The power of alumni engagement
Illinois hosts Concrete Canoe, Steel Bridge Regionals
Alumni news and features
The CEE Trust Fund

Empowering innovation, creation of knowledge and service to society

Funding from the CEE Trust enabled a group of engineers, social scientists, legal scholars and philosophers to gather at a two-day conference in April. Their goal was to identify foundational directions and approaches to societal risk management of natural hazards.

Presenters at the International Conference on the Societal Risk Management of Natural Hazards spoke on some of the major themes of risk management, including: the basis for distinguishing risks to which a society may be permissibly exposed from those it should not; determining appropriate tradeoffs between immediate needs and future potential devastation; the extent to which risks should be publicly debated and decided; and the principles that should be used to assess moral and legal responsibilities in preparing for risks as well as the aftermath of natural disasters.

Paolo Gardoni, CEE Associate Professor, Director of the Mid-America Earthquake (MAE) Center, and Co-director of the Societal Risk Management Program, was one of the conference organizers.

“The conference made significant progress in developing a deeper understanding of the interdisciplinary issues in societal risk management related to ethics, justice and policy,” Gardoni said.

Although emphasis was placed on risk management, he said, findings will also be applicable to other engineering fields.

Photo: CEE Interim Department Head Benito Mariñas, second from left, sits in the front row with conference organizers Paolo Gardoni, CEE Associate Professor; Colleen Murphy, Associate Professor of Philosophy and Director of the Women and Gender in Global Perspectives Program; and Arden Rowell, Associate Professor of Law.

The CEE Trust Fund is the department’s general, unrestricted gift fund. It is utilized in numerous ways to enhance the student experience and maximize the department’s impact in research, education and service to society. Through a gift to the CEE Trust Fund, you share in those accomplishments.

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Visit cee.illinois.edu/alumni/gift or contact John Southwood, jfswood@illinois.edu, (217) 300-5480.
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Come home. We need you.

By Benito Mariñas
Ivan Racheff Professor of Environmental Engineering and Interim Head

At the recent Illinois College of Engineering graduation ceremony, I had the privilege of congratulating the candidates from the CEE at Illinois Class of 2014 when presenting them for their degrees. Seeing all these graduates become brand new alumni gave me the opportunity to reflect on the role that our alumni play in the excellence of CEE at Illinois.

I am sure that as CEE at Illinois alumni you remain as proud as when you were students here because of your association with a top-ranked department. But like me you might wonder why it is that our peers have viewed us as having that leadership position for decades? I think one key reason is the fact that our CEE at Illinois students are the brightest and most motivated; this has helped us attract our outstanding faculty and staff, who know that working with these students facilitates success in their careers as global leading educators and researchers in CEE. Another complementary key reason is that these students, once they become alums, quickly develop into leaders in the profession and become global ambassadors of CEE at Illinois excellence.

However, I also feel that those two components are not sufficient by themselves to secure our position of excellence in the long term. You may not realize the important role you, as alumni, can play in helping the department maintain its top spot. Maintaining our leadership has only resulted from keeping alumni connected, and we will continue in this role only if this connection continues in a meaningful way. CEE at Illinois students excel, and faculty and staff lead in their endeavors, only if they engage with the profession so that their research and education efforts evolve to address emerging societal challenges and needs. And what better group of CEE professionals to engage with than our alumni? Additionally, the percentage of alumni giving financially to the department directly affects the rankings, regardless of the size of the individual gifts.

As an alumnus or alumna reading these lines, you may wonder, “How can I get involved?” I would like to suggest that you review this issue of the CEE magazine to get inspiration from what other alums are doing. You will find that there are many ways to get involved depending on time availability, geographical location and interest. Take a moment to think about what connections with the profession affected you most when you were a student in CEE at Illinois, especially when interacting directly or indirectly with alumni.

On our side we are very interested in hearing from you about your vision of what our department should do to address societal challenges. Our students, faculty and staff will benefit greatly from interacting with you because you are the current leading professionals who are building and modernizing the infrastructure of our civilization and serving as stewards of our environment for the benefit of society and as a legacy to future generations.

We know that you are all busy and that it is always difficult to find meaningful time for getting involved, but we have dedicated staff on our Advancement team who could facilitate and support you in doing so. Please let me know if you would like to explore getting involved and I will put you in touch with them.

To the many of you who are already involved, you have our sincere thanks; we could not do it without you. To those of you who are thinking about getting involved, please consider this our heartfelt invitation. We can’t wait to welcome you home again.

Maintaining our leadership has only resulted from keeping alumni connected, and we will continue in this role only if this connection continues in a meaningful way.
Thank You

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

Over the past two years the CEE Alumni Association (CEEAA) has achieved two major milestones in its history: May 2013 was the 50th anniversary of the CEEAA, and in April 2014 the first annual CEEAA Undergraduate Service Leadership scholarship was awarded to commemorate the 50th anniversary. This award, presented to a CEE student with a strong record of service to others, is funded entirely by past and present CEEAA board members who are giving something back. To these people, I want to say thank you.

The awards ceremony for the scholarship presentation provided an opportunity to let award winners know that they were about to become a member of a very exclusive club as a graduate of what has been for much of the last five decades the number one or number two civil and environmental engineering department in the world. My experience has been that membership in this club brings instant credibility and the respect of professional colleagues. Membership in this club can also present you with unique, interesting, and yes, sometimes challenging opportunities – which some may view as situations.

For me, such opportunities have ranged from spending several days at the bottom of 42-inch diameter vertical pipe, 90 feet below Phoenix, Ariz., mapping geology for a tunnel project to walking in a tunnel 350 feet below the water surface of Boston Harbor as part of the Boston Harbor clean-up project of the 1990s. These were both challenging situations.

The Boston Harbor cleanup project resulted in an invitation to visit Panama, where they had similar combined sewer overflow issues to Boston’s. Our small group, traveling with the President of the American Society of Civil Engineers, was given a small boat tour from one end of the Panama Canal to the other. My wife, Kathy (also a University of Illinois graduate), had the privilege of helping turn the knobs that open the lock gates at the western end of the canal.

More recently I was a mile deep in the earth in the Black Hills of South Dakota with a high-energy particle physicist observing a geotechnical exploration program for a $1 billion physics project. I know that your opportunities as a member of this club have been, and will be, different from mine, but I know that they will take you to places far from your beginnings in Urbana and introduce you to a wide variety of challenges along the way.

As a member of this very exclusive club I would challenge you to seal the deal of club membership if you have not done so already. Give something back to your department, your club. As you may know, as a graduate of the University of Illinois you are automatically a member of the alumni association, but you can take the next step by either supporting the department financially or by volunteering your time. Give something back. To those of you who are already involved and giving back, thank you.

To the past and present faculty and staff of the CEE department whose efforts have helped to create opportunities and situations for me and countless other graduates, I say thank you. And lastly, because this article represents my last act as president of the CEEAA, I would like to offer a final thank you to all those I have served with – you have made my experience a special one.

Interested in serving on the CEE Alumni Association Board of Directors?

Applications are available online at cee.illinois.edu/alumni.
For more information, contact Jamie Byrum, jbyrum@illinois.edu, (217) 244-6804.
Come home

CEE at Illinois has 13,000 alumni in Illinois and around the globe. From brand-new graduates putting up their CEE pennants in their first cubicles to CEOs of prominent, global firms to retired professionals who spent their entire careers shaping the history of our world through the creation of critical infrastructure, CEE Illini are everywhere.

At all stages of your life, we welcome your involvement with the department. There is always something you can do to share your knowledge with today’s students, help us achieve our mission to educate the engineers of the future and preserve the value of your own degrees by doing your part to keep CEE at Illinois top-ranked. On the following pages, we present some ideas on how to get involved in CEE at Illinois, so in one way or another, you can come home.
Alumni are appreciated: a student’s perspective

By Lance Langer

When I think about what makes the CEE department stand out here at the University of Illinois at Urbana-Champaign, a number of things come to mind: the many awesome student societies, the CEE Networking Nights and Job Fairs, the great research opportunities, the outstanding curriculum, the hardworking students and the amazing faculty working together to help make it all happen.

There are numerous ways for students to get involved here, and all of these opportunities will help us grow to someday become successful people in our fields, wherever we decide to go in life. As a student within the CEE department, I take advantage of as many of these opportunities as possible. I attend a lot of the events the department organizes for the students and I’ve noticed that the common denominator for most of them is alumni involvement.

No one understands the CEE student experience better than the CEE at Illinois alumni. They are more capable of connecting with the students than anyone else, because they have been in our shoes. These personal connections are important! Our shared connection makes engaging in a meaningful conversation much easier because we already have something great in common: we both know what student life on campus and within the department is like.

As students, we all have at least one thing in common: the desire to graduate from this department. However, some of us are a little unsure about what we would like to do afterwards, where we would like to go or even how to get there. One great benefit from interacting with alumni is that they have been in our exact situation before and can offer tremendous help and advice when it comes to taking the next step in our careers and in life. Through mentoring students, presenting at seminars, speaking to classes, attending student-sponsored activities and supporting student organizations, alumni pass on their wisdom and provide students with an idea of how to move forward into their careers.

I believe the greatest thing about the active alumni within the department, and the thing I appreciate most, is their willingness to help the students out. Whether they can give you advice directly or put you in contact with someone who can, they always are there to support the progress we attempt to make as students. I feel that the alumni are great role models. And I think I speak for all of the students in CEE when I say it’s a lot easier to talk to company representatives at the CEE Job Fairs who are also alumni.

As a student, I appreciate our alumni who are actively involved in making the CEE at Illinois experience an amazing thing to be a part of. One day I hope to have as much to contribute as an involved alumnus of CEE at Illinois.

Lance Langer, pictured at left above, is a CEE senior and president of the Water Environment Federation - American Water Works Association joint student chapter.

WE REMEMBER YOU

Martin Page (BS 03, MS 04, PhD 09) inspired me to expand the focus of my research group so that our expertise in water disinfection could be directed toward helping the hundreds of millions of people in the world without access to safe drinking water. In addition to his pioneering research toward addressing this global challenge, he also inspired and mentored other students, ranging from high school sophomores to Ph.D. candidates, who have followed in his steps.

— Professor Benito Mariñas
Student organizations need volunteers, support

By Armen Amirkhanian (MS12)

Out in the workforce it can sometimes be hard to remember what life was like back in college – going semester to semester, taking exams and participating in student clubs. This past April, a good number of alumni got to dip their toes back into college life, if only for a bit. The Great Lakes Regional Conference, a two-day event sponsored by the American Society of Civil Engineers (ASCE) and filled with engineering competitions, was hosted at the University of Illinois at Urbana-Champaign. Some of the competitive events included concrete canoe, steel bridge, surveying, environmental design and others. It was organized by the student chapter of ASCE here on campus, but the alumni played a big role in the success we had in hosting the event.

An event of this magnitude requires excellent coordination and solid teamwork. Alumni ensured the success of the event in many ways. Some alumni asked their companies to sponsor certain events financially. After sponsor letters went out, we were surprised at the response and support we received. It truly demonstrated that the CEE department has a robust and active alumni network.

But even more important than the financial donations were the volunteer hours put in by various alumni. We had a great need for judges and other administrative personnel to ensure a smooth-running competition. We had a tremendous response from alumni when we asked them to volunteer for various events. One of the more thankless jobs we needed volunteers for was that of concrete canoe judge. The rules for the competition are more than 80 pages long, there are 15 technical papers to read through, and no time to rest once the competition starts. We had one amazing alumna who happened to be a participant on the team when she was attending Illinois who volunteered for the job. Having been involved with the concrete canoe team before, she knew what to expect, but she had never judged the competition before.

Afterwards, while she said she enjoyed it, she also said she was surprised by just how much work it was. She wasn’t the only one who stepped up to help out. We had one alumnus who took off four days of work to assist with setting up the buoy course for the concrete canoe races. A group of alumni came into town Friday night to assist with preparing the floor system for the steel bridge competition. We also had numerous alumni who were judges for the steel bridge competition. While not as intense as being a concrete canoe judge, it still requires being on your feet all day on a Saturday when you could be out enjoying the nice weather, relaxing with your family or catching up on work from the previous week.

In addition to the alumni who actively volunteered for the events were the alumni who came back just to cheer on their school. It was a great sight to behold that the Illinois fans outnumbered any other school in attendance. This kind of support did not go unnoticed and was greatly appreciated by all the current students competing.

While the Great Lakes Regional Conference was only a two-day event, activities occur year-round within the department. Concrete canoe and steel bridge teams start the planning phase in the summer. They start writing letters to companies for donations, whether financial or material, and get in contact with alumni

Continued on page 10
By Ken Floody (BS 83)

After graduating from the University of Illinois in 1983, I must admit I didn’t give much thought to maintaining my ties with the university. I was happy enough to be free to pursue my own ambitions. I became an alumni association member for a couple of years, but as the pace of my personal and professional life accelerated, I let my membership lapse.*

I didn’t give much more thought about the university, or my connection to it, until 1996 when I was asked to consider serving on the Civil Engineering Alumni Association (CEEAA) Board of Directors (no “and Environmental” at that time). I took a moment to reflect on where my career had taken me and began to appreciate how much my professional accomplishments arose from the education the university had provided me. I considered it was due time to express my appreciation by giving something back to the department. My alumni association membership was reinstated, and I soon found myself at the beginning of a long association (14 years to be exact) with the CEEAA.

I had the great pleasure to work with a number of talented, generous and committed people during my time on the board. I initially volunteered to serve on the Student Support Committee. I found working with students and strengthening the ties between the students and the CEEAA to be so rewarding that I stayed on.

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for advice and guidance. The Engineers Without Borders student group is always looking for industry mentors to assist with their organization. Other student groups are listed on the department’s website at cee.illinois.edu/student_organizations.

Even if you weren’t involved with an organization during your time at Illinois, the current groups will still welcome your involvement. You left the University of Illinois with a set of tools in your toolbox. You had the knowledge to use them but no experience. Now that you have years and even decades of experience with those tools, pass on some of that knowledge to the future group of engineers. The students in these groups are already beginning to use their tools and gain experience from their endeavors but still could use guidance. Not only do they learn how to build a concrete canoe or design an efficient bridge, they learn how to work in a team environment and handle unexpected problems that arise. Borrowing a quote from Neil Armstrong taken from his speech “The Engineering Century” given to the National Press Corporation in 2000: “Science is about what is. Engineering is about what can be.” The students in these groups are just beginning to learn what can be, and your support can help them achieve great things. 

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Alumni board service leads to resume help, student outreach

I remember **Eric Kerestes** (BS 04, MS 06). He earned his B.S. and M.S. degrees in CEE at Illinois in the mid-2000s, and he enrolled in one of my classes during that time. He stands out in my memory, not only because of his good academic performance, but also because of his warm, friendly spirit and positive attitude, traits he shared with his immediate friend group and classmates, whom I also remember. Sadly, Eric passed away several years after his graduation from CEE, and his loss was felt by the faculty here.

— Associate Professor John Popovies
Faculty contact has career benefits

By Dana Mehlman (BS 99, MS 01)

Over the years, I have made it a top priority to stay engaged with the Department of Civil and Environmental Engineering at Illinois. Among other things, I’ve made extra special effort to stay connected to my former professors. Even when I was a student, I never hesitated to take full advantage of their office hours. I always figured that they were required to be there, so I might as well help to make their time in their office worthwhile. The availability of professors and their dedication to the students made a lasting impression.

Not long after I graduated, I came to a realization about my professors – they are people just like you and me, and being a professor is just one facet of their lives. While it is often difficult for students, and even many graduates, to accept this fact, it is what has fostered my continued relationships with my professors, even more than 15 years after leaving the University of Illinois.

I was lucky to have wonderful professors to serve as mentors and role models throughout the years, and now I am lucky to be able to call several of my former professors colleagues. My former professors have facilitated every facet of my career to date. They recommended companies to which I should apply and provided me with references when those companies inquired as to my abilities and character. They also provided me with ongoing career guidance, even going so far as to guide my transition from engineering into the legal profession.

I was able to follow in the footsteps of one professor, who took a sabbatical as I was graduating with my master’s degree in order to attend law school. When I decided that law school was my next step, one of the first calls I made was to this professor who provided me with the guidance and support I needed to properly evaluate my decision to take the next step. Not only were my former professors available to give me career guidance, but even though it had been almost 10 years since I left Champaign, I still had the connections to my professors that I needed to obtain the requisite law school recommendations. Throughout law school I stayed in touch with several professors from Illinois, and upon graduation, I once again found that they were more than willing to provide me with references and opportunities for networking, once I had reestablished myself in the Chicago area.

Now that I have made the successful transition to the practice of law, I see my former professors in a whole new light.

Continued from page 10

that committee during my entire tenure on the board.

One of the activities I enjoyed most was reviewing student resumes during the (at that time) annual February Job Fair. What started as an idea to help prepare students for their interviews at the Job Fair expanded into a much larger effort, culminating in an annual presentation on résumé writing to dozens of students and meet-and-greet events between students and practicing alumni.

I found all these opportunities to interact with the students to be enjoyable as well as personally rewarding. These students are the best and brightest from around the world. To have the opportunity to talk with them, to share my stories about being a consulting engineer and hear their stories about where they are from and where they are going is truly exceptional.

To be honest, although my term on the board ended four years ago, I still take every opportunity I can to stay involved with the CEEAA board and their student outreach efforts. You may still find me in February reviewing résumés at the west end of the crane bay, making a presentation on resume writing, or as a panel member on a Q&A session with practicing professionals. Once I got involved, I found I looked forward to each of these opportunities and found it hard to leave once my time on the board ended.

For the two years I served as president of the CEEAA board, I wrote repeatedly in my President’s Message about the need for our alumni to show greater support for the department. Most often, the needs were financially driven as a result of the continuing cutbacks in funding from the state. Whereas those needs will likely be with us for the foreseeable future, there is another equally generous gift our alumni can bequeath to the department: the gift of your time. I can assure you, you will receive a return on that investment greater than anything you contribute.

* Today all alumni are automatically members of the alumni association.
Continued from page 11

rules, regulations and policy as well as environmental remediation and engineered structures. As such, I have been able to call upon my former professors to provide me with recommendations for consultants and experts, and my former professors have called upon me with similar requests. While not all of my former professors are still in Champaign, they all still have a connection to Champaign which continues to foster our relationships.

When I have the opportunity to return to campus one of my favorite activities is to wander the halls of Newmark to see if any of my former professors are in their offices. Although I have been gone less than 20 years, one thing that has struck me is the new faces throughout the department. Although I may not have been a student of any of the newer professors, I believe that I can still have a relationship with them, due to my connections to the department. I have looked up and connected with many of the newer professors on social media platforms such as LinkedIn to learn more about their research areas and to try to facilitate new professional connections. Many of the professors are looking to engage with practicing engineers, in order to study real-world situations, or to engage their students outside of the laboratory.

Each and every alumnus of the department has the potential to assist in this manner. Professors, new and experienced, are looking to enhance their experiences at the University of Illinois. I am fortunate that I have been able to benefit both from my own reaching out to professors, and from their reaching out to me. It is through these relationships that I have been able to remain connected to the Civil and Environmental Engineering department at the University of Illinois, and through this connection I have been able to prolong and enhance both my educational experience and my professional career.

WE REMEMBER YOU

When I reflect back on students who have made an impact in my professional career and life, John Hausman (BS 99, MS 01) (1977-2012) comes to mind. John was a big man (played offensive lineman), but more importantly, was a gentle giant at heart. He was a great student (lead author of an award-winning paper), and was loved by his peers in the CEE department and at Applied Research Associates for his kindness and sense of humor. He will not be forgotten. — Professor Bill Buttlar

Bring the family home for EOH!

Brian Porter (BS 97) returned to campus to deliver a gift from his employer, Terracon Consultants Inc., and visit Engineering Open House with his family: wife, Amy; daughters Ashleigh, 10 (striking a dramatic pose), and Katie, 7; and son, Nathan, 11. Engineering Open House is offered each March. Visit eoh.ec.illinois.edu for more information as March 2015 approaches.
CxEE.ILLINOIS.EDU/JOBFAIR

CEE Job Fairs offer the chance to recruit top Illinois students

BY SARAH MORGAN (BS 03 MS 05)

I’ll always have a special place in my heart for the CEE Job Fair because I found my own job with Golder Associates there. I still vividly remember back in 2005 walking up to the Golder recruiter, Jim Daly (BS 88, MS 93) from Atlanta, fellow Illinois graduate who is now one of my close colleagues. We still joke about how I didn’t care where I took a job, just as long as it wasn’t in the Midwest. And luckily, Golder is a global company! So after interviewing in Golder’s Seattle, Washington, office, I accepted a geotechnical engineering position, packed up my car, and moved cross-country. That was nine years ago and since then I’ve had amazing opportunities and worked on projects I never dreamed of, like utilizing my climbing skills to rappel below a dam to install a monitoring instrument!

I want to share this experience with the current Illinois students, so I’ve gone back to the CEE Job Fair to recruit many times since I joined Golder. And I always say; yes, you CAN find your dream job at the CEE Job Fair! I’m the perfect example of a CEE Job Fair success story! I think it’s important that this message comes from a CEE alumni. I’m not a human resources representative or recruiting specialist; I’m a fellow engineer and was in the same shoes as these students not that long ago. Also, it’s important and advantageous to Golder that I have experience and a connection with the department. The CEE Job Fair is not a random job fair in a convention center; it’s at my Alma Mater, in the building I spent the bulk of my time at Illinois in, and attended by students that I personally know have the advanced training and education in civil and environmental engineering that Golder wants.

I take advantage of the trip all the way from Seattle to reconnect with the CEE department in person. The fair gives me a chance I wouldn’t otherwise have to sit down with my old professors to catch up on life and discuss potential hires. Even with all the technology we have these days, nothing beats a face-to-face meeting. Also, my colleagues and I have become familiar faces to the students. A lot of students attend the fair for multiple years and it’s a great opportunity to reconnect with them as well. I enjoy the look of surprise some students give me when I remember them by name or can ask how a certain hobby is going.

We also like to take advantage of our time on campus to give a presentation to the students. This gives us a little extra time to network with groups and individual students in a more casual and relaxed environment. By volunteering to speak to student groups, Golder has become a familiar company on campus. The same groups ask us to present each year, which gives Golder a direct connection to the department through the students.

As I walk the old and new halls of Newmark during my visits, I’m thankful for my time at Illinois and how the department prepared me for my career. And it’s important to me to stay connected to the CEE department so I can share my personal experience finding my job at the fair and hopefully help someone else find their dream job.
Alumni events help CEE Illini stay connected

One of the most fun ways to stay connected with the department and your fellow Illini is to attend some of the CEE alumni events we host each year, such as our annual golf outing, beer tasting or the Chicago Alumni Dinner. For more information about events, visit our website or contact Jamie Byrum, Coordinator of Alumni and Corporate Relations, jbyrum@illinois.edu, (217) 244-6804.
Give back

There are many ways to give to CEE at Illinois. Regardless of the size of the gift, a donation to the annual fund helps us retain our top ranking by boosting the percentage of alumni who give back. Unrestricted gifts to the CEE Trust improve the student experience by enabling unique academic opportunities like field trips and student attendance at professional conferences. The department is also utilizing those funds to support the creation of knowledge through workshops and conferences on innovative new topics and research.

For more information on giving to the department, visit our website or contact John Southwood, Director of Advancement, jfswood@illinois.edu, (217) 300-5480.

Alumnus Paul Koch (BS 66, MS 68), second from left above and pictured in the top photo during his time as a student and a member of the Illini baseball team, is a long-time supporter of the department. He and his family sponsor the Koch Family Academic Scholarship. Koch visited the department in May and met with this year’s scholarship recipient, Hannah Lohman, center. They are pictured here in the department head’s office with, from left, Professor Mark Rood, Professor and Interim Head Benito Mariñas, and Director of Advancement John Southwood.

WE REMEMBER YOU

Knowing that I would have a graduate student to work with me when I arrived at Illinois as a young assistant professor was extremely reassuring to me. What I did not know at the time was that the student was going to be truly outstanding. Having a research assistant like Yarko Niño (MS 92, PhD 95) was a dream, since he had already a lot of experience from having taught at the University of Chile in Santiago, Chile. Since we were born only two years apart in the month of April, working with Yarko was akin to working with a brother more than with a student. He is an exceptional human being, extremely bright and unselfish, and to this date continues to be a source of inspiration for me and for all of my students. Yarko is the godfather of both my son Blas and also the academic godfather of all the graduate students that have come to work with me at the University of Illinois since 1990.

— Professor Marcelo García
Concrete canoe races and bridge-building competitions were just part of the fun April 10-12 when the American Society of Civil Engineers (ASCE) Great Lakes Regional Conference competition came to campus. Hosted by CEE at Illinois’ ASCE student chapter, the event featured students from 19 universities competing in eight different contests related to civil and environmental engineering.

The two-day event included concrete canoe and steel bridge competitions, as well as a quiz bowl, contests in surveying, materials engineering, environmental engineering, technical paper writing and a “Mystery Design” project. For that, students don’t learn what they have to design until they arrive on Thursday evening; they must build something during the designated build time on Friday. The top winner from the concrete canoe competition and the top three winners from the steel bridge competition proceeded to the national competitions held in June. The other events are not held at the national level.

The top five finishers in the competition as a whole were the University of Wisconsin – Madison, the University of Evansville, the University of Illinois at Chicago, Milwaukee School of Engineering and the University of Notre Dame. Those qualifying for nationals were the winner of the concrete canoe competition, the University of Wisconsin – Madison, and the top three in steel bridge, the University of Wisconsin – Madison, Milwaukee School of Engineering and a third school which is still being decided due to a technicality. The University of Illinois at Urbana-Champaign placed eighth overall in the conference, with a third-place finish in the concrete canoe competition and an eighth-place finish in steel bridge.

The opportunity to host the regional competition doesn’t come around very often, with schools getting the chance roughly every 20 years. Illinois’ turn came just a year after hosting the national concrete canoe championship competition in 2013. Partly because of this, the ASCE Committee on Student Members recognized the ASCE student chapter with a Letter of Honorable Mention for its outstanding activities in recent years.

“The Chapter’s accomplishments reflect the enthusiasm and hard work of your student officers and members,” wrote Leslie Payne, director of Educational Activities for ASCE, in a letter to CEE Professor David Lange, ASCE student chapter adviser.

“Really, they have done a lot the past two years,” Lange said. “The national concrete canoe competition, the regional meeting—these are big undertakings.” Lange praised the work of undergraduate Mark Keller, who served as ASCE student chapter adviser.

Above, members of the co-ed sprint team wave to supporters after winning their race. The races were held on Homer Lake, also shown below.
Armen Amirkhanian, left, and Mark Keller, right, during the concrete canoe races at Homer Lake. Canoe team adviser Professor Jeffery Roesler is in the background.

Armen Amirkhanian, a Ph.D. student and concrete canoe team adviser, who ran the national competition and volunteered for regionals as well. Amirkhanian, who has been involved with concrete canoe competitions since childhood, also cited Keller for organizing hundreds of students and volunteers, as well as various competitions at multiple sites around the area—from the Yeh Center to the gym at Parkland College to Homer Lake, where the canoe races, surveying competition and Mystery Design were held.

“We had possibly the smoothest running regional conference I have ever been to—and I’ve been to over 15 of them,” Amirkhanian said. “While the volunteers played a key role in this success, it would not have been possible without the tireless planning and organization of Mark Keller. He is the sole reason this entire weekend went off without a problem. … Mark made the U of I look like a top program that was able to accommodate around 600 engineering students from 19 different universities with little difficulty.”

At right, members of the steel bridge team rush to construct their bridge. Below, the surveying competition gets underway at Homer Lake.
In water and sanitation work for developing countries, implementation partners make a world of difference

By Kristina Shidlauskii

On a recent trip to Uganda, a team of students from Professor Benito Mariñas’ environmental lab course (CEE 449) saw first-hand how water and sanitation issues in developing countries are part of a much broader problem. Clean water and optimal sanitation practices must compete with other priorities such as energy and food security, and are affected by limited resources, lack of education and complex cultural barriers.

But the students also met someone who understands the importance of access to safe water and sanitation and is eager to help integrate this goal with other priorities and overcome barriers preventing its successful implementation.

Peter Francis Luswata has created the Uganda Rural Community Support Foundation (URCSF) model farm, located near Masaka, Uganda. Keen to prove that access to safe water and sanitation is key for making sustainable farming a viable possibility in Uganda, Luswata has partnered with the College of Engineering Safe Global Water Institute (SGWI), and the Civil and Environmental Engineering (CEE) department at the University of Illinois at Urbana-Champaign to make it a reality.

Luswata wants the URCSF model farm to serve as a demonstration facility, where local farmers can learn how to produce food that will both sustain them and provide income, identify and plant fast-growing trees that would provide fuel for cooking, treat drinking water to make it safe, construct sanitation facilities that are hygienic and generate resources such as energy and fertilizer. By partnering with CEE and SGWI, Luswata has access to technical knowledge that will help in this endeavor.

The URCSF model farm was one of the stops the CEE students made on their trip, the latest in a series of annual international trips led by Mariñas to give CEE 449 students an opportunity to study water and sanitation issues in the field. The class works with their hosts, international agencies, local academics and local NGOs throughout the trip on a range of details—from ensuring the safety of the students to sharing data for water quality and information about target communities. Yet rarely does their academic effort result in concrete changes in the communities they visit. Working with an implementation partner like Luswata could change all that.

It can be very difficult to convince people to change their behaviors, Mariñas said, but when they are shown a new system that works successfully they are more open to adopting those methods. Effective water treatment and sanitation systems on Luswata’s farm that develop as an outgrowth of the SGWI research could serve as a model to help pave the way for more widespread change.

One of the things Luswata is particularly excited about is turning pig waste into a valuable economic resource. Waste from his farm is treated in an anaerobic digester, which results in the release of methane and the inactivation of pathogens. If harnessed correctly, two extremely valuable commodities can result: clean energy and nutrient-rich fertilizer. The methane can be used to supply energy for lighting, cooking and boiling water, and the fertilizer can improve crop output.

“This is revolutionary in the way business is done,” Mariñas said. “Most people in the developed world pay money to destroy waste; to get rid of it. They do not view it as a resource that could produce income.”

Not only does the digester have economic benefit for farmers in terms of energy and crop improvement, Luswata said, but the gas can also generate additional income while providing needed resources for city-dwellers.

“We’re looking into the commercialization of the gas – putting it in cylinders and selling it in urban areas, where the people do not have land or animals available to them,” Luswata said.

The CEE students who visited the farm worked under the guidance of the two CEE graduate advisers on the trip, Bernardo Vazquez Bravo and Kate Stephens, to collect and analyze samples from water sources, soil, surfaces and the digesters. Professor Betty Naziriwo of Mak-
A team of undergraduates from the CEE 449 class traveled to Africa in February to study water quality challenges in communities near Arusha, Tanzania. Though similar trips are made by the class every year, this one held a new twist: it was a cross-disciplinary effort that included Professor Madhu Viswanathan and graduate students from the Department of Business Administration.

CEE Ph.D. candidate Lauren Valentino represented both disciplines on this trip, participating as an adviser to the CEE students and also as a student in the business class. The theory is that a combined approach to Tanzania’s water problems that incorporates both engineering and business perspectives will be the most holistic and sustainable one. While engineers have the knowledge required to develop technical solutions, business students are able to identify other factors that could influence the success or failure of the proposed designs, Valentino said.

As part of the effort to fully understand the water quality challenges facing communities they visit, the CEE 449 students also spent time in the settlement looking at sanitation and water quality problems.

Oruchinga is home to approximately 5,000 refugees. Living conditions are poor, and people are undernourished in spite of supplemental food provided by the UN. They also have limited access to wood or other sources of fuel, use wells that supply unsafe water and suffer poor sanitation conditions. Though families in this refugee camp are provided with a small plot of land for living and farming, residents generally have to walk 1.5 kilometers or more to get to one of the camp water sources. Latrines are available throughout the camp, but collapsible soil and a high water table often lead to latrine collapse. Bernardo Vazquez Bravo and Kate Stephens, the CEE graduate advisers who led the undergraduate student teams at Oruchinga, explained that inadequate sanitation practices at the households are likely the main route of microbial water contamination.

By analyzing samples taken from the various water sources, students learned that some of the water available in the

Continued on page 20
Among recent innovations in engineering, one of the most intriguing is the use of the principles of origami to create novel structures. Folding structures are being developed at all scales for a broad range of purposes—for example, in the creation of tiny, minimally invasive surgical tools and in the development of moveable parts on buildings that regulate shade or orient solar panels. Some are smart structures, capable of assembling themselves through the use of shape memory alloys or the inclusion of semi-conductors.

With the goal of furthering this science, some of the world’s foremost experts gathered on the University of Illinois campus April 14-16 for the Workshop on Origami Engineering, funded by the Department of Civil and Environmental Engineering (CEE) and organized by CEE Tomohiro Tachi, pictured holding one of his origami designs.

Koryo Miura listens to another presenter. Professor Glauco Paulino. The term “origami engineering” was coined by Paulino during a year serving as the director of the Mechanics of Materials program at the National Science Foundation (NSF). It refers to the utilization of the artistic and scientific principles of origami in the creation of novel structures. The NSF is providing significant funding for the development of this initiative through its program Origami Design for Integration of Self-Assembling Systems for Engineering Innovation (ODISSEI).

The workshop drew experts from as far away as Tokyo, many of whom presented. The three-day event also included ample time for networking, which Paulino hoped would spark the sharing of ideas and plans for future collaboration. The presentations were open, so attendees also included many faculty and students from various departments.

Presenters included:

• **Koryo Miura**, a professor emeritus at the University of Tokyo and the Institute of Space and Astronautical Science and an icon in the field of origami, having designed one of the most-used origami designs.
gami patterns, the Miura-ori.

- **Robert Lang**, an artist and consultant on origami, recognized as one of the foremost origami artists in the world as well as a pioneer in computational origami and the development of formal design algorithms for folding.

- **Tomohiro Tachi**, a professor of origami at the University of Tokyo, who has written a suite of origami software, including the Origamizer, Freeform Origami, and the Rigid Origami Simulator.

- **Sergio Pellegrino**, a professor at the California Institute of Technology, who is conducting interdisciplinary research to design novel retinal implants with distributed microelectronics that conform accurately to retinas of different shapes.

“Tensegrity, a term coined from the concept of tensional integrity, refers to structures in which the components are connected by struts that hold two points apart or by cables that hold them together (continuous tension, discontinuous compression). The geometric problem that must be solved to build a tensegrity is the same one required to calculate the base for many origami forms, so the base design for origami is a tensegrity. For both tensegrity and origami, solving the geometrical problem is an essential underlying optimization problem in the creation of an artistic design.

“In the future, civil engineering systems can become highly adaptive environments that transform themselves, like plants, to optimize their performance in response to both external and internal stimuli,” Paulino said. “Origami has already shown tremendous potential to serve as an adaptable system. The artistic and seamless merging of origami and tensegrity within our built environment has the potential to facilitate cost-efficient, dynamic, artistic and comfortable living spaces.”

More information on origami engineering, as well as videos showing folding structures in action, can be found here: paulino.cee.illinois.edu/origami_tensegrity_initiative.html.
100 years of transportation leadership

By Meg Griffin

For 100 years, transportation professionals have met every year on the University of Illinois campus to learn about the latest research and engage in professional development and networking. This year, more than 1,200 attendees were present to mark a significant anniversary – the 100th annual Transportation and Highway Engineering (THE) Conference in March.

Sponsored by the Department of Civil and Environmental Engineering at the University of Illinois at Urbana-Champaign, the Illinois Department of Transportation (IDOT), the Illinois Center for Transportation, the Illinois Association of County Engineers, and the Illinois Association of Highway Engineers, this 100th event was held around the Illinois Quad in the Illini Union, Foellinger Auditorium, Gregory Hall and the historic, recently renovated Lincoln Hall. Other conference activities included pre-conference short courses at Newmark Civil Engineering Laboratory, tours of the ATREL facility in Rantoul, and a fish fry at Legends Bar and Grill on Green Street.

The history of the conference tracks the history of highway engineering in Illinois and the nation. The very first event, then called the Short Course in Highway Engineering, was held in January 1914 at the Engineering Building (now Engineering Hall) on the University of Illinois campus. The first conference director was civil engineering professor C.C. Wiley. In 1913, the state legislature had passed the Tice Bill, an effort to create a structure for and fund improvements to Illinois roads and “bring Illinois out of the mud.”

“The purpose of the Short Course in Highway Engineering is to aid the newly appointed County Superintendents of Highways in preparing for their duties. It is hoped that the instruction given, the demonstrations made, and the machinery exhibited will prove of interest also to contractors, contractor’s foremen, and to Highway Commissioners and others interested in road improvement.” (Short Course Program, 1914)

The training received at the short course in the early years helped ensure uniform methods of construction and maintenance throughout the state. By the late 1920s miles of new highways had been constructed, and the number of vehicles on those highways had greatly increased. The short course continued, and the conference topics at that time included maintenance, safety and further improvements.

In 1935 the conference name was changed to the University of Illinois Conference on Highway Engineering. Increasingly, the County Superintendents of Highways were engineers, and the focus of the conference evolved to include...
In its 100-year history, the conference has had only four directors: Carroll C. Wiley, below left; Ellis Danner, below right; Professor Emeritus Marshall Thompson, above left; and Professor William Buttlar, above right. Thompson and Buttlar are pictured here in the Illini Union at a reception on the first night of the conference.

In its 100-year history, the conference has had only four directors: Carroll C. Wiley, below left; Ellis Danner, below right; Professor Emeritus Marshall Thompson, above left; and Professor William Buttlar, above right. Thompson and Buttlar are pictured here in the Illini Union at a reception on the first night of the conference.

For a century, the Illinois transportation conference has been a place where transportation professionals from the public and private sector have met annually to present key accomplishments, discuss new trends and specifications, and network and renew friendships. What was stated in the 1935 program remains relevant for attendees in 2014 and beyond.

“Every year the object has been to give the road builders of Illinois an opportunity to discuss the problems of immediate and vital interest and to gain the latest information on technical matters. Our greatest desire is that it shall continue to be of ever increasing service to the people of the State.”


IACE scholarships long part of THE tradition

Of the many scholarships offered to Illinois students, those offered by the Illinois Association of County Engineers (IACE) are among the most long-standing. The group has been involved with the THE conference since its inception 100 years ago. This year, the IACE increased the size of its gift to award four scholarships of $2,500 each to U of I students, for a total of $10,000.

“Our members contribute to these scholarship donations and hold scholarship fundraising activities across the state, because they are aware of the importance of students entering the engineering field to become the engineers of tomorrow,” said Curtis D. Cook, IACE president.

This year’s winners, acknowledged as always at the THE conference, were Javzan Guntumur, a CEE transportation junior from Lake County, Ill.; Eli Hyman, a CEE transportation junior from Champaign County; Tariq Shihadah, a CEE construction junior from Winnebago County; and Christian Thompson, a CEE transportation sophomore from Rock Island County.

“Scholarships are essential in attracting and retaining top students into engineering fields where workforce shortages are present or eminent,” said Professor Bill Buttlar. “The IACE scholarship program addresses this need in a significant way, as it is one the largest annual scholarship programs in CEE. We greatly appreciate the leadership and support provided by IACE over the past century and look forward to continuing our fruitful collaborations with them.”
Team wins $1.5M EPA grant to increase success of cookstove improvement efforts

Around the world, billions of people cook their daily meals in biomass-burning cookstoves, a traditional practice that unfortunately produces a substantial amount of air pollution along with the family dinner. Researchers at Illinois are part of a new, $9 million funding initiative, announced in June by the Environmental Protection Agency (EPA), with the goal of measuring and communicating the benefits of adopting cleaner cooking, heating and lighting practices.

Traditional cookstoves are a major source of black carbon, an air pollutant that not only has serious human health impacts, but also affects climate, including increased temperatures, accelerated ice and snow melt and changes in the pattern and intensity of precipitation. The World Health Organization estimates that more than four million premature deaths result every year from cookstove smoke. To address this, the EPA has awarded grants to researchers at six universities across the country who will explore cleaner technologies and fuels for cooking, lighting and heating homes.

At Illinois, Associate Professor Tami Bond will lead a $1.5 million, three-year project to investigate how local resources affect community acceptance of heating stove interventions and how measurements will help improve understanding of air quality and climatic benefits of cookstove interventions in Alaska, Nepal, Mongolia and China. As policymakers and non-profit organizations work to develop and distribute more efficient, less polluting cookstoves, Bond’s project is aimed at increasing the sustainability and effectiveness of these initiatives by exploring how people in various parts of the world actually use energy. The team will develop a global, resource-driven map of current emissions and plausible interventions for all residential uses of solid fuel; improve understanding of emissions attributable to space heating by adding measurements to four residential-energy projects in Alaska, Nepal, Mongolia and China; incubate a Regional Testing and Knowledge Center and demonstrate successive improvement in interventions; and model how current emissions and plausible interventions affect the atmosphere.

“The household is just as complex as any other system that we work to protect,” Bond said. “We can’t propose changes to that system until we understand what affects it. One fundamental question that we hope to address is what people use energy for. A kitchen is more than just a cooking pot.”

“Health and environmental impacts of air pollution and climate expand beyond the borders of any one country,” said EPA Administrator Gina McCarthy. “This research funding seeks to provide new tools to reduce health risks for the nearly three billion people around the world who are exposed to household air pollution from crude stoves.”

For more, visit http://cee.illinois.edu/Bond_ EAPGrant_2014

Photo: Cookstove in use.
Continued from page 25

by the Committee on Technical Advancement to receive the 2014 Walter L. Huber Civil Engineering Research Prize “For pioneering research contributions in the field of seismic behavior and design of steel wall and braced-frame systems, combining large-scale experimental testing with nonlinear analysis to develop practical guidance for implementation.” The selection committee particularly noted his research combining large-scale experimental testing with nonlinear analysis to develop practical guidance for implementation.

Associate Professor Paolo Gardoni, Associate Professor Liang Lui, Associate Professor Scott Olson, Associate Professor Yanfeng Ouyang and Academic Adviser Becky Stillwell were named 2013 Engineering Council Outstanding Advisers at the Engineering at Illinois College Faculty Awards Fiftieth Honor Awards Ceremony.

Assistant Professor Mani Golparvar-Fard was awarded the 2013 Fiatech CETI Award in the category of Outstanding Early Career Researcher. The Fiatech Annual CETI Awards, (Celebration of Engineering & Technology Innovation Awards), recognize organizations that have implemented new and emerging technologies and innovative practices on capital projects/facilities and recognize individuals who have made significant strides in advancing technology and innovation in research and development.

Professor Emeritus German Gurfinkel was selected by the Structural Engineers Association of Illinois (SEA01) to receive the John F. Parmer Award. John F. Parmer, a structural engineer, was one of the seven founders of SEA01. The Parmer Award was first established by SEA01 in 1978, honoring a structural engineer whose distinguished career is acknowledged by his peers to be an example of excellence.

Assistant Professor Oscar Lopez-Pamies has been awarded the 2014 Journal of Applied Mechanics Award for his paper “Some remarks on the effect of interphases on the mechanical response and stability of fiber-reinforced elastomers,” co-authored with Katia Bertoldi, an associate professor in Applied Mechanics at Harvard University. The award, provided by the Applied Mechanics Division (AMD) of the American Society of Mechanical Engineers (ASME), honors the best paper which has been published in the Journal of Applied Mechanics during the two calendar years immediately preceding the year of the award.

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Illinois researchers study Oso landslide

By Kristina ShidlasKi

Two members of a University of Illinois research team studying the Oso, Wash., landslide traveled to Washington state in May to inspect the disaster site, obtain slide geometry and failure mechanism information, and collect samples for testing and analysis. CEE professors Timothy D. Stark and Gholamreza Mesri were joined there by local geologic consultant Daniel J. Miller and two graduate students from the University of British Columbia, Jordan Aaron and Andrew Mitchell.

The group investigated the slide mass and debris field, took soil samples along the length of the slide mass and at the old river bottom – the potential slide surface – and measured splash height and run-out distance at the slide margins. They also observed some of the man-made changes that resulted from the disaster clean-up, including a new river channel that was excavated to reduce flooding initiated when the original river was dammed by the slide mass and a temporary highway built to skirt the debris field while the original highway is cleared.

This work is funded by a CEE Rapid Response grant, department funds made available for the study of the effects of disaster.

For more, visit cee.illinois.edu/OsoVisit.

Photos: At top, from left to right, Daniel J. Miller, Tim Stark, Jordan Aaron, Andrew Mitchell and Gholamreza Mesri. Below, a car caught in the mud slide.

Thank you!
The department gratefully acknowledges the sponsors of the spring 2014 CEE Job Fair luncheon:
Bowman, Barrett & Associates Inc.
Civiltech Engineering Inc.
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In May 2011, when the U.S. Army Corps of Engineers used explosives to breach a levee south of Cairo, Ill., diverting the rising waters of the Mississippi and Ohio rivers to prevent flooding in the town, about 130,000 acres of Missouri farmland were inundated. It was the largest flood of the lower Mississippi ever recorded, and U of I researchers took advantage of this “once-in-a-scientific-lifetime” event to study the damage, funded by a National Science Foundation grant. Results published in the journal Environmental Science and Technology show that landscape vulnerabilities can be mapped ahead of time to help communities prepare for extreme flooding.

“There is overwhelming scientific evidence that the characteristics of extreme rainfall under climate change are going to be different,” said CEE Professor Praveen Kumar, the project leader on the study. “Forecasts of extremes of rainfall and flooding are not sufficient. The most urgent need is appropriate preparedness based on scientific assessment of landscape vulnerability.”

The 2011 activation of the Birds Point-New Madrid (BPNM) Floodway resulted in the diversion of floodwater for 35 miles before it was directed back to the Mississippi at New Madrid, Mo. The Corps of Engineers also later opened the Bonnet Carré and Morganza spillways in Louisiana to ease pressure on the New Orleans levee system.

The Illinois team included experts in hydrology, geography and geology, in collaboration with the U.S. Geological Service and the U.S. Army Corps of Engineers. Using sensors they observed changes on the river and throughout the floodplain. They used a unique collection of data from high-resolution pre- and post-flood LIDAR mapping, an optical remote sensing technology, to analyze erosion and deposition from the flood. Using HydroSED 2D, a computer modeling system developed at Illinois, they incorporated 2D flow modeling, soil characteristics and information about vegetation to analyze the vulnerability of the landscape compared with observed impacts. They also compared sites that were heavily affected due to the flow with those that were not.

For more, visit cee.illinois.edu/flood_research_will_lead_to_preparedness.
ICT researchers develop tool to evaluate effects of wide-base tires

By Nichole Evans

Researchers at the Illinois Center for Transportation are developing an advanced 3-D modeling tool to help state agencies and highway construction materials engineers evaluate the effects of new-generation wide-base tires on existing pavements and to provide guidance about their use without the need for actual road testing.

Wide-base tires offer economic, safety and environmental benefits. They improve fuel economy by reducing weight and aerodynamic drag, and they have the potential to reduce noise and improve stability. However, the impact of wide-base tires on pavement life must also be considered.

Toward that end, the research team is developing theoretical models that will be validated by tests of wide-base tires on heavily instrumented, full-scale pavements comprising various materials and layer thicknesses in different climatic regions of the United States. The resulting tool will allow comparison of conventional dual-tire assemblies,
Emeritus luncheon
CEE professors emeritus and spouses gathered in the Yeh Student Center June 12 for the annual CEE emeritus luncheon. Back row, left to right, Professors emeritus Marshall Thompson, Bill Hall, Barry Dempsey, German Gurfinkel, Fred Lawrence, Bill Walker and Wayland Eheart. Front row, left to right, Elaine Hall, Pauline Dempsey, Ana Gurfinkel, Shirley Walker, Brenda Eheart and Professor and Interim Head Benito Mariñas.

ICT uses the Advanced Transportation Loading Assembly (ATLAS) to simulate wear on pavements in various conditions. Used on 18-wheel trucks, with new-generation wide-base tires, without the need for actual testing.

The model uses non-uniform tire stresses, actual loading and contact areas to provide an accurate understanding of pavement damage and predict its performance over time. The model will be validated with measurements of pavement performance captured in highly instrumented field sections as well as full-scale pavement sections exposed to accelerated vehicular loading testing. The combination of model results and actual pavement responses will be used to train an artificial neural network, resulting in a powerhouse analysis tool. The tool will allow engineers to assess the impact of different tire types and configurations on pavements, ultimately providing a way to evaluate various scenarios.

For more, visit cee.illinois.edu/wideba-setires.

63rd Annual
Traffic Engineering and Safety Conference
October 15-16, 2014
I Hotel
Champaign
trafficconf.com
First Illinois Water Day presented in April

The first annual Illinois Water Day was held on April 11, 2014. The event was held as part of the UN World Water Day, which was established to bring greater awareness to the importance of safe, clean and abundant water resources across the globe. With help from sponsors and partners, more than 20 students helped organize the event, including Ph.D. student Paul Noël.

“We wanted to create a discussion on campus about the importance of water resources,” Noël said.

A poster session highlighted local work and research relating to water, and a variety of speakers were present to lead information sessions. More than 100 people attended the event and 30 people presented posters, Noël said. He envisions even bigger things for next year’s event.

“We hope we can attract even more people from south campus and from outside academia,” he said. “We would also want to have our partners organize their own events as part of the Illinois Water Day to reach undergraduate and high school students and more general public.”

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Professor Ximing Cai’s Ph.D. student Landon Marston won the 2014 NDSEG (National Defense Science and Engineering Fellowship Program) Award, which provides a three-year graduate study fellowship. Assistant Professor Megan Konor serves as his co-adviser. The NDSEG Fellowship is sponsored and funded by the Department of Defense, and selections are made by the Air Force Research Laboratory/Air Force Office of Scientific Research, the Office of Naval Research, and the Army Research Office.

Associate Professor Scott Olson has been awarded the 2014 Chi Epsilon Central District James M. Robbins Excellence in Teaching Award.

Assistant professors Joshua Peschel and Ashlynn Stillwell were inducted as Collins Scholars by Dean Andreas Cangellaris.

Associate Professor John Popovics has been named the winner of the 2014 College of Engineering Teaching Excellence Award. This award was established by an anonymous alumnus and his wife in appreciation for the excellent teaching that he received during his student days. It is intended to motivate teachers to increase the educational impact that they make on their students and to improve the excellence of teaching across the College of Engineering. The departments submit nominations for this award, and the top three faculty members are then nominated for the Campus Award for Excellence in Undergraduate Teaching. In addition to being nominated for the Campus Award, the top-ranked nominee is selected for the College teaching award.

Professor Timothy Stark and Manzoor Hussain (MS 07, PhD 10) received a Richard S. Ladd Standards Development Award from ASTM International Standards Worldwide Committee D18 on Soil and Rock. The recognition was given for the time and extensive effort that they spent in revising ASTM Standard Designation D6467 “Standard Test Method for Torsional Ring Shear Test to Determine Drained Residual Shear Strength of Cohesive Soils.”

Professor Leslie Struble has been selected as a Purdue University Distinguished Women Scholar for 2013-2014. This award is intended to recognize the doctoral alumnae of Purdue who have made significant scholarly contributions.

Professor Wilson Tang, a former 27-year faculty member, was honored posthumously for his Offshore Technology Conference (OTC) Paper 7196, “Case Study of Offshore Pile System Reliability,” at the American Society of Civil Engineers (ASCE) OTC Hall of Fame Gala Dinner.
Guest, Work win NSF CAREER awards

Jeremy Guest and Dan Work, both CEE assistant professors, have won National Science Foundation (NSF) CAREER awards. Administered under the Faculty Early Career Development Program, CAREER awards are the NSF’s most prestigious form of support and recognition for junior faculty who “exemplify the role of teacher-scholars through outstanding research, excellent education and the integration of education and research within the context of the mission of their organizations.”

Guest received a five-year, $400,000 grant through NSF’s Energy for Sustainability program for his proposal, “CAREER: Advancement of Microalgal Biotechnology via Quantitative Sustainable Design: An Integrated Research and Education Plan.”

“The overarching goal of this work is to eliminate energy consumption, and nitrogen and phosphorus losses at wastewater treatment plants,” Guest said. “This will be achieved through the development of microalgae-based treatment processes that could enable energy positive nutrient recovery from wastewater. Research will integrate experimentation, modeling and sustainable design to identify a path forward for technology development, and results from research will be used in educational tools that more effectively teach environmental engineering and sustainable design.”

Work received a five-year, $400,000 grant through NSF’s Civil Infrastructure Systems program for his proposal, “CAREER: Modeling and Estimation Methods for Complex Traffic.”

“The objective of this project is to investigate the dynamics of complex traffic,” Work said. “Complex traffic is characterized by heterogeneous vehicle types, for example bikes and cars, that vary in size and performance characteristics but share the same roads. These features are increasingly common in the U.S. during extreme congestion generated by special events.”

Work’s research postulates that advances in mathematical models, informed by and validated with large volumes of traffic data, are key elements to unlock the full understanding of complex traffic. This research focuses on the development of mathematical models of heterogeneous traffic, modeling and analysis of human-directed traffic and the development of fast and accurate estimation algorithms to integrate data into city-scale models. Data to validate the models and estimation algorithms are obtained through a new traffic sensing technology developed by Work called TrafficTurk.

Students, alumnus cycle cross-country for cancer research, awareness

On May 25 two CEE students and an alumnus embarked on a 71-day bike ride across the country as part of the Illini 4000 Bike America Team. The ride is an annual student-run event to raise money for cancer research, spread awareness of the fight against the disease and collect stories of those affected by cancer all across the nation. This year, 20 Illinois students are making the trek. Above, left to right, CEE students Arthur Tseng and Alex Knicker, and CEE postdoctoral research associate Blake Landry pose with their bikes in front of Newmark Lab For more, visit cee.illinois.edu/illini4000_2014.
Old Masters
Engineering giants of the department’s history

Clyde Kesler
1922-2011
Teacher, concrete expert, father of the concrete canoe competition

Clyde E. Kesler was born on May 7, 1922, in Champaign County. Kesler graduated in 1943 with a B.S. in Civil Engineering from the University of Illinois at Urbana-Champaign with high honors. During 1943-46 he was in the U.S. Army Corps of Engineers, leaving service with the rank of Major in 1946. He returned to the University of Illinois for graduate study and received his M.S. in 1946 with a major in Structural Engineering. During 1946-47 he also served as a Junior Engineering Aide with the Illinois Central Railroad.

Kesler assumed a position as Research Associate in Theoretical and Mechanics (TAM) in 1947, moving rapidly up the ranks to be a Professor of Theoretical and Applied Mechanics (1957-62), after which time he held a joint appointment in TAM and the Department of Civil Engineering until he retired in 1982. At that time he was granted the rank of Professor Emeritus. During 1978-81, he was an Associate Head of the Department of Civil Engineering.

In early years, Kesler was a specialist in the properties of plain concrete, including fatigue, creep and fracture control, as well as properties of reinforced concrete. Later he investigated fiber reinforced concrete with respect to reducing its cost while increasing its workability and toughness, and maintaining quality. Among his many other studies were those involved with the use of foam, expansive concrete to reduce deterioration of bridge decks, studies to decrease the maintenance of concrete pavements, and studies of precast and slip formed tunnel liners.

Kesler was recognized early for his achievements by being elected to membership in Sigma Xi, Chi Epsilon and Tau Beta Pi. His awards include the Halliburton Engineering Education Leadership Award of the College of Engineering, Sanford E. Thompson Award from the American Society of Testing and Materials, and the Alfred E. Lindau Award of the American Concrete Institute in 1971. He was a Fellow of the American Society of Civil Engineers (ASCE), and during 1967 was elected President of the American Concrete Institute (ACI), becoming the youngest individual to hold that post to that time. In 1977 he was elected to membership in the National Academy of Engineering.

By virtue of his expertise in concrete, Kesler lectured and served on committees throughout the world. He was an active member of numerous technical committees of engineering and professional societies, especially ACI, ASCE and the Transportation Research Board. He was widely sought out as a consultant for industry and government; among his numerous assignments were those with Illinois Bell Telephone Co., the Panama Canal Zone, Port Authority of New York, and the General Electric Company, to name but a few.

He was the author or coauthor of 85 major publications, including one book. He held one patent (Fiber-Reinforced Cement Composite). He was a registered professional engineer in the State of Illinois.

Kesler is credited with being the founder of the concrete canoe competition, in which students around the world design, build and race concrete canoes. The practice began as one of his class projects, with the first inter-collegiate concrete canoe race taking place against students from Purdue in 1971.

He died in December 2011 in Champaign.

– W. J. Hall, Oct. 10, 2009

He was a Fellow of the American Society of Civil Engineers (ASCE), and during 1967 was elected President of the American Concrete Institute (ACI), becoming the youngest individual to hold that post to that time. In 1977 he was elected to membership in the National Academy of Engineering.
2010s

Michelle Mehnert (BS 12) has risen to 146 on the International Triathlon Union (ITU) points list after three sprint triathlons this spring. At the end of 2013, Mehnert was ranked 222 on this list. She placed tenth at the ITU Pan American Cup in Clermont, Fla., on March 1, twenty-fourth at the ITU Triathlon World Cup (Mooloolaba, Australia) on March 15 and thirty-first at the ITU Triathlon World Cup (New Plymouth, New Zealand) on March 23. At the New Plymouth race, 12 of the top 20 racers in the world competed.

2000s

Jeffery E. Large (BS 06, MS 09) was named Young Engineer of the Year by the Capital Chapter of the Illinois Society of Professional Engineers (ISPE). He was recognized for his contributions to both the engineering industry and to the communities in which he serves. Large has been employed at Crawford, Murphy & Tilly Inc. since 2006, where he currently serves as project manager on water resources projects. The Young Engineer of the Year award is presented annually to an engineer under the age of 34 who has made outstanding contributions to the industry and community.

Daniel B. Oerther (MS 98, PhD 02), the John A. and Susan Mathes Chair of Environmental Engineering at Missouri University of Science and Technology, has been selected as a Jefferson Science Fellow for 2014-2015. He and 12 others will begin their one-year assignments in Washington, D.C., on Aug. 11, 2014. The Jefferson Science Fellows Program was established in 2003 by the Office of the Science and Technology Adviser to the U.S. Secretary of State. It is designed to further build capacity for science, technology and engineering expertise within the U.S. Department of State and U.S. Agency for International Development.

Travis D. Painter (BS 04, MS 06) P.E., S.E., a civil and structural engineer at Hanson Professional Services Inc., recently earned his structural engineer license in Illinois. He serves Hanson’s railway market in the company’s Peoria, Ill., office. Painter joined Hanson in 2007.

1990s

John R. Laskowski (BS 99) has been appointed city engineer in DeKalb, Ill. Laskowski will lead the engineering department, which oversees maintenance and construction of the city’s streets, alleys, bike paths, sidewalks, bridges, traffic signals, street lights and storm sewers.

Britton K. Taulbee (BS 95) has been promoted to general manager of Byrne & Jones Construction’s asphalt division. Byrne & Jones is the largest commercial asphalt paving company in metro St. Louis. In his new position, Taulbee will oversee the asphalt division sales, estimating and operations, which builds and maintains parking lots, roads and highways.

1980s

Misganaw Demissie (MS 74, PhD 80) from the Illinois Water Survey has been appointed to the position of Illinois’ first state hydrologist at the Prairie Research Institute at the University of Illinois in Champaign, Ill.

Jack P. Moehle (BS 78, MS 78, PhD 80) was elected to the National Academy of Engineering. He is the T.Y. and Margaret Lin Professor of Engineering in the CEE department at the University of California Berkeley.

Nicholas Pansic (BS 76, MS 80) P.E., vice president of MWH Global’s Energy and Industry operations, was appointed the commissioner to the U.S. Section of PIANC, the World Association for Waterborne Transport Infrastructure. During his four-year term as a member of the governing body of the U.S. Section, Pansic will help advance the U.S. maritime and inland Go Illini!

Three generations of CEE graduates pose in front of Newmark Lab in May on the occasion of the youngest’s graduation. From left to right, they are John Witter (BS 14), Ray Ackerman (BS 43) and Randall Ackerman (BS 84).
Capt. Robert D. Schlesinger (MS 85) P.E., LEED AP BD+C, U.S. Navy (Retired) has been appointed to the position of Co-Vice Chair of the American Council of Engineering Companies (AEC) Federal Agencies & Procurement Advocacy Committee. Schlesinger is currently vice president and Navy/Marine Corps Business Development Leader for Baker International’s DoD Market. He is a retired Navy Captain with 29 years of service, and was the Commanding Officer of NAVFAC Northwest and the Navy Region Northwest Director of Facilities and Environment prior to joining Baker in 2009.

Robert W. Steen (BS 80) has retired from the U.S. Army after 33 years of military and civilian service. He resides in Elizabethtown, Ky., with his wife, Brenda.

Sharon L. Wood (MS 83, PhD 86) has been named the ninth dean of the Cockrell School of Engineering at The University of Texas at Austin. A professor of structural engineering and an expert on the earthquake response of concrete structures, Wood has served as interim dean since October 2013 and will assume the post permanently Sept. 1. Wood headed the school’s Department of Civil, Architectural and Environmental Engineering for five years before becoming interim dean last year. She previously served on the civil engineering faculty at the University of Illinois at Urbana-Champaign for 10 years, and joined the Cockrell School faculty in 1996. In 2013, she was elected to the National Academy of Engineering. She is nationally recognized for her research on the earthquake response of reinforced concrete structures.

1970s

Gregory D. Cargill (BS 71) P.E., has retired from the engineering profession after more than 42 years. His career included stops at the Illinois Environmental Protection Agency, the Metropolitan Water Reclamation District of Greater Chicago and Clark Dietz Inc. Cargill is a past member of the CEE Alumni Association (CEEA) board and past president (2004-2006) of the CEEAA. He lives in Palos Heights, Ill., with his wife, Kathryn Samaras Cargill. Cargill was founder and CEO of the Greaser Party People, a group that provided ‘50s and ‘60s music, fun and laughter to countless people over the last 40 years.

W. Charles Greer Jr. (BS 71, MS 73) was elected to Honorary Membership in the International Society for Concrete Professionals (ISCP). Honorary membership is the highest honor bestowed by ISCP upon individuals that have provided exemplary service to the Society and/or to the improvement of concrete pavement technology throughout their careers. Greer is Senior Vice President at AECOM E&I Inc., where he has served the engineering profession for nearly 40 years. He has made particularly important contributions to the improvement of quality control during the construction of airfield concrete pavements. He has also been a leader in the development and implementation of pavement management systems for highways and airports.

Larry W. Mays (PhD 76), a professor of civil and environmental engineering at Arizona State University, will receive the Julian Hinds Award. Mays is a professor in the School of Sus-
When not occupied with coursework or research, CEE grad student and alumna Richael Young (BS 11) is busy running a start-up company. Young is close to completing dual degrees in Agricultural & Consumer Economics (ACE) and Civil & Environmental Engineering. Using concepts from both disciplines, she joined with ACE Professor Nick Brozović to form Mammoth Trading which develops smart platforms for exchanging resource rights while handling complicated regulatory systems in the background. Young says the company helps people put limited natural resources to their most valuable uses in a way that is equitable, saves time and money, and helps sustain the resource.

Mammoth Trading launched its first market platform earlier this year in a groundwater management district in western Nebraska. The company collects bids and offers, then matches buyers and sellers in a way that best meets the needs of all involved parties. A customized algorithm incorporates local rules of transfer in the process.

Before technology for the platform was developed, dozens of farmers, district staff, agronomists and policy makers were interviewed to learn about their needs and the best way to address them. Meetings were held wherever it was most convenient: homes, fields, workshops and sometimes the nearest bar.

“Even with something as high-tech as a smart market, I learned that understanding the people was more important than developing the technology,” Young explains.

Young believes that society needs fair, cost-effective ways to manage natural resources and that the potential for smart market platforms is growing. The growth she sees in Mammoth Trading’s future dovetails neatly with her desire to contribute to society in a meaningful way.

“Each of us cares deeply about something,” she says. “That something for me is that I care about people and their ability to prosper today and in the future.”

Student/alumna entrepreneur: Richael Young

By Kristina Shidlauski
The bylaws of the CEE Alumni Association specify that the board is required to publish the slate of nominations for constituent approval. All CEE alumni are asked to cast their votes and return this ballot by mail or email to the addresses below.

Open positions for Board of Directors for the new term:

President 2014-2016:
- Allen J. Staron (BS 74), Clark Dietz Inc., Chicago
- Write-in: ____________________________

Past President 2014-2016:
- Tracy K. Lundin (BS 80, MS 82), Fermilab, Batavia, Illinois

Vice President 2014-2016:
- Colleen E. Quinn, Ricondo & Associates Inc., Chicago
- Write-in: ____________________________

2nd Vice President 2014-2016:
- John P. Kos (BS 77), DuPage County
- Write-in: ____________________________

Directors 2014-2018 (vote for five):
- Nick Canellis (BS 94), Turner Construction Co., Chicago
- John E. Conroyd (BS 83, MS 85), Tishman Realty & Construction Corp., Chicago
- James K. Klein (BS 78), Illinois Department of Transportation, Springfield
- David A. Schoenwolf (BS 77, MS 78), Haley & Aldrich Inc., McLean, Virginia
- Daniel J. Whalen (BS 84, MS 85), Hanson Professional Services Inc., Springfield
- Write-in: ____________________________

Please mail to:
Jamie Byrum
Coordinator of Alumni and Corporate Relations
205 N. Mathews Ave.
Urbana, IL 61801

Or email your choices to:
jbyrum@illinois.edu

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1970s

Terrence L. Gibson (BS 72, MS 74) died January 28. He was 63. He was founding President of Gibson Traffic Consultants and past president of the Institute of Transportation Engineers (ITE), chairing the golf tournament for over 20 years. Gibson received the ITE Outstanding Achievement award in 2001 and ITE Western District award in 2007.

CDR Jay M. Snyder, USCG, (Retired) (BS 73) died February 11. He was 66. He was a licensed professional engineer and served 21 years in the U.S. Coast Guard before embarking on a career in local government in Loudoun County, Va. He retired as Director of General Services in 2011.

1960s

Michael P. Laughlin (BS 64) died March 30. He was 74. He retired in 2007 after a 43-year career as a civil engineer. He served the village of Tuscar for 21 years, first as a member of the Zoning Board of Appeals and then as Chairman of the Plan Commission.

Robert A. Rogina (BS 64) died February 28. He was 72. He spent 50 years as Professional Engineer and Land Surveyor working for the Illinois Department of Transportation (five years), Beling Consultants (20 years) and his own firm, Rogina Engineers and Surveyors (25 years).

Thomas R. Wallin (MS 68) died February 2. He was 71. He served as an environmental engineer and supervisor within the Environmental Protection Agency. He retired in 2001 after 36 years of service.

1950s

Charles N. Bainbridge (BS 52) died February 21. He was 84. He served his country in the U.S. Navy during the Korean War from 1952-1955 aboard the USS Wiltie. He began his engineering career at Warren and Van Praag in Decatur, Ill. Charles was a founding member of the Decatur engineering firm Bainbridge, Gee, Milanski & Associates in 1974. He retired from BGM in 1999.

Richard C. Capek (BS 58) died January 18. He was 78. He served in the U.S. Marine Corps as a first lieutenant. Dick worked for Symonds Manufacturing and Reynolds Metals. He and his partner, Andy Ballestra, founded the engineering firm, Intech Consultants, in Downers Grove, Ill., where he worked until his retirement.

Robert J. Hahn (BS 55) died February 13. He was 82. Hahn worked for the city of Cape Girardeau as the city engineer for a short stint before starting his own company, Hahn Engineering. After that, he worked as vice president of development at Midamerica Corp. He was in his 30th year there, continuing to work, until he became ill in January.

Kenneth H. Hankins (BS 50) died February 16. He was 90. He served aboard the destroyer escort USS Coates during World War II. Hankins worked for the Illinois State Highway Department, where his first major project was the cloverleaf Highway 251 interchange in Rockford, Ill. After moving to California in 1955 he worked on the Stanford Linear Accelerator, Civil Defense shelters and the Oroville Dam, once America’s largest earthen dam. In 1975 he founded HMH Inc. Consulting Civil Engineers, Planners and Surveyors, for which he was president and CEO.

James Petrica (MS 51) died January 16. He was 89. He was a Consulting Civil and Sanitary Engineer. He was President of James Petrica and Assoc. Inc. from 1967-1984. He retired from Whitney, Bailey, Cox, Magnani. Petrica was a Diplomate of the American Society of Environmental Engineers, a Life Member of the American Water Works Association, and a lifetime member of the Illinois Society of Professional Engineers, Illinois Society of Professional Engineers, and president of the University of Illinois Civil Engineering Alumni Association.

John R. Towers (BS 53, MS 57) died April 6. He was 83. He received his commission as first lieutenant in the United States Air Force, and served as an F86 fighter pilot in Korea. He spent the majority of his career with Arco Steel Corporation and finished his career with Chemical Waste Management. Towers served as president of National Society of Professional Engineers, president of Illinois Society of Professional Engineers, and president of the University of Illinois Civil Engineering Alumni Association.

Allan H. Weihe (BS 55) died January 18. He was 81. He began his engineering career with the Illinois State Highway Department as a draftsman and paving inspector, working on Highway 66 during the time when it was being converted from a two-lane to a four-lane highway. In 1956, he enlisted in the Army and was posted to Fort Belvoir in Alexandria, Va., in a program for engineers. There he served as an instructor and later supervisor, for construction drafting. After completing his military service in 1958, Allan accepted a position as a civil engineer with Rochester & Goodell, an engineering consulting firm based in Salem, Ill. that focused on interstate high-
John C. Houbolt (1919-2014)  
Apollo Program innovator

John C. Houbolt (BS 40, MS 42), the engineer whose ideas were essential to the success of the Apollo Program, died April 15, 2014. He was 95.

Houbolt spent most of his childhood in Joliet, Ill., before attending the University of Illinois at Urbana-Champaign. Soon after receiving his B.S. and M.S. degrees in Civil Engineering he went to work for the National Advisory Committee for Aeronautics at Langley Aeronautical Laboratory, the predecessor of NASA Langley Research Center. Later on, F&HR Farman-Farmaian Consulting Engineers collaborated with leading American consulting engineering firms to provide the design and construction supervision services for important public works projects such as extra high voltage power transmission lines and the Neka Power Plant project.

In 1963, Houbolt took a position with the Aeronautical Research Association of Princeton, N.J., where he continued to research aircraft dynamics. He returned to NASA in 1976, where he is considered to be one of the “unsung heroes of the Apollo Program,” until his retirement in 1985.

Please send news of alumni deaths to Celeste Bragorgos, celeste@illinois.edu.
A. Epstein Award in Civil Engineering
Eric Mason

Alvord, Burdick, and Howson Scholarship
Lance Langer

Anna Lee and James T.P. Yao Scholarship
Ye Bai

ASCE Outstanding Student Award
Mark Keller

Bates and Rogers Scholarship
Haitham El Mengad
Pelle Oberg

Bob Zieba Memorial Scholarship
Rohini Gupta

Bowman, Barrett and Associates Outstanding Scholar Award
Alek Heilstedt

Carroll C. Wiley Traveling Award
Jeff LaHucik

C.S. and Ruth Monnier Scholarship
Lauren Cannon
Allison Densler
Luke Livers
Shivani Soni
Justin Vogel

CEEAA Undergraduate Service Leadership Scholarship
Nicole Vail

CH2M Hill Transportation Endowed Scholarship
Gary Tang

Chester P. Siess Award
Youngjib Ham
Lauren Logan

Chicago Outer Belt Contractors Association Scholarship
Daniel Malsom

Civil Engineering Class of 1943 Undergraduate Leadership Award
Christine Daul

Clement C. Lee Outstanding Scholar Award in Honor of Houssam Mahmoud Karara
Aditya Nagpal

Concrete Reinforcing Steel Institute Scholarship
Guillermo Acevedo

Crawford, Murphy & Tilly Award
Justin Cruce

Delores Wade Huber Scholarship
Jon Stricker
Tawakalit Sulaiman

DFI Educational Trust Berkel & Company Contractors, Inc. Scholarship
Javan Samp
Luis Pelayo
Kelly Samara

Earle J. Wheeler Scholarship
Eduardo Hanon
Weixi Li

Left to right: Nicole Vail receives the CEEAA Undergraduate Service Leadership Scholarship award from CEEAA Board President Tracy Lundin. Jon Stricker and Tawakalit Sulaiman receive the Delores Wade Huber Scholarship, presented by CEE Associate Head and Director of Undergraduate Studies Liang Liu. Christian Vanhooser receives the William E. Stallman Scholarship in Civil and Environmental Engineering from Bill Stallman. Emma Kay receives the William C. Ackermann, Sr. Civil Engineering Scholarship from Bill and Art Ackermann.
Eli W. Cohen – Thornton Tomasetti Foundation Scholarship
Wenjing Li
George L. Farnsworth Jr. Scholarship
Jingxuan Ge
Sylwia Kokoszka
Jessica Villie
Geotechnical Scholarship Gift
Zhenbang Li
Grant Shaw Memorial Scholarship
Michael Halkias
Scott Schmidt
Harold R. Sandberg Scholarship
Nicholas Lien
Henry T. Heald Award
Reshma William
Illinois Asphalt Pavement Association Scholarship
Angeli Mariz Gamez
Punit Singhvi
Illinois Association of County Engineers Scholarship
Javzan Gantumur
Eli Hyman
Tariq Shihadah
Christian Thompson
Harvey Hagge Concrete Scholarship
Eric Ferrebee
Industry Advancement Foundation of Central Illinois Builders of the AGC Scholarship
Marcus Sanders
Ira O. Baker Memorial Scholarship
Ralph Albano
Luis Garay
Ira O. Baker Prize
Savannah Goodman
Marika Nell
Jack and Kay Briscoe Scholarship
Jennifer DeBelliis
Zachary Henderson
Armando Sanchez
John B. Felmley Engineering Fund
Cory Mosiman
Klein and Hoffman Inc. Scholarship
Ivan Chung
Koch Scholarship in Civil and Environmental Engineering
Hannah Lohman
Leigh F. Zerbee Scholarship Civil Engineering
Corey Maisch
Joshua Megginson
Maude E. Eide Memorial Scholarship
Haobo Gao
Rebecca Nothof
Min Yin
Max Whitman APWA Memorial Scholarship
Timothy Chan
Melih T. Dural Undergraduate Research Prize
Meng Wang
Moreland Herrin Scholarship
Brian Castro
Simonas Tvaronas
Norfolk Southern Scholarship

Left to right: Christian Thompson, Tariq Shihadah and Javzan Gantumur are presented with Illinois Association of County Engineers scholarships by Curtis Cook, IACE President. Daniel Rhee receives the Walter E. Hanson Graduate Award, presented by Dan Whalen of Hanson Professional Services Inc. Marcus Sanders is presented with the Industry Advancement Foundation of Central Illinois Builders of the AGC Scholarship by Jim Meek of Felmley-Dickerson Company.
CEE at Illinois Alumni Dinner in Chicago

Chicago-area alumni, CEE faculty, students and friends of the department gathered March 12 at the Union League Club in Chicago for the annual CEE at Illinois Alumni Dinner in Chicago. The event included a cocktail reception, dinner, the presentation of the CEE Alumni Association awards, and a department update by Professor and Interim Head Benito J. Mariñas. Assistant Professor Daniel B. Work also spoke about his research.

Earlier that day, a group of CEE students toured local engineering firms Alfred Benesch & Company and Milhouse Engineering & Construction. Representatives of each company generously gave their time to show students around the firms and share insights about what they could expect as entry-level engineers. The department would like to thank the following individuals for hosting the tours and speaking to the students: Joe Zurad, Adam Hardy, Marcus Woods, Michelle Ross-Montgomery, Carl Larson, Andrew Keaschall and Scott Wojteczko.

With gratitude, CEE acknowledges the following sponsors of the alumni dinner:

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With gratitude, CEE acknowledges the following sponsors of the alumni dinner:

Photos at right, top to bottom: Darwin Valenzuela (MS 08), Bryan Wickert (MS 10); Wilbur Milhouse (BS 94, MS 95), David Ariola (BS 90); Matthew Pregmon (BS 97, MS 98), Paula Plenton (BS 85); Tracy Lundin (BS 80, MS 82), Pedro Cevallos (MS 77, PHD 80), Michael Ewers (BS 83).
The Civil and Environmental Engineering Alumni Association is pleased to announce the 2014 recipients of its Distinguished Alumnus/Alumna Award and Young Alumnus/Alumna Achievement Award. The Distinguished Alumnus/Alumna Award recognizes professional accomplishments or unique contributions to society by alumni of the department. The Young Alumnus/Alumna Achievement Award recognizes recent graduates who have achieved distinction in their fields and reached a level of accomplishment significantly greater than that of other recent graduates. The honorees were recognized at the March 2014 Alumni Dinner in Chicago.

Honorees of the evening, left to right: Michael Kicklighter, Andrew Keaschall, Gary Brierley, Thomas Broz

Young Alumni Awards

Andrew J. Keaschall (BS 04, MS 05)
Project Manager
Alfred Benesch & Company
Chicago, Illinois
For demonstrated leadership, expertise and commitment in managing mega transportation projects, for directing the career paths of young engineers and providing them with structured mentoring, and for an active volunteer role in support of giving back to the community.

Michael E. Kicklighter (MS 05)
Chief of Construction/Chief of Planning & Real Property
U.S. Coast Guard Civil Engineering Unit
Miami, Florida
For effective leadership and management to meet unanticipated conditions encountered by the U.S. Coast Guard and for exceptional administration of numerous mission-critical Coast Guard planning, real property and construction projects.

Amelia I. Patrick (MS 06)
Principal and CEO
Thalia Engineering Studio
Spring, Texas
For a high level of achievement culminating in the founding of an engineering firm, coupled with a commitment to the cultivation of the next generation of civil engineers, particularly female engineers, through a series of mentoring programs.

Distinguished Alumni Awards

Ned A. Bacon (MS 73)
Vice President (retired)
Chicago Bridge and Iron Company
Plainfield, Illinois
For an outstanding career of progressively increasing responsibility in steel plate structures requiring superior technical, management and marketing skills executed in a challenging world-wide forum with integrity, humility and technical proficiency.

Gary S. Brierley (MS 70, PHD 75)
President
Dr. Mole Incorporated
Denver, Colorado
For an outstanding career working on the design and construction of underground projects, for extensive contributions to the engineering profession as a member and officer of many technical and professional societies and for teaching and mentoring young engineers on topics of tunnel design and construction, subsurface investigations, rock mechanics and professional practice.

Thomas A. Broz (MS 73)
Senior Vice President
Director, Program and Construction Management Services
Willdan Engineering
Anaheim, California
For a demonstrated high degree of competence and leadership in the civil engineering profession through work on a series of mega projects including nuclear power plants worldwide, as well as active involvement in professional organizations serving as a mentor and role model for young engineers.

Paul R. Schroeder (BS 74)
Research Civil Engineer
U.S. Army Corps of Engineers
Vicksburg, Mississippi
For exemplary performance and dedication in the research civil engineering profession, specifically the field of contaminated sediments, sediments management and the development of vetted models in support of environmental engineering and dredging operations, along with the mentoring of young engineers and scientists.

Daniel W. Urish (BS 54)
Professor Emeritus of Civil and Environmental Engineering
University of Rhode Island
Kingstown, Rhode Island
For an outstanding career as an officer in the United States Navy including Commanding Officer of the Naval Mobile Construction Battalion Forty and the Chief Staff Officer for the Atlantic Seabees, twenty-five years as a university professor including Smithsonian Institute Fellow, Director of the University of Rhode Island Environmental Research and Training Center and Department Chair, and civic activities including providing infrastructure support and water supply systems to remote areas in South Vietnam and the Republic of Haiti.

2014 CEE Alumni Awards

Honorees unable to attend the awards dinner, clockwise from top left: Ned Bacon, Amy Patrick, Dan Urish, Paul Schroeder

ceed.illinois.edu/2014alumniawards
When past and present met.

Each year, the CEE Alumni Association gives the Distinguished Alumnus or Alumna Award to men and women who have made remarkable contributions to the field of civil and environmental engineering. The first award was given in 1968, to Rear Admiral Walt Enger, CEC, USN (BS 35). The latest group of honorees included Dan Urish (BS 54), who was given the award in March 2014. Interestingly, Enger and Usher have crossed paths in real life – 43 years ago and half a world away. The above photo was taken in July 1971 when Enger was the first U. S. Navy Admiral to visit the new Navy Base on the remote island of Diego Garcia in the middle of the Indian Ocean; as Island Commander, Urish (on the left) was greeting Enger as he came off the plane on the newly completed runway.
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