win regionals and become the 2014 national champions! We are not an island and seek support from alumni and companies to aid in our goals of engineering professionalism and regional and national titles. Please contact the BYC project managers Robert Butler (rlbutle2@illinois.edu) or Alexandra Prasauskas (prasaus2@illinois.edu) with any questions about the team, the upcoming competition or events.

Deep Foundations Institute
The Deep Foundations Institute (DFI) student chapter allows student members to learn about the planning, design and construction aspects of deep foundations and deep excavations. For the second year, DFI is hosting a field trip to Atlas Tube in Chicago. DFI also hosts events in conjunction with GESO. Please contact Aaron Leopold, chapter president, at leopold3@illinois.edu to learn more about upcoming events and get involved.

Earthquake Engineering Research Institute
The Earthquake Engineering Research Institute (EERI) is a leading technical society in earthquake risk and engineering research. We give any student the chance to make contacts and learn about subjects in earthquake engineering. EERI hosts visiting professionals for guest lectures. The recent range of topics has included SAP2000, engineering, risk analysis and policy. Another event is the Seismic Design Competition. The National EERI holds an undergraduate competition at their annual conference, which will be at Anchorage, Alaska this July. The U of I has participated for the last four years and performed consistently well. Undergraduates who join the design team are introduced to earthquake engineering concepts, construct a 5-foot-tall balsa wood building, and give a presentation at the conference. Finally, their structure is tested on a shake table to simulate a real earthquake. For more information, contact Kevin Kho, at kho1@illinois.edu.

Student Organizations
Some of the many student organizations for civil and environmental engineers at Illinois tell what they’re up to and how alumni can get involved. A more extensive list of CEE student organizations and links to their websites appear here: cee.illinois.edu/student_organizations.
Geotechnical Engineering Student Organization
The Geotechnical Engineering Student Organization (GESO) provides geotechnical graduate students with a forum to pursue and discuss their research interests in an educational and constructive environment and allow them to develop leadership and interpersonal skills they will need as future engineers. The chapter continues to have frequent research roundtables, which include student member presentations on their current research and professional speakers from the private or public sector. Last school year, GESO sent a team of undergraduate and graduate students to the annual GeoCongress conference in San Diego, Calif., to participate in the GeoWall and GeoPrediction competitions. The Illinois GeoPrediction team won 2nd place, competing against other top geotechnical engineering schools throughout the United States and world. This school year, GESO plans to attend the GeoCongress conference in Atlanta and participate in all of the student competitions: GeoWall, GeoPrediction and GeoPoster. For information, contact Steve Wilk at swilk2@illinois.edu.

Institute of Transportation Engineers
The student chapter of Institute of Transportation Engineers (ITE) is part of an international community of transportation professionals working around the world to meet safety and mobility needs. Students join ITE to learn about exciting advancements and challenging problems in this field, network with peers and have fun. Activities this year include participating in the 62nd Annual Traffic Engineering and Safety Conference and concurrent student-practitioner forum, hosting speakers from consulting firms and academia, student social events, field trips and the Illinois ITE annual banquet and student day. In the spring, ITE will create a transportation-related exhibit to be featured during Engineering Open House. ITE is very excited to return and compete at the Midwestern District Traffic Bowl in June. For more information, contact iteuiuc@gmail.com.

International Association of Hydraulic Engineering and Research (IAHR)
The IAHR is an 80-year-old independent organization of engineers and scientists who work in the area of hydro-environmental sciences and their practical applications. The Illinois IAHR student chapter organizes informal collaborative activities with neighboring IAHR student chapters, field trips to local hydraulic works and research facilities, professional development seminars and reading groups. It also organizes social activities which include the annual Hydro T-Shirt design contest, annual pumpkin carving contest, cookouts and mixers. The chapter is also committed to education outreach; every year we present a range of exhibits during Engineering Open House and since last year we have been mentoring local schools for the Office of Naval Research’s SeaPerch program. For information, email duttasj@illinois.edu.

International Water Resources Association (IWRA)
The IWRA student chapter is part of an educational organization whose mission is to expand understanding of water resource issues by promoting education and collaboration in research and decision-making with an emphasis on community involvement. We work locally to raise awareness of water issues through educational events open to the campus community, promote interaction among students and faculty within the Hydrosystems Laboratory, and provide members with networking opportunities. This year, IWRA will start a new event that will involve students and alumni from CEE and other departments with an interest in water resources: a Water Day celebration with a student poster competition and discussions on the future of water resources. We invite alumni to contribute to our efforts by participating in info sessions, seminars and informal meetings with students. For information, contact Andrew Rehn at rehn1@illinois.edu.

Steel Bridge Team
The Steel Bridge team is preparing for this year’s competitions. Last year, we placed fourth in the Great Lakes Regional Competition at Trine University. This year, we are looking forward to hosting regionals here at Illinois. We also plan to improve from last year through a more comprehensive design process and better selection of bridge components. Our goal is to qualify for the national competition in Akron, Ohio, May 23-24. Contact captain Alexander Lakocy (lakocy1@illinois.edu) with questions or information requests.

Structural Engineers Association
The Structural Engineers Association student chapter educates students on professional opportunities through events and networking opportunities. Our general meetings have featured presentations by structural engineers. We have also toured construction sites, done job shadowing and hosted a research panel. Our social outings have included a welcome back barbecue, field day, bowling night, and a multi-organizational broomball tournament. Our outreach committee created a year-long partnership with the High School of St. Thomas More in Champaign; we visit every month to introduce basic concepts in structural engineering. This year marks our 10th anniversary, so the SEA board is organizing a celebration dinner for current members, past members, SEA officers and professionals who have presented throughout the years. To get involved or to be added to the guest list for the 10th Anniversary Celebration, please contact Paul Papazisi at papazisi1@illinois.edu or visit our website at https://sites.google.com/site/seauofi.

U.S. Green Building Council
U.S. Green Building Council (USGBC) student chapter recruits, connects and equips the next generation of green building leaders by empowering them to transform their campuses, communities and careers. Our chapter helps students integrate sustainability themes into their coursework and advocates for sustainable university practices and policies. We provide LEED study sessions to prepare students for the LEED Green Associate Exam. We also organize monthly general meetings to educate our members about recent green building projects. We organized an event for Green Apple Day of Service and attended the annual Greenbuild International Conference and Expo. We will be leading an annual dorm competition called Green Your Dorm, which will encourage students to compete to reduce the amount of energy and water that they use. We plan to host a green building and networking conference in spring 2014, which will feature workshops, talks and tours. For information, write usgbcsstudents.uiuc@gmail.com.

2014 Great Lakes Regional Competition to be held at Illinois April 11-12
This year, the University of Illinois will host the American Society of Civil Engineers Great Lakes Regional Competition April 11-12. Regional concrete canoe and steel bridge contests will be among eight total competitions held that weekend. For more information as plans develop, check https://publish.illinois.edu/asceglc2014/.
Meet the future of CEE at Illinois

Since 2010, CEE at Illinois has hired 14 new faculty members, increasing our number of tenure-system faculty to 54. The new professors’ areas of expertise are cross-disciplinary, representing the integration of the traditional CEE sub-disciplines that has been a strategic focus for the department for several years.

The department’s three new cross-disciplinary programs were developed with the same strategic goal in mind: a more forward-thinking approach to engineering education, research and service to society that recognizes the complexity and interconnectedness of our world and therefore our challenges in civil and environmental engineering.

Presented on these pages are the new professors added since 2010—two of whom will join the department in 2014. They represent the future of civil and environmental engineering.

 Paolo Gardoni
 Joined January 2012

**Structural Engineering; Director of the Mid-America Earthquake Center; Co-director of the Societal Risk Management (SRM) Program**

Laurea, Structural Engineering, Politecnico di Milano, 1997
MS, Structural Engineering, University of Tokyo, 1997
MA, Statistics, UC Berkeley, 2001
PhD, Civil Engineering, UC Berkeley, 2002

Why did you choose CEE at Illinois? The new frontiers of engineering are interdisciplinary. CEE at Illinois provides a unique opportunity to work on cutting-edge interdisciplinary projects with significant societal impact.

Tell us about your research interests. My areas of expertise include reliability, risk and life cycle analysis; decision making under uncertainty; earthquake engineering; performance assessment of deteriorating systems; ethical, social, and legal dimensions of risk; policies for natural hazard mitigation and disaster recovery; and engineering ethics.

Geotechnical Engineering; Societal Risk Management (SRM)

BS, Civil Engineering, Texas A&M University, 2002
MS, Civil Engineering, Texas A&M University, 2004
PhD, Civil Engineering, Texas A&M University, 2012

Why did you choose CEE at Illinois? I chose to come to Illinois because of the Civil and Environmental Engineering department’s commitment to supporting innovative experimental research.

Tell us about your research interests. I have research interests in the characterization of marine sediments subjected to dynamic loading and the relationship between geohazard triggering mechanisms and sediment properties.

Oscar Lopez-Pamies
 Joined August 2011

**Transportation Engineering: Structural Engineering**

BS, Civil Engineering, K.N. Toosi University of Technology, 2002
MS, Structural Engineering, Sharif University of Technology, 2005
MS, Electrical Engineering, University of Southern California, 2012
PhD, Civil Engineering, University of Southern California, 2012

Why did you choose CEE at Illinois? CEE at Illinois is a leader in traditional civil engineering areas and a pioneer in establishing new interdisciplinary areas in civil engineering research and education.

Tell us about your research interests. My overarching objective is to develop rigorous predictive models for complex systems. To this end, my research is focused on the modeling of the uncertainties relevant to the behavior of these systems, and the quantitative assessment of their impacts on the overall performance.

Cassandra Rutherford
 Joined December 2011

**Societal Risk Management**

BA, Mathematics, University of Maryland Baltimore County, 2001
BS, Mechanical Engineering, University of Maryland Baltimore County, 2001
MS, Mechanical Engineering, University of Maryland Baltimore County, 2002
PhD, Mechanical Engineering and Applied Mechanics, University of Pennsylvania/Ecole Polytechnique, 2006

Why did you choose CEE at Illinois? I chose CEE at Illinois because of its great reputation and tradition in mechanics.

Tell us about your research interests. I am interested in the mechanics and physics of advanced materials with a particular emphasis on soft-matter (i.e., highly deformable) systems. Specific areas of interest include the development of mathematical models for the response and failure of electroactive materials for uses as artificial muscles and energy harvesters.

Hadi Meidani
 Joining August 2014

**Geotechnical Engineering; Societal Risk Management**

BS, Civil Engineering, Texas A&M University, 2002
MS, Civil Engineering, Texas A&M University, 2004
PhD, Civil Engineering, Texas A&M University, 2012

Why did you choose CEE at Illinois? CEE at Illinois has a strong reputation for teaching and research in geotechnical engineering.

Tell us about your research interests. My research is focused on the development and application of advanced geotechnical models and numerical techniques for the design and analysis of geotechnical systems.
Jeremy Guest  
Joined December 2011

**Why did you choose CEE at Illinois?** I was incredibly impressed by the faculty, students, and staff, and was very excited about the opportunity to work closely with them to advance fundamental knowledge in environmental engineering.

**Tell us about your research interests.** My research group integrates experimentation, modeling, and sustainable design to invent and advance select water treatment technologies, with a focus on those that are capable of energy, nutrient, and water recovery from wastewaters.

---

Ange-Therese Akono  
Joined December 2013

**Why did you choose CEE at Illinois?** I was incredibly impressed by the faculty, students, and staff, and was very excited about the opportunity to work closely with them to advance fundamental knowledge in environmental engineering.

**Tell us about your research interests.** In my research group, the Sustainability Under the Nanoscope laboratory (SUNlab), we will investigate fracture mechanisms in complex materials from the millimeter scale down to the nanometer scale.

---

Rosa Espinosa-Marzal  
Joined September 2013

**Why did you choose CEE at Illinois?** During my first visit I immediately realized that this was a special place: dynamic, interactive, collaborative, multidisciplinary, very creative, and full of opportunities.

**Tell us about your research interests.** Specific research interests include antibacterial biodegradable nano-particles for drinking water, electrolyte structure/transport and crystal growth in pores of rocks or membranes, surface modification against material (bio)degradation, and understanding self-healing behavior of polymer-reinforced minerals toward the design of sustainable materials.

---

Ashlynn Stillwell  
Joined August 2013

**Why did you choose CEE at Illinois?** My work is highly interdisciplinary, so I was drawn to the new overarching programs, EWES in particular, as an avenue for advancing my work.

**Tell us about your research interests.** My primary research areas include developing decision support tools regarding water use in thermoelectric power plants, modeling the impacts of water and energy management decisions on resource systems, and assessing the economic value of waste streams.

---

Rosa Espinosa-Marzal  
Joined September 2013

**Why did you choose CEE at Illinois?** During my first visit I immediately realized that this was a special place: dynamic, interactive, collaborative, multidisciplinary, very creative, and full of opportunities.

**Tell us about your research interests.** Specific research interests include antibacterial biodegradable nano-particles for drinking water, electrolyte structure/transport and crystal growth in pores of rocks or membranes, surface modification against material (bio)degradation, and understanding self-healing behavior of polymer-reinforced minerals toward the design of sustainable materials.

---

Mani Golparvar-Fard  
Joined December 2012

**Why did you choose CEE at Illinois?** CEE at Illinois has a long standing reputation for focusing on creativity, innovation, interdisciplinary collaboration, and entrepreneurship to solve some of the grand challenges of engineering.

**Tell us about your research interests.** My research focuses on the development of computer vision and machine learning methods that benefit from site images, video streams, and Building Information Models (BIM).
Eun-Jeong Cha  
Joining Spring 2014

Structural Engineering; Societal Risk Management (SRM)
BS, Architectural Engineering, Seoul National University, 2006  
MS, Structural Engineering, Georgia Institute of Technology, 2009  
PhD, Structural Engineering, Georgia Institute of Technology, 2012  

Why did you choose CEE at Illinois? Creativity, passion, mastery, vision and leadership is what I see from the past and the present of the department and I could see myself happily being part of this great synergy.

Tell us about your research interests. My research is aimed at establishing a comprehensive risk-informed decision framework to manage risk to structures and civil infrastructure from extreme natural hazards, including earthquakes, hurricanes, or floods, and to abnormal events, such as terrorist attack, using analytical and statistical approaches.

Megan Konar  
Joined Fall 2012

Energy-Water-Environmental Sustainability (EWES); Safe Global Water Institute
BS, Environmental Engineering, University of California, Riverside, 2005  
MS, Environmental Engineering, Penn State University, 2010  
PhD, Environmental Engineering, Penn State University, 2013  

Why did you choose CEE at Illinois? I was extremely impressed by the research facilities, the quality and collegiality of department faculty. I was also excited to participate in the development of the new cross-cutting EWES program as well as the Safe Global Water Institute.

Tell us about your research interests. My primary research areas include nutrient and energy recovery from wastewater using microbial electrochemical technologies, electrochemical energy production from natural and engineered salinity gradients, capacitive deionization, and sustainable sanitation technologies for the developing world.

Daniel Work  
Joined December 2010

Transportation Engineering; Sustainable and Resilient Infrastructure Systems (SRIS); Decision and Control in the Coordinated Science Lab
BS, Civil Engineering, the Ohio State University, 2006  
MS, Systems Engineering, Civil Engineering, UC Berkeley, 2007  
PhD, Systems Engineering, Civil Engineering, UC Berkeley, 2010  

Why did you choose CEE at Illinois? I was extremely impressed with the quality of the research at Illinois and the outstanding reputation of the faculty in CEE.

Tell us about your research interests. My current research focuses on modeling, estimation and management of transportation systems. My research leverages the ubiquity of mobile phones as traffic sensors and cheap computing to study traffic phenomena at scales that were unimaginable even just a few years ago.

Ahmed Elbanna  
Joined January 2013

Structural Engineering; Societal Risk Management (SRM)
BS, Civil Engineering, Cairo University, 2003  
MS, Structural Engineering, Cairo University, 2005  
MS, Applied Mechanics, Caltech, 2006  
PhD, Civil Engineering, Caltech, 2011  

Why did you choose CEE at Illinois? At Illinois I will be able to work on my interdisciplinary research while (1) collaborating with world-class faculty and students, and (2) using the best computational resources available in the world.

Tell us about your research interests. Understanding how things break. I use computational models as well as theories from physics and mechanics to uncover mechanisms contributing to these processes from the microscale up to the macroscopic scale.

Roland Cusick  
Joined October 2013

Energy-Water-Environmental Sustainability (EWES); Safe Global Water Institute
BS, Environmental Engineering, University of California, Riverside, 2005  
MS, Environmental Engineering, Penn State University, 2010  
PhD, Environmental Engineering, Penn State University, 2013  

Why did you choose CEE at Illinois? I was extremely impressed by the research facilities, the quality and collegiality of department faculty. I was also excited to participate in the development of the new cross-cutting EWES program as well as the Safe Global Water Institute.

Tell us about your research interests. My research focuses on the nexus of water and food systems, with a particular emphasis on how trade in agricultural commodities impacts water resource use. This research is inherently interdisciplinary, due to the focus on agricultural production and economic trade.

Hydrology/Environmental Hydrology; Energy Water Environmental Sustainability (EWES)
BS, Conservation and Resource Studies, UC Berkeley, 2002  
MS, Water Science, Policy and Management, Oxford, 2005  
PhD, Civil & Environmental Engineering, Princeton, 2012  

Why did you choose CEE at Illinois? I chose CEE at Illinois for the world-class research and colleagues, the ability to recruit top students, and the emphasis on excellence in both technical depth and interdisciplinary breadth.

Tell us about your research interests. My research focuses on the nexus of water and food systems, with a particular emphasis on how trade in agricultural commodities impacts water resource use. This research is inherently interdisciplinary, due to the focus on agricultural production and economic trade.

Megan Konar  
Joined Fall 2012

Energy-Water-Environmental Sustainability (EWES); Safe Global Water Institute
BS, Environmental Engineering, University of California, Riverside, 2005  
MS, Environmental Engineering, Penn State University, 2010  
PhD, Environmental Engineering, Penn State University, 2013  

Why did you choose CEE at Illinois? I was extremely impressed by the research facilities, the quality and collegiality of department faculty. I was also excited to participate in the development of the new cross-cutting EWES program as well as the Safe Global Water Institute.

Tell us about your research interests. My primary research areas include nutrient and energy recovery from wastewater using microbial electrochemical technologies, electrochemical energy production from natural and engineered salinity gradients, capacitive deionization, and sustainable sanitation technologies for the developing world.

Roland Cusick  
Joined October 2013

Energy-Water-Environmental Sustainability (EWES); Safe Global Water Institute
BS, Environmental Engineering, University of California, Riverside, 2005  
MS, Environmental Engineering, Penn State University, 2010  
PhD, Environmental Engineering, Penn State University, 2013  

Why did you choose CEE at Illinois? I was extremely impressed by the research facilities, the quality and collegiality of department faculty. I was also excited to participate in the development of the new cross-cutting EWES program as well as the Safe Global Water Institute.

Tell us about your research interests. My primary research areas include nutrient and energy recovery from wastewater using microbial electrochemical technologies, electrochemical energy production from natural and engineered salinity gradients, capacitive deionization, and sustainable sanitation technologies for the developing world.

Daniel Work  
Joined December 2010

Transportation Engineering; Sustainable and Resilient Infrastructure Systems (SRIS); Decision and Control in the Coordinated Science Lab
BS, Civil Engineering, the Ohio State University, 2006  
MS, Systems Engineering, Civil Engineering, UC Berkeley, 2007  
PhD, Systems Engineering, Civil Engineering, UC Berkeley, 2010  

Why did you choose CEE at Illinois? I was extremely impressed with the quality of the research at Illinois and the outstanding reputation of the faculty in CEE.

Tell us about your research interests. My current research focuses on modeling, estimation and management of transportation systems. My research leverages the ubiquity of mobile phones as traffic sensors and cheap computing to study traffic phenomena at scales that were unimaginable even just a few years ago.
Repping CEE at Homecoming
Two CEE students, pictured here with Chancellor Phyllis Wise, left, served on the University of Illinois Homecoming Court in fall 2013. Nishant Makhijani, right, and Marika Nell, center, both seniors, were among 20 students selected by university faculty and staff through a rigorous application process that emphasizes student achievement, leadership and community service. The honor involves taking part in numerous activities during Homecoming Week, including the Homecoming parade and pep rally, football game and receptions. To learn more about Makhijani and Nell, visit cee.illinois.edu/HCcourt2013.

The M.T. Geoffrey Yeh Student Center received an Award of Merit at the Structural Engineers Association of Illinois 2013 Excellence in Structural Engineering Awards Competition. This design competition takes place each year to recognize excellence in structural engineering.

Professor Iman Al-Qadi was recently named the next president of the American Society of Civil Engineers (ASCE) Transportation and Development Institute (T&DI). The ASCE established the T&DI in 2002. Membership is open to anyone with an interest in transportation or development. As director of the Illinois Center for Transportation, Al-Qadi oversees operations for the center, which has become one of the largest centers at the University of Illinois and one of the leading national and international transportation centers.

Professor Emeritus Robert H. Dodds Jr. (MS 75, PhD 78), former CEE at Illinois department head, was named to the initial class of Fellows of the Engineering Mechanics Institute of the American Society of Civil Engineers (ASCE), and was also awarded the Fracture Mechanics Medal by the American Society for Testing and Materials (ASTM) in recognition of his outstanding and sustained contributions to the advancement of fracture mechanics technology and education. He is also a Fellow of ASTM and has previously won the George Irwin Medal, the Jerry L. Swedlow Lecture Award, and the ASTM Award of Merit.

Associate Professor Larry A. Fahnstock, a CEE Excellence Faculty Fellow, has been honored with a 2013 Campus Distinguished Promotion Award. The award recognizes faculty whose cases for promotion were deemed particularly noteworthy by the Campus Committee on Promotion and Tenure during the promotion review process, noting scholars whose contributions are exceptional in terms of quality of work and overall achievement. Four faculty in total across the campus were so honored. The award comes with a $3,000 discretionary fund to support scholarly activities. Fahnstock has served on the CEE faculty since 2006. His research focuses on earthquake engineering, innovative structural systems, steel structures, connection performance, progressive collapse mitigation and large-scale experimental evaluation of structural components and systems.

Assistant Professor Mani Golparvar Fard (PhD 10) has been selected for a 2013-14 fellowship from the National Center for Supercomputing Applications for his project “Energy Performance Augmented Reality Models for Building Diagnostics Using a Hybrid of RGBD/Thermal Cameras and CFD Models.” He also has a collaborative fellowship with Timothy Bretl of Aerospace Engineering for “Autonomous Vision-based Progress Monitoring of Building and Infrastructure Construction Projects.”

Professor Marcelo Garcia was named a Fellow of the Environmental Water Resources Institute, a civil engineering specialty institute of the American Society of Civil Engineers. A Fellow is someone who is recognized by the field and their peers as a leader in water resources and/or environmental engineering.

Associate Professor Youssef M.A. Hashash was selected by the Geo-Institute Board of Governors to receive the 2014 Ralph B. Peck Award for “innovative research in evaluating the load and deformation response of deep excavations, using novel modeling approaches and innovative monitoring technologies and the immediate advancement of the excavation design practice, and for his voluntary commitment to the geotechnical community.” The Ralph B. Peck Award recognizes an individual’s outstanding contributions to the geotechnical engineering profession through the publication of a thoughtful, carefully researched case history or histories, or the publication of recommended practices or design methodologies based on the evaluation of case histories.

Xiang Liu (MS 11), a postdoctoral researcher with the Rail Transportation and Engineering Center, won the Society for Risk Analysis (SRA) Risk Policy & Law Merit Award at the SRA annual meeting in December.

CEE graduate student Andrew Mock (MS 12) has won a Graduate Research Opportunity Worldwide award from the National Science Foundation. The GROW program, which began this year, is a partnership between NSF and select international funding agencies that allows current NSF fellows to conduct extended research overseas. Mock will conduct structural dynamics research in France for seven months at the Ecole Normale Supérieure de Cachan with Fabrice Gatuingt. Mock will devise computational models to predict how cracks in concrete form and propagate under stressful conditions.

CEE graduate student Yu Qian (MS 13) has been awarded the 2013-14 Geosynthetic Institute Fellowship for his research proposal “Investigation of Geogrid-Ballast Interaction and Geogrid Application in Railroad Reinforcement using Image-aided Discrete Element Method.”

CEE Senior Research Engineer and Director of Research with RailTEC Conrad Ruppert Jr. is one of six people appointed to the New York Metropolitan Transportation Authority Authority’s Blue Ribbon Panel to study the causes of rail accidents and incidents, including the major derailment last May on Metro-North’s New Haven Line and several train-car accidents on the Long Island Rail Road.

Fall job fair lunch sponsors
With deep gratitude, we acknowledge these companies who sponsored lunch at the fall 2013 CEE Job Fair.
Wiss, Janney, Elstner Associates Inc.
Civiltec
Fullerton Engineering Design
Sargent & Lundy LLC
Langan Engineering & Environmental Services
Manhard Consulting

The 100th Illinois Transportation and Highway Engineering conference (THE) will take place on campus March 25-26. Visit the conference website for more information or to view historical information and photos.
theconf.com
CEE student Scott Schmidt has been awarded a $1000 Frank J. Richter Scholarship by the American Association of Railroad Superintendents. His focus of study is railway engineering with a minor in business. He has worked as an intern for Loram Maintenance of Way, BNSF Railway and Hanson Professional Services. He is President of the AREMA Student Chapter and works as a RailTEC undergraduate assistant.

Professor David Lange has received a Fulbright Scholarship to conduct research on concrete durability in collaboration with VTT Technical Research Centre in Finland from January to June 2014. VTT is the largest multidisciplinary research organization in Northern Europe. Lange will be developing new experimental techniques to better understand mechanisms that deteriorate concrete and limit service life. Drs. Erika Holt, Markku Leivo and Miguel Ferreira are among the VTT team focusing on concrete durability who will serve as primary partners during Lange’s time there.

Professor Charles J. Werth has been appointed to the U.S. Environmental Protection Agency (EPA) Science Advisory Board’s Environmental Engineering Committee. He will serve through Sept. 30, 2016, providing independent advice on technical issues underlying the EPA’s policies and decision-making.

**MAE Center adopts multi-hazard focus**

A broader range of natural and human-made hazards is the new focus of the recently revitalized MAE Center, a 17-year-old research center headquartered within CEE at Illinois. Previously geared toward solely earthquake engineering research, the center now derives its acronym, MAE, from its new Multi-hazard Approach to Engineering.

“The MAE Center was established in 1997 by the National Science Foundation as one of three national earthquake engineering research centers,” said Associate Professor Paolo Gardoni, MAE Center director. “Since then, we have expanded the mission to consider multiple hazards around the world. We have also developed a new sustainable business model that will allow the center to continue to be a world leader in the prediction and mitigation of natural and human-made hazards and one of the world’s most comprehensive centers for risk analysis.”

Two conferences are planned: The International Conference on the Societal Risk Management of Natural Hazards, April 17-18, Urbana; and the International Conference on Multi-hazard Approaches to Civil Infrastructure Engineering, June 26-27, Chicago.

mae.cee.illinois.edu
Microbes in fish offer key to Asian carp control

A project to map the microbes present in the digestive systems of fish species holds promise for monitoring the presence of Asian carp in Chicago area waterways and ultimately preventing their spread, according to a study published in Nature’s ISME Journal. The work, funded through the U.S. Environmental Protection Agency Great Lakes Restoration Initiative, is being conducted by researchers from the University of Illinois at Urbana-Champaign and the U.S. Geological Survey.

Asian carp is a term used to refer to several invasive fish species including silver, bighead and black carp. Bighead carp and silver carp have already invaded much of the Mississippi River basin, where they compete for food with native species and dominate aquatic communities. Bighead carp and silver carp are considered one of the most severe aquatic invasive species threats facing the Great Lakes today, according to the Asian Carp Regional Coordinating Committee (ACRCC). The ACRCC is coordinating the efforts of federal, state, local and private resource management agencies to develop an Asian carp control program. Efforts to control the fish include research to understand their physiology and behavior and how they differ from that of native species, with an eye toward developing effective monitoring and management systems.

Gut microbiota—the microbial communities present in the digestive tracts of living things—are unique, according to CEE Professor Wen-Tso Liu, co-author of the study. For that reason, careful analysis of fish gut microbiota can reveal host-specific biomarkers shed in fish feces that indicate the presence of a specific species, promising the development of precise monitoring systems. Since fish feces are plentiful in waterways, monitoring could be easier than with techniques that have focused on detecting the DNA of the targeted species in sloughed-off skin tissue, Liu says.

The researchers used a next-generation gene sequencing technology called 16S pyrosequencing, which focuses on the 16S rRNA gene sequences, to analyze the gut microbiota of the invasive silver carp and the native gizzard shad. They successfully discovered potential biomarkers for silver carp and are working to refine them, Liu says.

http://cee.illinois.edu/fish_microbes_wentsoliu
GAMES camp offers Environmental Engineering and Sustainability track

The Girls’ Adventures in Mathematics, Engineering and Science (G.A.M.E.S.) camp is once again offering a track on Environmental Engineering and Sustainability. The week-long camp, July 13-19, 2014, focuses on designing sustainable technological solutions for critical environmental and energy challenges of the 21st Century. Through a series of team activities, lab exercises, and field trips campers will learn about:

- Sustainability and how the environment, culture, society and economics are all linked
- Environmental pollutants and the cycles they follow as they move through the air, water and soil
- Climate change
- Renewable energy sources and energy efficiency
- Water resources and clean water technologies
- Air quality management
- What environmental engineers do to help protect human health and the planet

A group of CEE undergrads attended the Water Environment Federation’s Annual Technical Exhibition and Conference (WEFTEC) in October in Chicago. Above are (from left) Lance Langer, Michael Azzarello, Joseph Chang, Theodore Chan, Namrata Logishetty and Bill Cheng. Langer and Azzarello, along with Donnie Manhard and Alyssa Sohn (not pictured), competed in the Environmental Design Competition, placing fourth with their study of the Combined Sewer Overflow system in Mishawaka, Ind. The students also visited Greeley and Hansen’s Chicago office and attended the WEFTEC career fair.

Scientists to Study Human Impact on Midwestern Environment

As humans modify the earth’s landscape to suit their purposes, their activities can have far-reaching effects on the environment. Of particular concern to those who study these effects is the region from the top of the plant canopy to the bedrock beneath. This area—called the critical zone—is now a special focus for scientists, thanks to a National Science Foundation initiative to study human impact on the environment through a network of nine instrumented locations across the country called Critical Zone Observatories (CZOs). CEE Professor Praveen Kumar is leading a $4.9 million, multi-disciplinary, multi-institution project to establish the first CZO in the Midwest.

In the Midwest, human beings have intensively modified the landscape within the last 200 years to make the prairie more capable of sustaining agriculture, Kumar said. But these modifications may have led to unintended consequences for the critical zone, which functions as “a cohesive unit with living and non-living things interacting,” Kumar said.

The Midwestern CZO will consist of two core sites, one located in the Upper Sangamon River basin measuring 3,600 square kilometers and the other in Clear Creek Watershed in Iowa measuring 275 square kilometers. A third, partner site is located in the Minnesota River basin in Minnesota. Instrumentation will be installed to monitor baseline characteristics such as rainfall, radiation, evaporation, carbon dioxide use by plants, and the flow of nutrients, sediments, organic carbon and water. Researchers will also collect soil samples to map the paths of nutrients and sediments, and examine previously collected data to understand historical trajectories. The result will be a very detailed, comprehensive picture of the natural processes going on throughout the CZO, Kumar said. The sites will serve as a resource for researchers, educators and students in fields including engineering, geography, geology, soil science and ecology, he said.

“The observatory is aimed at understanding how natural processes happen together, how they co-evolve and how human modification has altered that,” Kumar said. “What is the limit to these modifications and what do we need to do to recover many of the functions that originally made this land productive?”

cee.illinois.edu/MidwesternCZO
1940s

Charles J. Berkel (BS 46) died Nov. 4. He was 88. In 1959, working out of his basement, he started his own company. Berkel & Co. grew into one of the largest piling contractors in the U.S. Berkel’s awards included Ernst & Young’s 2008 Entrepreneur of the Year.

Ronald H. Brown (BS 49) died Aug. 13. He was 87. He was employed by Shell Oil Company for about 40 years. He held professional memberships in the National Petroleum Refiners Association and the American Institute of Chemical Engineers. He retired in Houston, Texas in 1988.

Thomas D.Y. Fok (MS 48) died Aug. 24. He was 92. He taught civil engineering for nine years at Youngstown State University. In 1967, he began Moser-Fok Consulting Engineers, and later served as chairman of Thomas Fok and Associates. He was a registered engineer in nine states and a registered surveyor.

Richard H. Foley (BS 49) died July 6. He was 87. He spent his career at Felmley-Dickerson Co. in Champaign, retiring as president in 1990. His projects on the Urbana campus included the Assembly Hall (1963), classroom buildings and dormitories. He was a lifetime member of the University of Illinois Alumni Association and received the Civil Engineering Loyalty Award.

Raymond M. Stone (BS 46) died Sept. 27. He was 88. He worked on the design of many schools and other buildings in Indiana as a partner in I.E. Brown and as an independent consultant.

1950s

Austin J. Boyle (BS 51) died June 23. He was 87. Boyle was the Midwest Manager for Ceco Steel Corp.

Donald E. Eckmann (BS 56) died July 4. He was 78. Eckmann was a partner in the consulting firm of Alvord, Burdick & Howson, and was responsible for the design of the Lake Michigan Water Supply System project for DuPage County. He was past president of the Illinois Section of the American Society of Civil Engineers, and was a past Director of the National ASCE. He received the 1992 ASCE Civil Engineer of the Year award. He was the past president of the University of Illinois Civil Engineering Alumni Association. He was also named a 1989 Distinguished Alumnus of CEE at Illinois.

Fred E. Myers Jr. (BS 57) died Sept. 7. He was 83. He worked at Caterpillar Inc. and later at Ziegler Co. in Minneapolis, Minn.

Vernon C. Rosenbery (BS 51) died March 13. He was 84. He began his career with a job at North American Aviation in Los Angeles, designing fuselages for F-86 Sabre fighter jets. He returned to the Midwest to work for the Iowa DOT in Manchester, Iowa. He later became sole owner of Foley Construction.

James H. Schooler (BS 58, MS 59) died Sept. 11. He was 77. He was a Lieutenant junior grade in the Navy where he worked at MCAS Yuma. He transitioned to civil service in the U.S. Army Corps of Engineers, retiring in 1992.

Samuel M. Wolfington (BS 57) died Oct. 14. He was 83. He was an Army forward observer, Chief Engineer at MacDill AFB and later stationed in London.

1960s

Max L. Rosenquist (BS 65) died September 7. He was 71. He was a commissioned officer in the Civil Engineer Corps of the U.S. Navy, served a one year tour in Vietnam, and was honorably discharged as a lieutenant in 1970, serving in the U.S. Naval Reserves until 1973.

1970s

Don C. Banks (PhD 78) died Aug. 11. He was 73. He spent a 35-year career at the then U.S. Army Corps Waterways Experiment Station in Vicksburg, Miss. He was a fellow in the American Society of Civil Engineers and the American Rock Mechanics Association.

Phillip W. Schuetz (BS 73, MS 74) died Aug. 10. He was 63. He had a long career with Bechtel Power Corp.

1980s

Anthony G. Levine (BS 81, MS 85) died Sept. 25. He was 54. He was the former president of Devine Engineering, Incorporated.

Timothy J. Spangler (MS 84) died Aug. 13. He was 57. He served in the U.S. Coast Guard from 1978-1988 and was recalled to active duty in 2002. He retired from the U.S. Coast Guard Reserve in 2004. He was a Senior Project Manager with HICAPS in Greensboro, N.C.
**2000s**

Joannis Brilakis (MS 02, PhD 05) has been selected to receive the 2013 Collingwood Prize for the paper, “Visual Pattern Recognition Models for Remote Sensing of Civil Infrastructure,” Journal of Computing in Civil Engineering, October 2011.

Ryne M. Fiorito (BS 08) a civil engineer at Hanson Professional Services Inc.’s Springfield, Ill., headquarters earned his professional engineer license in Illinois. He joined the company in 2008 and serves the firm’s power and industry market.

Thomas J. Foley (BS 09, MS 10) of Clark Dietz Inc., Kenosha, Wis., has received his professional engineer license in Illinois.

Lee Fritz (BS 04, MS 05) has been promoted to senior project architect at Thornton Tomasetti’s Chicago, Ill., office.

Ronald E. Heuer (BS 63, PhD 71) received an outstanding achievement award from the Moles, a professional group for those working in heavy construction. Heuer is a geotechnical consultant specializing in large underground projects.

Michelle Mehnert (BS 12) represented the University of Boulder as a graduate student to take a Collegiate National Triathlon Championship in Tempe, Ariz., on April 13, 2013.

Sean W. Mikos (BS 04) is an engineer and head of public works for the City of Peru, Ill.

Christopher T. Rapp EIT (MS 13), railroad designer, recently joined Hanson Professional Services Inc.’s Seattle regional office, serving the firm’s railway market.

Sudhir K. Singamsethi (MS 02) received the Structural Engineers Association of Illinois 2013 Outstanding Young Engineer Award.

**Greer visits as CEE Engineer in Residence**

Four once-in-a-lifetime engineering projects—from relocating a lighthouse to moving nuclear reactor pressure vessels—were highlighted when CEE alumnus W. Charles Greer Jr. (BS 71, MS 73) visited Oct. 25 as CEE’s Engineer in Residence.

Greer is Senior Vice President and Director of Quality Assurance for AMEC Environment & Infrastructure Inc. in Atlanta, Ga. While on campus, he gave his lunchtime presentation, “Once-in-a-Lifetime Project Every 10 Years;” held office hours with students and met with faculty.

The Engineer in Residence program was developed in an effort to bring accomplished alumni back to campus to interact with students and faculty.

Kevin M. Spitz P.E. (BS 08) civil engineer at Hanson Professional Services Inc.’s Chicago regional office, recently celebrated five years of service with the company.

Timothy J. Truster (MS 10, PhD 13) was the recipient of the award for the Best Mathematically Oriented Poster from Computers & Mathematics with Applications at the 12th U.S. National Congress on Computational Mechanics in Raleigh, N.C. His Ph.D. advisor is CEE Professor Arif Masud.

**1990s**

Radwan Al-Weshah (PhD 93), professor of civil engineering at the University of Jordan in Amman, is a senior advisor to the Kuwait National Focal Point for Environmental Remediation Project in Kuwait.

Russell A. Green (BS 94), associate professor of civil and environmental engineering in the College of Engineering at Virginia Tech, has received the University’s 2013 Alumni Award for Excellence in International Research for his work in the areas of engineering seismology and earthquake engineering.

Douglas L. Mangers (BS 96) has been promoted from project director to vice president operations — healthcare for the central division of McCarthy Building Companies Inc., based in St. Louis, Mo.

Richard K. Murphy (MS 90) is a senior manager at Lockport, Ill.-based Bollinger Shipyard Inc. Murphy joins Bollinger following a 30-year career with the Coast Guard.

Scott A. Spellmon (MS 97) was promoted to brigadier general in a ceremony at Fort Hood, Texas. Spellmon is the commanding general of the U.S. Army Operational Test Command.

Helen Torres, S.E., LEED AP BD+C (MS 95) has been promoted to vice president in the Chicago office of Thornton Tomasetti.

**1980s**

Wayne A. Aldrich (BS 83) is public works director in Normal, Ill.

Joette Flora (MS 88) has rejoined The Boudreaux Group as a project architect.

Stuart M. Kemp P.E., S.E. (BS 83, MS 85), regional vice president, recently celebrated 25 years of service at Hanson Professional Services Inc.’s Rockford, Ill., regional office.

Gennaro G. Marino P.E. (PhD 85) has been named by the Academy of Geo-Professionals a Diplomate, Geotechnical Engineer.

Ronald P. Palmieri P.E. (BS 83, MS 85) is chief operating officer of GEI Consultants Inc. in GEI’s Libertyville, Ill., office.

Robert D. Schlesinger P.E., LEED AP BD+C, Capt., U.S. Navy (Retired) (MS 85) has been elected a member of the National Board of Direction for the Society of Military Engineers.

Dan S. Takasugi (MS 82) is the new Public Works Director and City Engineer for the City of Sonoma, Calif.

Bob (BS 54) and Fran (BS Home Ec. 54) Fosnaugh of Albuquerque, N.M., and Dennis (BS 76 MS 78) and Cathie Benoit (BA Psych 78) of Grand Rapids, Mich., met while on a small group tour in Spain and soon discovered that both couples were University of Illinois at Urbana-Champaign graduates. The couples shared memories of life on the Urbana campus one generation apart. Bob and Dennis enjoyed discovering that several of the Civil Engineering faculty that were there during Bob’s tenure were also there when Dennis attended, including Chester Seiss, John D. Haltiwanger and Ven Te Chow. This picture is taken near the Greek ruins of Empuries on the Mediterranean coast.
If you know of a deserving colleague who graduated from CEE at Illinois, consider nominating him or her for a CEE Alumni Association award. The Distinguished Alumnus/Alumna Award and the Young Alumnus/Alumna Achievement Award recognize those who have distinguished themselves in the field at different career stages. The next deadline is July 28, 2014. For more information, please visit our alumni awards page of the CEE website at cee.illinois.edu/CEEAAwards.

Show your CEE at Illinois pride with an item from the CEE webstore! New items are being added all the time, like this CEE Illinois-debossed leather padfolio. Visit https://my.cee.illinois.edu/buy.

---

Nominations invited: CEE alumni awards

If you know of a deserving colleague who graduated from CEE at Illinois, consider nominating him or her for a CEE Alumni Association award. The Distinguished Alumnus/Alumna Award and the Young Alumnus/Alumna Achievement Award recognize those who have distinguished themselves in the field at different career stages. The next deadline is July 28, 2014. For more information, please visit our alumni awards page of the CEE website at cee.illinois.edu/CEEAAwards.

---

Thomas F. McCluskey (BS 71) received the Structural Engineers Association of Illinois 2013 Service Award.

John E. Schaufelberger (MS 70, PhD 71) is dean of the University of Washington College of Built Environments.

John P. Tynan (BS 77) has been named interim CEO and President of VG Life Sciences Inc.

---

M. Frank Avila Jr. (BS 61), the Metropolitan Water Reclamation District of Greater Chicago Commissioner, was recently honored with the Society of Hispanic Professional Engineers Chicago Presidents Award.

Louis T. Cerny (BS 64, MS 65) is one of six people appointed to the New York Metropolitan Transportation Authority’s Blue Ribbon Panel to study the causes of rail accidents.

---

Burton A. Lewis (MS 50) received the Structural Engineers Association of Illinois 2013 John F. Parmer Award. This award honors a structural engineer whose distinguished career was acknowledged by his peers to be an example of excellence.

---

Joseph C. Geagea (BS 81, MS 82), Senior Vice President, Technology, Projects and Services, for Chevron (right) visited the department in October. He is pictured here in the department head’s office with Amr S. Elnashai, then Head (left) and Professor Emeritus William J. Hall (MS 51, PhD 54). At Illinois, Geagea was named a 1981 Bronze Tablet honoree and was awarded the 1981 Baker Prize.

Sharon L. Wood (MS 83, PhD 86) is interim dean of the Cockrell School of Engineering at the University of Texas.
# Sponsored Research

Research is an important part of the mission of the Department of Civil and Environmental Engineering. The many and varied projects of our faculty contribute to knowledge, enhance the education of our students, and improve the practice of civil and environmental engineering. On this page we acknowledge companies and organizations that are currently providing research funding in the department (through September 2013). Listed are the faculty members who are conducting the research, the sponsoring agencies, and project names.

<table>
<thead>
<tr>
<th>Investigator</th>
<th>Funding Agency</th>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abrams, Daniel P</td>
<td>US National Science Foundation</td>
<td>Hybrid Masonry Seismic Structural Systems</td>
</tr>
<tr>
<td>Al-Qadi, Imad</td>
<td>Texas Engineering Experiment Station</td>
<td>Numerical Prediction of Three-Dimensional Tire-Pavement Contact Stresses</td>
</tr>
<tr>
<td>Al-Qadi, Imad</td>
<td>Federal Highway Administration</td>
<td>The Impact of Wide Base Tires on Pavements a National Study</td>
</tr>
<tr>
<td>Al-Qadi, Imad</td>
<td>Applied Pavement Technology Inc</td>
<td>Development of Reference Documents for Sustainable Pavement Systems</td>
</tr>
<tr>
<td>Al-Qadi, Imad</td>
<td>Virginia Transportation Research Council</td>
<td>Validation of Hot Poured Crack Sealant Performance Based Guidelines Pooled Fund Study TPF 5 225</td>
</tr>
<tr>
<td>Al-Qadi, Imad</td>
<td>Michelin Americas Research &amp; Development Corp</td>
<td>Influence of Tire Parameters on Roadway Structures</td>
</tr>
<tr>
<td>Al-Qadi, Imad</td>
<td>IL State Toll Highway</td>
<td>Development of Life-Cycle Assessment Tool for the Illinois Tollway Roadway</td>
</tr>
<tr>
<td>Al-Qadi, Imad</td>
<td>IL Department of Transportation</td>
<td>ICT Program Management FY14</td>
</tr>
<tr>
<td>Al-Qadi, Imad</td>
<td>IL Department of Transportation</td>
<td>Testing Protocols to Ensure Performance of High Asphalt Binder Replacement Mixes Using RAP and RAS</td>
</tr>
<tr>
<td>Al-Qadi, Imad</td>
<td>IL Department of Transportation</td>
<td>Funding Set Aside for BS &amp; MS Students</td>
</tr>
<tr>
<td>Al-Qadi, Imad</td>
<td>IL Department of Transportation</td>
<td>Asphalt Binder Additives Modifiers of Moisture Sensitivity in HMA</td>
</tr>
<tr>
<td>Al-Qadi, Imad</td>
<td>IL Department of Transportation</td>
<td>Special Projects Engineering</td>
</tr>
<tr>
<td>Al-Qadi, Imad</td>
<td>IL Department of Transportation</td>
<td>Information Technology Support</td>
</tr>
<tr>
<td>Al-Qadi, Imad</td>
<td>IL Department of Transportation</td>
<td>Technology Transfer and Editorial Support</td>
</tr>
<tr>
<td>Al-Qadi, Imad</td>
<td>IL Department of Transportation</td>
<td>Illinois Center for Transportation ICT</td>
</tr>
<tr>
<td>Al-Qadi, Imad</td>
<td>IL State Toll Highway</td>
<td>Support for Pavement Research at UIUC Proposal to the Illinois State Toll Highway Authority 2010</td>
</tr>
<tr>
<td>Andrawes, Bassem</td>
<td>US National Science Foundation</td>
<td>Innovative Confinement Technology for Strong Main Shock-Aftershock Damage Mitigation</td>
</tr>
<tr>
<td>Andrawes, Bassem</td>
<td>IL Department of Transportation</td>
<td>Strengthening of Bridge Wood Piling Retrosfits for Moment Resistance—Phase 2</td>
</tr>
<tr>
<td>Barkan, Christopher</td>
<td>Trustees of Purdue University</td>
<td>Integrated Hazardous Materials Transportation Safety Risk Management Framework</td>
</tr>
<tr>
<td>Barkan, Christopher</td>
<td>US Department of Transportation</td>
<td>National University Rail NURail Center A Proposal for a Tier 1 University Transportation Center</td>
</tr>
<tr>
<td>Barkan, Christopher</td>
<td>Trustees of Purdue University</td>
<td>Integrated Solutions for Mobility Safety and Infrastructure Renewal Integrated Hazardous Materials Transportation Safety Risk Management</td>
</tr>
<tr>
<td>Barkan, Christopher</td>
<td>Federal Highway Administration</td>
<td>Dwight David Eisenhower Graduate Fellowship</td>
</tr>
<tr>
<td>Barkan, Christopher</td>
<td>IL Department of Transportation</td>
<td>A Preliminary Feasibility Study for the Chicago Champaign Link in the Midwest High Speed Rail Network</td>
</tr>
<tr>
<td>Benekohal, Rahim F</td>
<td>Trustees of Purdue University</td>
<td>Optimized Active Traffic Management and Speed Harmonization in Work Zones</td>
</tr>
<tr>
<td>Benekohal, Rahim F</td>
<td>Trustees of Purdue University</td>
<td>Dynamic Multi Modal Multi-Objective Intersection Signal Priority Optimization</td>
</tr>
<tr>
<td>Benekohal, Rahim F</td>
<td>Trustees of Purdue University</td>
<td>Agent Based Real-Time Signal Coordination in Congested Networks</td>
</tr>
<tr>
<td>Benekohal, Rahim F</td>
<td>US Department of Transportation</td>
<td>2006-06604 DOT PU 4108-21574</td>
</tr>
<tr>
<td>Benekohal, Rahim F</td>
<td>IL Department of Transportation</td>
<td>Safety and Efficiency Benefits of Implementing Adaptive Signal Control Technology in Illinois</td>
</tr>
<tr>
<td>Benekohal, Rahim F</td>
<td>IL Department of Transportation</td>
<td>Street Lighting Technologies—LED Street Lighting Evaluation, Phase 2</td>
</tr>
<tr>
<td>Benekohal, Rahim F</td>
<td>IL Department of Transportation</td>
<td>Field Eval of Smart Sensor Detectors at Intersections &amp; RR Crossings</td>
</tr>
<tr>
<td>Bond, Tami C</td>
<td>University of California - Irvine</td>
<td>Characterization of Emissions From Small Variable Solid Fuel Combustion Sources for Determining Global Emissions and Climate Impact</td>
</tr>
<tr>
<td>Bond, Tami C</td>
<td>US Environmental Protection Agency</td>
<td>Linking Regional Emission Changes with Multiple Impact Measures Through Direct and Cloud-related Forcing Estimates</td>
</tr>
<tr>
<td>Bond, Tami C</td>
<td>Pacific Northwest National Lab</td>
<td>Harmonized Emission and Activity Databases for 1850-2010</td>
</tr>
<tr>
<td>Bond, Tami C</td>
<td>US Environmental Protection Agency</td>
<td>Global to Urban Models for Minimizing Air Quality and Climate Impacts of Freight Choice</td>
</tr>
<tr>
<td>Bond, Tami C</td>
<td>US National Science Foundation</td>
<td>A Chemical History of Anthropogenic Input to the Atmosphere Throughout the Industrial Era</td>
</tr>
<tr>
<td>Investigator</td>
<td>Funding Agency</td>
<td>Project Title</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------------------------</td>
<td>-------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Bond, Tami C</td>
<td>NASA Shared Services Center</td>
<td>Bridging the Last Few Kilometers: Accounting for Subgrid Mixing and Spatial Gradients in Global Aerosol Models</td>
</tr>
<tr>
<td>Buttlar, William G</td>
<td>Trustees of Purdue University</td>
<td>Integration of Smart-Phone-Based Pavement Roughness Data Collection Tool with Asset Management System</td>
</tr>
<tr>
<td>Buttlar, William G</td>
<td>Trustees of Purdue University</td>
<td>Integrated Solutions for Mobility Safety and Infrastructure Renewal Integration of Pavement Cracking Prediction Model</td>
</tr>
<tr>
<td>Buttlar, William G</td>
<td>US Department of Transportation</td>
<td>Testing, Modeling and AE Crack Detection for FAA Reflective Cracking Study</td>
</tr>
<tr>
<td>Buttlar, William G</td>
<td>US National Science Foundation</td>
<td>A Hybrid Failure Approach Using Digital Image Correlation for Functionally Graded Thin-Bonded Overlays</td>
</tr>
<tr>
<td>Buttlar, William G</td>
<td>National Academy of Sciences</td>
<td>Development and Implementation of the Asphalt Embrittlement Analyzer</td>
</tr>
<tr>
<td>Buttlar, William G</td>
<td>IL Department of Transportation</td>
<td>Designing Producing &amp; Constructing Fine-Graded HMA in IL</td>
</tr>
<tr>
<td>Cai, Ximing</td>
<td>US National Science Foundation</td>
<td>Interdependence Resilience and Sustainability of Infrastructures for Biofuel Development</td>
</tr>
<tr>
<td>Cai, Ximing</td>
<td>NASA Shared Services Center</td>
<td>Developing Seasonal Predictive Capability For Drought Mitigation Decision Support System</td>
</tr>
<tr>
<td>Cai, Ximing</td>
<td>US National Science Foundation</td>
<td>Quantifying Environmental Ecological Relationships for Watershed Sustainability Analysis</td>
</tr>
<tr>
<td>Cai, Ximing</td>
<td>International Food Policy Research Institute</td>
<td>Impacts of Climate Extremes on Future Water and Food Security</td>
</tr>
<tr>
<td>Dersch, Marcus</td>
<td>Amsted Rail, Inc</td>
<td>Testing of Concrete Crosstie Fastening Systems</td>
</tr>
<tr>
<td>Dick, C Tyler</td>
<td>California Air Resources Board</td>
<td>Economic and Operational Considerations in Transitioning to a Zero or Near-Zero Emission Rail System in California</td>
</tr>
<tr>
<td>Dick, C Tyler</td>
<td>TransSys Research</td>
<td>Comparison of Passenger Rail Energy Consumption with Competing Modes</td>
</tr>
<tr>
<td>Duarte, Armando</td>
<td>US National Science Foundation</td>
<td>Validated Multiscale Simulations of Ceramic Matrix Composites for Power Generation</td>
</tr>
<tr>
<td>Duarte, Armando</td>
<td>Ohio State Univ</td>
<td>A Collaborative Center in Structural Sciences</td>
</tr>
<tr>
<td>Edwards, John Riley</td>
<td>Trustees of Purdue University</td>
<td>Design of Abrasion Resistant Concrete Railway Crosstie Rail Seats</td>
</tr>
<tr>
<td>Edwards, John Riley</td>
<td>Federal Railroad Administration</td>
<td>Improved Concrete Crossties and Fastening Systems for US High Speed Passenger Rail and Joint Passenger/Freight Corridors</td>
</tr>
<tr>
<td>Edwards, John Riley</td>
<td>Trustees of Purdue University</td>
<td>Integrated Solutions for Mobility Safety and Infrastructure Renewal Improved Concrete Railway Crosstie Design and Performance</td>
</tr>
<tr>
<td>Edwards, John Riley</td>
<td>Amsted Rail, Inc</td>
<td>Testing of Concrete Crosstie Fastening Systems</td>
</tr>
<tr>
<td>El-Gohary, Nora</td>
<td>US National Science Foundation</td>
<td>Axiological Modeling and Simulation for Value Sensitive Infrastructure Project Planning and Design</td>
</tr>
<tr>
<td>El-Gohary, Nora</td>
<td>US National Science Foundation</td>
<td>Deontic Modeling and Natural Language Processing for Automated Environmental and Green Compliance Checking</td>
</tr>
<tr>
<td>El-Gohary, Nora</td>
<td>IL Department of Transportation</td>
<td>Incorporating NEPA into the IDOT and MPO Planning Process</td>
</tr>
<tr>
<td>El-Rayas, Khaled A</td>
<td>IL Department of Transportation</td>
<td>Effects of Flaggers and Spotters in Directing Work Zone Traffic for Illinois Multi-lane Highways</td>
</tr>
<tr>
<td>Fahnstock, Larry</td>
<td>US National Science Foundation</td>
<td>Reserve Capacity in New and Existing Low-Ductility Steel Braced Frames</td>
</tr>
<tr>
<td>Fahnstock, Larry</td>
<td>US National Science Foundation</td>
<td>Structural Integrity of Steel Gravity Framing Systems</td>
</tr>
<tr>
<td>Fahnstock, Larry</td>
<td>University of Washington</td>
<td>Smart and Resilient Steel Walls for Reducing Earthquake Impacts</td>
</tr>
<tr>
<td>Fahnstock, Larry</td>
<td>American Institute of Steel Construction</td>
<td>Seismic Steel Design in the East: Balancing Strength Ductility and Reserve Capacity</td>
</tr>
<tr>
<td>Garcia, Marcelo H</td>
<td>US Geological Survey</td>
<td>Discharge Rating of Chicago River Controlling Works</td>
</tr>
<tr>
<td>Garcia, Marcelo H</td>
<td>Office of Naval Research</td>
<td>Characterization of Bed Morphodynamics Using Multi Beam Echo Sounding (MBES) and Wavelet Transform (WT) Analysis</td>
</tr>
<tr>
<td>Garcia, Marcelo H</td>
<td>US Department of Interior</td>
<td>INT 04ER6G0004</td>
</tr>
<tr>
<td>Garcia, Marcelo H</td>
<td>US Geological Survey</td>
<td>Hydrodynamic/Sediment Transport Modeling for the Enbridge Line 6B Kalamazoo River Oil Spill</td>
</tr>
<tr>
<td>Garcia, Marcelo H</td>
<td>Metropolitan Water Reclamation</td>
<td>TARP Modeling - Phase II of the Mainstream Des Plaines TARP System</td>
</tr>
<tr>
<td>Garcia, Marcelo H</td>
<td>Metropolitan Water Reclamation</td>
<td>Impact of CSOs &amp; Stormwater on Chicago Area Waterways</td>
</tr>
<tr>
<td>Garcia, Marcelo H</td>
<td>Great Lakes Commission</td>
<td>Hydraulic Modeling of Chicago Area Waterways System to Assess the Impact of Hydrologic Separation on Water Levels and Potential Flooding</td>
</tr>
<tr>
<td>Garcia, Marcelo H</td>
<td>Exxon-Mobil Corporation</td>
<td>Hydrodynamic Behavior of Thickened Tailings</td>
</tr>
<tr>
<td>Garcia, Marcelo H</td>
<td>Exelon Business Services Company</td>
<td>Development of a Hydrodynamic and Thermal Model for Clinton Lake Illinois</td>
</tr>
<tr>
<td>Golparvar Fard, Mani</td>
<td>US National Science Foundation</td>
<td>Hybrid 4-Dimensional Augmented Reality Environments for Ubiquitous Markerless Context-Aware AEC/FM Applications</td>
</tr>
<tr>
<td>Golparvar Fard, Mani</td>
<td>MathWorks Inc</td>
<td>Visual Sensing for Civil Infrastructure Engineering and Management</td>
</tr>
<tr>
<td>Guest, Jeremy</td>
<td>King Abdullah Univ. of Science and Technology</td>
<td>Advancement of Anaerobic Membrane Bioreactor (anMBR) Technology via Quantitative Sustainable Design</td>
</tr>
<tr>
<td>Hashash, Youssef M A</td>
<td>University of Colorado</td>
<td>Seismic Response of Shallow Underground Structures in Dense Urban Environments</td>
</tr>
<tr>
<td>Hashash, Youssef M A</td>
<td>US National Science Foundation</td>
<td>Performance of Deep and Wide Excavations in Congested Urban Areas</td>
</tr>
<tr>
<td>Hashash, Youssef M A</td>
<td>University of California Berkeley</td>
<td>Geotechnical Working Group Integration Project</td>
</tr>
<tr>
<td>Hashash, Youssef M A</td>
<td>University of California - San Diego</td>
<td>Earth Pressures on Deep Foundation Walls During Seismic Events</td>
</tr>
<tr>
<td>Herricks, Edwin E</td>
<td>Federal Aviation Administration</td>
<td>Airport Safety Management Program</td>
</tr>
<tr>
<td>Investigator</td>
<td>Funding Agency</td>
<td>Project Title</td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------------------------------</td>
<td>-------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Kumar, Praveen</td>
<td>University of Michigan</td>
<td>Sustainable Environment through Actionable Data</td>
</tr>
<tr>
<td>Kumar, Praveen</td>
<td>U S National Science Foundation</td>
<td>Critical Zone Observatory for Intensively Managed Landscapes</td>
</tr>
<tr>
<td>Kumar, Praveen</td>
<td>NASA Shared Services Center</td>
<td>Fellow Assessing Disaster Impact from Large Scale Floods Using Hyperspectral Remote Sensing</td>
</tr>
<tr>
<td>Lafave, James M</td>
<td>Illinois State Toll Highway</td>
<td>Integral Abutment Bridge Study</td>
</tr>
<tr>
<td>Lafave, James M</td>
<td>Illinois Department of Transportation</td>
<td>Analysis of Superstructures of Integral Abutment Bridges</td>
</tr>
<tr>
<td>Lange, David A</td>
<td>Kansas State Univ</td>
<td>Freeze-Thaw Performance of Concrete Railroad Ties</td>
</tr>
<tr>
<td>Lange, David A</td>
<td>Silica Fume Association</td>
<td>Development of Optimal High Performance Concrete Mixture to Address Concrete Tie Rail Seat Deterioration</td>
</tr>
<tr>
<td>Liu, Wen-Tso</td>
<td>BPC Airport Partners</td>
<td>The Center of Excellence for Airport Technology A Partnership in Research and Outreach O’Hare Modernization Program</td>
</tr>
<tr>
<td>Liu, Wen-Tso</td>
<td>US Geological Survey</td>
<td>Development of a Rapid and Quantitative Genetic-Based Asian Carp Detection Method</td>
</tr>
<tr>
<td>Liu, Wen-Tso</td>
<td>King Abdullah Univ of Science and Technology</td>
<td>Primary Colonizers Eco-Physiology in Submerged UF Membranes for Wastewater Treatment and Reuse</td>
</tr>
<tr>
<td>Liu, Wen-Tso</td>
<td>The AIWWA Research Foundation</td>
<td>Development of a Microbial Standard for Assessment of Performance of Total Coliform Analytical Methods</td>
</tr>
<tr>
<td>Liu, Wen-Tso</td>
<td>PepsiCo International</td>
<td>Anaerobic Membrane Bioreactors Using Advanced Membrane for Treating Industrial and Domestic Wastewater</td>
</tr>
<tr>
<td>Liu, Wen-Tso</td>
<td>The AIWWA Research Foundation</td>
<td>Developing a Genetic-based Approach that Complements Enzyme-based Coliform Methods</td>
</tr>
<tr>
<td>Long, James H</td>
<td>Wisconsin Dept of Transportation</td>
<td>Static Pile Load Tests on Driven Piles into Intermediate Geo Materials</td>
</tr>
<tr>
<td>Long, James H</td>
<td>Illinois Department of Transportation</td>
<td>Improvement of Driven Pile Installation and Design in Illinois—Phase 2</td>
</tr>
<tr>
<td>Lopez-Pamies, Oscar</td>
<td>US National Science Foundation</td>
<td>Collaborative Research: Damage in Soft Solids: Elasticity vs Fracture</td>
</tr>
<tr>
<td>Lopez-Pamies, Oscar</td>
<td>US National Science Foundation</td>
<td>An Iterated Homogenization Method to Study Cavitation in Soft Solids</td>
</tr>
<tr>
<td>Lopez-Pamies, Oscar</td>
<td>US National Science Foundation</td>
<td>Novel Homogenization Approaches to Study the Electromechanical Behavior and Stability of Soft Electrosticcive Composites</td>
</tr>
<tr>
<td>Marinas, Benito Jose</td>
<td>US Environmental Protection Agency</td>
<td>Toxicity of Drinking Water Associated with Alternative Distribution System Rehabilitation Strategies</td>
</tr>
<tr>
<td>Marinas, Benito Jose</td>
<td>King Abdullah Univ of Science and Technology</td>
<td>Anti Nitrogenous Disinfection By-Products in Reclaimed Wastewater Effluents Chemistry Toxicity and Control Strategies</td>
</tr>
<tr>
<td>Marinas, Benito Jose</td>
<td>Japan Sewage Works Agency</td>
<td>Triteral Training</td>
</tr>
<tr>
<td>Marinas, Benito Jose</td>
<td>Not Specified</td>
<td>Advanced Characterization of Oxidation Processes Involved in the Degradation of Reverse Osmosis Membranes</td>
</tr>
<tr>
<td>Minsker, Barbara S</td>
<td>University of North Carolina</td>
<td>Conceptualization of a Water Science Software Institute</td>
</tr>
<tr>
<td>Minsker, Barbara S</td>
<td>U S National Science Foundation</td>
<td>CyberSEES: Type 2: A New Framework for Crowd-Sourced Green Infrastructure Design</td>
</tr>
<tr>
<td>Minsker, Barbara S</td>
<td>Metropolitan Water Reclamation</td>
<td>Animated Chicago Area Waterways Analysis System</td>
</tr>
<tr>
<td>Minsker, Barbara S</td>
<td>Deere &amp; Company</td>
<td>Demonstrating the Feasibility of Agronomic Decision Support Using a Field Readiness Virtual Sensor</td>
</tr>
<tr>
<td>Mondal, Paramita</td>
<td>US National Science Foundation</td>
<td>The Effect of Alumina Substitution on Viscoelasticity of Calcium Silicate Hydrate</td>
</tr>
<tr>
<td>Mondal, Paramita</td>
<td>CEER Champaign</td>
<td>Development of Relationship Between Calcium Carbonate Polymorphs and their Bonding Capacity with Ceentitious Materials</td>
</tr>
<tr>
<td>Mondal, Paramita</td>
<td>Illinois Department of Transportation</td>
<td>Bridge Decks: Mitigation of Shrinkage Cracking (Phase 2 Study)</td>
</tr>
<tr>
<td>Nguyen, Thanh Huong</td>
<td>US National Science Foundation</td>
<td>Virus Removal in Membrane Bioreactors: Role of Virus Aggregation and Adhesion</td>
</tr>
<tr>
<td>Nguyen, Thanh Huong</td>
<td>US National Science Foundation</td>
<td>Horizontal Gene Transfer in Porous Media Experiments and Modeling</td>
</tr>
<tr>
<td>Nguyen, Thanh Huong</td>
<td>US National Science Foundation</td>
<td>US Singapore Planning Visit: Survivability of Human Enteric Virus in Surface Water</td>
</tr>
<tr>
<td>Nguyen, Thanh Huong</td>
<td>US Environmental Protection Agency</td>
<td>Association of Pathogens With Biofilms in Drinking Water Distribution Systems</td>
</tr>
<tr>
<td>Nguyen, Thanh Huong</td>
<td>Not Specified</td>
<td>Reclamation of Secondary Effluents with Reverse Osmosis Membranes Fouling Mechanisms and Control</td>
</tr>
<tr>
<td>Nguyen, Thanh Huong</td>
<td>US National Science Foundation</td>
<td>Pathogen Control, Sustainable Reuse of Wastewater, Role of Surface Interactions on Natural Removal of Cryptosporidium Parvum Oocysts</td>
</tr>
<tr>
<td>Nguyen, Thanh Huong</td>
<td>National Institute of Food &amp; Agriculture/USDA</td>
<td>Mechanisms of Viral Contamination in Fresh Vegetables and Tomatoes</td>
</tr>
<tr>
<td>Olson, Scott</td>
<td>US Nuclear Regulatory Commission</td>
<td>Investigation and Modeling of Element-Level Soil Behavior Under Multi-Dimensional Loading</td>
</tr>
<tr>
<td>Olson, Scott</td>
<td>US National Science Foundation</td>
<td>Impact of Liquefaction-Induced Water Layers on Forward and Inverse Geoenvironment Analyses</td>
</tr>
<tr>
<td>Ouyang, Yanfeng</td>
<td>US National Science Foundation</td>
<td>Planning Reliable and Resilient Transportation Networks Against Correlated Infrastructure Disruptions</td>
</tr>
<tr>
<td>Ouyang, Yanfeng</td>
<td>Trustees of Purdue University</td>
<td>Decision Support Tool to Locate Shelters in Disasters</td>
</tr>
<tr>
<td>Ouyang, Yanfeng</td>
<td>Trustees of Purdue University</td>
<td>Impact of High-Speed Passenger Trains on Freight Train Efficiency in Shared Railway Corridors</td>
</tr>
<tr>
<td>Ouyang, Yanfeng</td>
<td>US National Science Foundation</td>
<td>Information Mechanisms and Robust Stabilization of Nonlinear, Stochastic Transportation Networks</td>
</tr>
<tr>
<td>Parker, Gary</td>
<td>US National Science Foundation</td>
<td>Climate and Human Dynamics as Amplifiers of Natural Change: A Framework for Vulnerability Assessment and Mitigation Planning</td>
</tr>
<tr>
<td>Parker, Gary</td>
<td>University of Texas - Austin</td>
<td>A Delta Dynamics Collaboratory Proposal</td>
</tr>
<tr>
<td>Parker, Gary</td>
<td>US National Science Foundation</td>
<td>A Field Laboratory and Theoretical Study of Mixed Bedrock-Alluvial Meandering Rivers</td>
</tr>
<tr>
<td>Investigator</td>
<td>Funding Agency</td>
<td>Project Title</td>
</tr>
<tr>
<td>------------------------------</td>
<td>---------------------------------------</td>
<td>-------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Paulino, Glaucio</td>
<td>US National Science Foundation</td>
<td>Building Engineering Through Topology Optimization</td>
</tr>
<tr>
<td>Paulino, Glaucio</td>
<td>US National Science Foundation</td>
<td>Mapping Fragmentation and Topology Optimization Concepts to GPUs</td>
</tr>
<tr>
<td>Paulino, Glaucio</td>
<td>Skidmore Owings &amp; Merrill LLP</td>
<td>Topology Optimization Applied to High-Rise Building Design</td>
</tr>
<tr>
<td>Popovics, John S</td>
<td>National Academy of Sciences</td>
<td>Hardware Development for a Full Lane Acoustic Scanning Device</td>
</tr>
<tr>
<td>Popovics, John S</td>
<td>University Texas Arlington</td>
<td>Full-Scale RC and HPPRC Frame Sub-assemblages Subjected to Collapse-Consistent Loading Protocols</td>
</tr>
<tr>
<td>Popovics, John S</td>
<td>UT-Battelle LLC</td>
<td>Testing of Ultrasonic NDE Techniques and Equipment on Concrete Specimens</td>
</tr>
<tr>
<td>Popovics, John S</td>
<td>US National Science Foundation</td>
<td>Contactless Characterization of Distributed Damage in Concrete Using Diffuse Surface Wave Scattering</td>
</tr>
<tr>
<td>Popovics, John S</td>
<td>IL Department of Transportation</td>
<td>Ultrasonic Tomography for Concrete Infrastructure Condition Assessment and Quality Assurance</td>
</tr>
<tr>
<td>Popovics, John S</td>
<td>IL Department of Transportation</td>
<td>Evaluation of PCC Pavement and Structure Coring &amp; In-situ Testing Alternatives</td>
</tr>
<tr>
<td>Roele, Jeffrey R</td>
<td>National Slag Association</td>
<td>Evaluation of Steel Furnace Slag FRAP Aggregates in Concrete</td>
</tr>
<tr>
<td>Roesler, Jeffrey R</td>
<td>IL Department of Transportation</td>
<td>Mech Empirical Design I &amp; M for Rigid Pavelements</td>
</tr>
<tr>
<td>Rood, Mark J</td>
<td>US National Science Foundation</td>
<td>Gas Purification with Recovery and Reuse to Achieve More Sustainable and Competitive Manufacturing</td>
</tr>
<tr>
<td>Rood, Mark J</td>
<td>Colorado State Univ</td>
<td>Bondville Environmental and Atmospheric Research Site (BEARS)</td>
</tr>
<tr>
<td>Rood, Mark J</td>
<td>US National Science Foundation</td>
<td>International DDEP: Understanding and Enhancing Post-Combustion Multi-Pollutant Control with Carbon-Based Materials</td>
</tr>
<tr>
<td>Rood, Mark J</td>
<td>US National Science Foundation</td>
<td>Understanding and Enhancing Post-Combustion Multi-Pollutant Control with Carbon-Based Materials</td>
</tr>
<tr>
<td>Rood, Mark J</td>
<td>US National Science Foundation</td>
<td>Ammonia NH3 Emission from Fertilizer Application: Understanding an Uncertain Input to Air Quality Models</td>
</tr>
<tr>
<td>Rood, Mark J</td>
<td>Trustees of Purdue University</td>
<td>Faculty for the Future</td>
</tr>
<tr>
<td>Saat, Mohd</td>
<td>Federal Railroad Administration</td>
<td>Identification of High-Speed Rail Ballast Flight Risk Factors and Risk Mitigation Strategies</td>
</tr>
<tr>
<td>Saat, Mohd</td>
<td>Monsanto</td>
<td>Lane-Specific Risk Analysis for Monsanto Yellow Phosphorous Shipments</td>
</tr>
<tr>
<td>Sivapalan, Murugesu</td>
<td>US National Science Foundation</td>
<td>Biotic Alteration of Soil Hydrologic Properties and Feedback with Vegetation Dynamics in Water Limited Ecosystems</td>
</tr>
<tr>
<td>Song, Junho</td>
<td>US National Science Foundation</td>
<td>Structural Optimization for Buildings Including Stochastic Excitations</td>
</tr>
<tr>
<td>Song, Junho</td>
<td>US National Science Foundation</td>
<td>Risk-informed Management and Post-disaster Operations of Lifeline Networks by Rapid Condition-based System Reliability Analysis</td>
</tr>
<tr>
<td>Spencer, B.F.</td>
<td>US National Science Foundation</td>
<td>Asia-Pacific Summer School on Smart Structures Technology (APSS) China 2011 India 2012 and Korea 2013</td>
</tr>
<tr>
<td>Spencer, B.F.</td>
<td>Trustees of Purdue University</td>
<td>NEES Operations FY 2010 – FY 2014</td>
</tr>
<tr>
<td>Spencer, B.F.</td>
<td>Federal Railroad Administration</td>
<td>Campaign Monitoring of Railroad Bridges in High-Speed Rail Shared Corridors using Wireless Smart</td>
</tr>
<tr>
<td>Stark, Timothy D</td>
<td>Federal Railroad Administration</td>
<td>Seismic Testing for Track Substructure (Ballast and Subgrade) Assessment</td>
</tr>
<tr>
<td>Strathmann, Timothy J</td>
<td>US National Science Foundation</td>
<td>Fouling, Regeneration, and Sustainability of Heterogeneous Catalytic Treatment Processes: An Integrated Research and Education Plan</td>
</tr>
<tr>
<td>Strathmann, Timothy J</td>
<td>US Environmental Protection Agency</td>
<td>Fellowship for Tias Paul</td>
</tr>
<tr>
<td>Strathmann, Timothy J</td>
<td>King Abdullah Univ of Science and Technology</td>
<td>Development of High-Activity and Fouling-Resistant Catalysts Using Novel Silica-Based Nanostructure Supports</td>
</tr>
<tr>
<td>Thompson, Marshall</td>
<td>IL Department of Transportation</td>
<td>Design I &amp; M for Flexible Pavements</td>
</tr>
<tr>
<td>Tutumluer, Enel</td>
<td>Trustees of Purdue University</td>
<td>Development of Improved Pavement Rehabilitation Procedures Based on FWD Backcalculation</td>
</tr>
<tr>
<td>Tutumluer, Enel</td>
<td>US Department of Transportation</td>
<td>Mitigation of Differential Movement at Railway Transitions for US High Speed Passenger Rail and Joint Passenger Freight Corridors</td>
</tr>
<tr>
<td>Tutumluer, Enel</td>
<td>North Carolina Department of Transportation</td>
<td>Base Course Aggregate Testing and Rutting Model Calibration</td>
</tr>
<tr>
<td>Tutumluer, Enel</td>
<td>Minnesota Department of Transportation</td>
<td>Cost Effective Base Type and Thickness for Long Life Concrete Pavements</td>
</tr>
<tr>
<td>Tutumluer, Enel</td>
<td>IL Department of Transportation</td>
<td>Sustainable Aggregates Production - Green Applications for Aggregate By-Products</td>
</tr>
<tr>
<td>Tutumluer, Enel</td>
<td>IL Department of Transportation</td>
<td>Development of Improved Overlay Thickness Design Alternatives for Local Roads</td>
</tr>
<tr>
<td>Tutumluer, Enel</td>
<td>IL Department of Transportation</td>
<td>Evaluation of Aggregate Subgrade Materials Used as Pavement Subgrade/Granular Subbase</td>
</tr>
<tr>
<td>Valocchi, Albert J</td>
<td>US Department of Energy</td>
<td>Microbiological-enhanced Mixing Across Scales During In Situ Bioreduction of Metals and Radionuclides at Department of Energy Sites</td>
</tr>
<tr>
<td>Valocchi, Albert J</td>
<td>US National Science Foundation</td>
<td>Improving Prediction of Subsurface Flow and Transport through Exploratory Data Analysis and Complementary Modeling</td>
</tr>
<tr>
<td>Werth, Charles J</td>
<td>US Environmental Protection Agency</td>
<td>Sustainable Catalytic Treatment of Waste Ion Exchange Brines for Reuse during Oxidation Treatment in Drinking Water</td>
</tr>
<tr>
<td>Werth, Charles J</td>
<td>King Abdullah Univ of Science and Technology</td>
<td>Collaborative Research on Sustainable Water Development and Engineering</td>
</tr>
<tr>
<td>Work, Daniel</td>
<td>Trustees of Purdue University</td>
<td>Joint Parameter and State Estimation Algorithms for Real-Time Traffic Monitoring</td>
</tr>
<tr>
<td>Work, Daniel</td>
<td>US National Science Foundation</td>
<td>Monitoring the Response of Transportation Cyber Physical Systems in the Wake of Hurricane Sandy</td>
</tr>
<tr>
<td>Work, Daniel</td>
<td>IL Department of Transportation</td>
<td>Traffic Turk Evaluation (Special Project)</td>
</tr>
<tr>
<td>Zilles, Julie</td>
<td>US National Science Foundation</td>
<td>Novel Biomimetic Materials for Water Purification: Perchlorate Treatment</td>
</tr>
<tr>
<td>Zilles, Julie</td>
<td>National Water Research Institute</td>
<td>Fellowship for Membrane Technology</td>
</tr>
</tbody>
</table>
Old Masters
Engineering giants of the department’s history

James J. Doland
1890-1960
Educator, author, hydraulic engineer

James Doland graduated from the University of Colorado Boulder with a B.S. degree in 1914. He earned his M.S. degree from the University of Illinois at Urbana-Champaign in 1932 and received an Honorary Doctor of Science Degree from St. John’s University, Collegeville, Minn., in 1945. He retired in 1958 with the rank of Professor Emeritus of Hydraulic Engineering.

Upon graduation from the University of Colorado, Doland became a hydrographer with the U.S. Bureau of Reclamation and shortly thereafter became an Instructor of Mathematics at the University of Colorado during 1914 to 1916. From 1916 through 1923 he was employed as an engineer with the W.J. Hoy Co., St. Paul, Minn., although this position was interrupted by military service in World War I. From 1923 until 1926 he was employed by the U.S. Bureau of Reclamation, and in 1926 he joined the University of Illinois faculty.

During WWI (1918-1919), Doland was a first lieutenant in the Construction Division of the War Department and later (1919-1935) held the rank of captain in the Corps of Engineers Reserve. He held special military posts at various times as noted below.

For 32 years, Doland was on the faculty of the University of Illinois Department of Civil Engineering; he was made a Professor of Hydraulic Engineering Emeritus in 1958. Doland worked with the Bureau of Reclamation for 12 years; served as consultant to the National Resources Planning Board from 1936 to 1944; was the principal engineer for the United States Engineering Department on several lend-lease bases in 1941, one in the West Indies; and from 1943 to 1944 was consultant for the War Production Board. He was president of the Illinois Union Board; engineer in charge of the University of Illinois Airport; Chairman of the University Senate Committee on Student Affairs; and served on the Board of Trustees of Burnham Hospital in Champaign from 1941 to 1948, serving as its president during the last two years.

In Doland’s College of Engineering Memoir, quotes were taken from two letters, one of which was written by J.B. Tiffany, Technical Director of Waterways Experiment Station, and recognized nationally as one of the more prominent engineers of the nation. Tiffany stated in part, “When I was a student at the University about 30 years ago the Civil Engineering staff was recognized as probably the best in the country, but among all those other outstanding men Jimmie was always the top of them all, almost from the first week that I entered Illinois and went into one of his classes ... He was not only a wonderful school teacher, but he was much more than that; he had the unique character of making everybody in his class feel somehow that he was somebody Jimmie was personally interested in, and he certainly gave me that feeling from the start. I am sure that there are hundreds of others of his former students who share the same feelings that I have in that respect.”

Another former student, H.A. Wallace, Vice-President of Massey, Ferguson Ltd. at that time, wrote that “Jimmy Doland is the finest teacher that I have had in my life. He was far more than an academic instructor, he was a friend, adviser and counselor. In addition to this he had that quality which is so rare—that of being able to challenge men in such a way as to get the very best out of everyone.”

Doland was a member of many engineering and scientific societies and the author or co-author of three books, numerous technical articles and papers. He was the author of “Hydro Power Engineering” and a co-author of “Water Supply Engineering” and “Low Dams.” He is noted also for being an author with Hardy Cross of the Cross-Doland method of analysis of flow in water distribution systems. In the last 15 years before his retirement his interest was confined mostly to the area of hydraulic engineering, in which capacity he was responsible for the development of courses on water power engineering, hydrology and water resources planning and development.

Corporate and Foundation Donors

The Department of Civil and Environmental Engineering is proud of its strong ties to industry and practicing engineers. We gratefully acknowledge the corporations, foundations and professional associations that contributed to CEE from July 1, 2012, to June 30, 2013. This list includes organizations that made gifts directly to the department, as well as those who matched gifts made by their employees. CEE Corporate Partners are denoted in bold.
The Department of Civil and Environmental Engineering thanks its alumni and friends who have made it possible for our students and faculty to pursue their education and research in the best CEE department in the country. We could not do it without your support.

**Donors to any fund in the Department of Civil and Environmental Engineering from July 1, 2012 to June 30, 2013, are listed here. We strive to make these lists as accurate as possible. If your name is listed incorrectly or omitted, please accept our apologies. For corrections or further information about making a gift, please contact John Southwood, (217) 300-5480, jfswood@illinois.edu.**

### Individual Donors

The Department of Civil and Environmental Engineering thanks its alumni and friends who have made it possible for our students and faculty to pursue their education and research in the best CEE department in the country. We could not do it without your support.

**President's Council**

We thank those who have joined the University of Illinois President's Council with a commitment of $25,000 or more. Below are members who joined before June 30, 2013, and who have given to the department.

**Friends:**
- Lalit R. Bahl and Kavita Kinra
- David Boyce
- Walter L. and Carole A. Crowley
- Anna Allen Farnsworth (dec)
- Helen F. Grandone
- Marilyn Smith Brown Hunt
- Thomas W. and Edith Margaret Johnston
- George-Anne Oliver Kelly
- Wendel F. Kent
- David A. and Rise R. Lange
- Paul M. and Susan A. Mayfield
- Mary Barlow Medearis
- Kenneth E. Nelson
- William E. O'Neil
- Phyllis Williams and Stanley T. Rolfe
- Vern and Jeannie Snoeyink
- Ruth Chao Yen

**1995**
- Wilbur C. Milhouse III

**1991**
- Brian E. and Lin Healy

**1987**
- David G. and Janet S. Peshkin

**1985**
- Kathryn A. Zimmerman

**1984**
- Larry C. and Rhonda S. Wesselink

**1983**
- Richard D. Payne

**1982**
- Tracy K. and Kathy P. Lundin
- Donald E. Jr. and Patricia M. Manhard
- Julian Rueda

**1981**
- Kevin J. and Carey A. Dulle

**1980**
- William F. Baker
- John L. and Karen E. Carrato
- David J. Stoïlko and Constance S. Wright

**1979**
- Thomas A. Beck
- John A. Frauenhoffer
- Stuart A. and Susan Verseman Klein

**1978**
- Robert H. Dodds Jr. and Deana Bland-Dodds
- Stanley M. Herrin
- Jon E. and Barbara B. Khachatryan
- Andrew W. Richardson
- Damon S. Williams

**1977**
- James J. Brown and Emi K. Kawasaki
- Perry C. and Linda S. Hendrickson

**1976**
- Jeffrey A. Liggett

**1975**
- Leslie J. and Theodora I. Benson
- Dan and Mary Guili

**1974**
- Richard Jr. and Helen A. Craymond
- Lawrence F. Johnson
- Sergio “Satch” Pecori
- Richard J. and Linda J. Sieracki

**1973**
- Ronald W. and Lois T. Crockett
- James L. and Doris I. Willner

**1972**
- Dean J. Arnold

**1971**
- Fred Garrott
- Joseph M. and Patricia A. Kaiser
- Bengt I. and Kathryn A. Karlsson

**1969**
- Barry J. and Pauline G. Dempsey
- Richard J. Erickson
- Michael M. and Carol Jean Kimura

**1968**
- Paul D. and Barbara C. Koch
- Robert G. and Flo Anne O'Brien
- George K. and Mami Varghese

**1967**
- Arthur R. Jr. and Judy B. Jensen
- Thomas E. Rees
- Larry B. and Sharon Salz

**1966**
- Norman Allen and Lee Ann Dobbs
- Richard A. Pattarozzi

**1965**
- Larry M. Sur

**1961**
- W. Gene (dec) and Lynd W. Corley
- Neil Middleton and S. Ann Hawkins
- William A. Jr. and Delores Houton
- Thomas K. Liu and Olive M. Chen-Liu
- Robert W. and Donna Mikitka

**1960**
- Phillip L. and Deborah F. Gould
- Lyke W. and Nancy M. Hughart
- Norman C. Riordan

**1959**
- Thomas C. H. Lum
- Joseph H. and Joan R. Pound

**1958**
- Benjamin A. Jones Jr.
- Joshua E. Jr. and Eleanor W. Merritt

**1957**
- Ronald R. and Margaret M. Watkins

**1956**
- Arthur R. Robinson

**1955**
- Thomas J. Byrne
- Jerry J. Felmley

**1954**
- David C. and Carolyn M. Crawford
- Robert E. (dec) and Doris B. Lenzini
- Maurice A. and JoAnn Wadsworth

**1952**
- John E. Barrett

**1951**
- William K. Becker
- Louis Bowman Jr.

**1950**
- Burton A. Lewis
- William E. and Margarite D. Stallman

**1949**
- Robert J. and Stella F. Mosborg
- Wendall Lee Rowe

**1948**
- Melvin and Theda Febesh

**1943**
- Sidney and Sondra Berman Epstein
Dean’s Club
The department is honored to acknowledge members of the Dean’s Club of 2012-2013. Listed below are those who gave $1000 or more to CEE from July 1, 2012, to June 30, 2013.

Friends:
Soledad Juamiz Esmilla
Michael Hextell
Sheilla Huck
Richard W. and Gayle D. Landuyt
Wen-To Liu
Steven R. and Pamela D. Saye
2004
Tjen N. Tjin
1994
Ron Juamiz Esmilla
1993
Henry Matt Bellagamba
1992
John A. and Gail L. Balling
1989
Robert J. Risser Jr. and Martha A.
1989
Robert J. Risser Jr. and Martha A.
1988
Gary G. Stokes
1983
Kenneth M. Floody
1982
C. Wayne Swafford
1980
James Robert Harris
1979
Lee W. Abramson
1978
Steve R. Raupp
1977
Alan J. and Karen A. Hollenbeck
John P. and Catherine M. Kos
Michael T. McCullough
William J. Nugent
1975
Larry A. Bolander
Thomas D. O’Rourke
1974
David and Diane M. Darwin
Vernon E. Dotson
Michael Ray Lewis
Douglas J. and Jacqueline A. Nyman
1973
Glenn E. Frye
Lawrence Paul Jaworski
1972
Bruce R. and Lois D. Ellingwood
1971
Michael W. and Jean D. Franke
Thomas L. and Margaret V. Roscetti
1968
Hershell Gill Jr.
1965
Frederick B. Plummer Jr.
Richard A. and Charlotte Wiseman
1963
James O. Jirsa
1962
H. S. Hamada
1957
Gary G. Stokes
1953
Nancy B. Brooks Estate

Sponsoring Associates
The department gratefully acknowledges the Sponsoring Associates of 2012-2013. Listed below are those who gave $500 to $999 to CEE from July 1, 2012, to June 30, 2013.
2003
Kyle R. and Katharine M. Duitsman
2001
David L. Byrd
2000
Kai Tak and Alisa Ocker Liu
1992
Ranjit S. Ranjithan and Imara Y. Perera
1990
Robert Scott Trotter
Howard F. Walther
1986
Sharon L. Wood
1985
Paula C. Pienton
1983
Siu-Wang Stephen Huang
Francis J. Powers
1982
Jeffrey L. Arnold
Jane Durkin Frun
Blaine F. and Kathryn G. Severin
1981
David A. and Frances K. Sabatini
1980
Marco David and Mary Lynn Boscadin
Lynne C. Chicoine
Carlos Rodriguez-Perez
1979
Christina U. K. Drouet
David A. and Kathleen A. Twardock
1978
Mark H. Erwin
1977
James M. Daum
Michael J. Kooob
Michael G. and Bette Wallerstein Lombard
Terry L. Rice
Takehira Takayanagi
1975
Robert R. Goodrich Jr.
1974
Luke Cheng
Richard Alan Guinn
1972
Robert C. and Joan B. Bauer
Anand K. and Aruna Singh
1971
Charles H. Dowding III
John and Eleanor W. Ramage
1970
John F. and Linda S. Harris
Gregory L. Perkinson
1969
Alan B. Butler
William J. Pananos
Michael W. Shelton

Contributors
CEE gratefully acknowledges the Contributors of 2012-2013. Below are those who gave up to $499 to CEE from July 1, 2012, to June 30, 2013.

Friends:
Charles and Carolyn Barker
Anne C. Baum
David C. Bergman
Winona S. Bolinger
Sara K. Born
Steven A. and Celeste Arbogast
Brasergos
Sangeetha Chandrasekaran
Michael R. and Mary A. Cleary
Annie Rae Clements and Jeffrey M. Threlfall
Charles E. and Anna Marie Corley
Clare Bridget Curtin
Bernice Cutler
Michael F. DeSantiago
John and Mary B. Digeman
Lawrence E. and Ethel M. Doyle
Wrenn L. Fellingham Jr.
Brian Mylin and Melissa L. Foden
Cesar Ghilarducci
Bradley Gipple
Nancy L. Hansen
Nancy C. Hardy
Glenn P. Heisey
Moreland and Nancy Herrin
Robert C. Johnston
Jimmy L. and Mona A. Kaiser
John Edward and Elizabeth Ann Kelley
Samuel L. Kershaw
Sandra K. and David L. King
Hans C. and Betty J. Kosel
Jeanette B. kreston
Susan Bahrenburg Matthews
John G. Mellor
Robert D. and Rosemarie Mikkish
Brian S. and Barbara S. Minnker
Jonathan S. Muner
Kathy Culver and Randall L. Nickell
Mark A. Prelas and Rosemary S. Roberts
Robert N. and Joyce E. Quade
Frederick Reed
Wilma J. Reed
Donald H. and Betty L. Rice
James A. Schroeder
Marshall J. Schultz
Virginia R. and David W. Scott
Brian J. Sinclair
Lee A. and Julie M. Spacht
Barbara I. Strange
Leslie J. and Robert G. Struble
Michael S. and Dawn M. Szatkowski
Leonard J. Timms Jr.
Margaret M. Tower
Brandon J. Van Dyk
Eddith A. Mose-Watts
Arnold R. and Nancy A. Wieczorek
Betsy P. and Kam Wu Wong
Jack C. and Robin R. Yockey
James L. and Judy A. Yockey
2013
Thomas M. and Erin Jean Frankie
Jason L. Frericks
2011
Thomas A. Burkland
Bryan A. Miko
Ava H. Stough
2010
Thomas M. Carrato
Anirudh Venkata
2009
Patrick C. Johnston
Elizabeth Caitlin Richter
Adam Tate
2008
Jordan J. and Jennifer J. Card
Michael J. Fornex
Michael D. Gustavson

Civil and Environmental Engineering Alumni Association—Winter 2014
We are grateful for your support. To make a gift to the department, visit the giving page on our website: cee.illinois.edu/alumni/gift.
Winter storms. Dedicated students.

“I have discovered in life that there are ways of getting almost anywhere you want to go, if you really want to go.”

— Langston Hughes
where will your road lead?

APTech is led by an accomplished group of civil engineers, including many University of Illinois alumni, who have built a company around excellence in pavement engineering. Our roads and airports have led us throughout the world, from India to Korea to Urbana, Illinois. Where will yours lead?

pavement management systems · pavement sustainability · pavement evaluation and design · research · training

Scan with your phone’s QR Code reader to go to APTech’s website.

www.appliedpavement.com