



CIVILreMARKS

CIVIL AND ENVIRONMENTAL ENGINEERING [civil.umd.edu]

A newsletter for the alumni and friends of the Department of Civil and Environmental Engineering

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Shaping a Path to the Future

Symposium Addresses Natural and Human-Caused Disasters



CHAIR'S MESSAGE



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This newsletter is printed on recycled paper and is also posted electronically on our website.

Welcome readers to our latest issue of Civil Remarks.

As usual we profile faculty, students and staff in an effort to keep you, our readers, better informed about the activities happening here at CEE.

In this issue we also provide you with information on our recent symposium hosted by the university and CEE on the topic of Infrastructure and Community Resilience: Natural and Human-Caused Disasters.

As we experience more catastrophes, such as the recent Super Storm Sandy which resulted in severe damage to many Atlantic coastal areas we must become better prepared to meet these challenges and work together to do so.

Faculty member such as Brian Phillips agree that our research can have a significant impact on our lives. He sees his research and the research of those in his field of engineering as a "direct benefit to society," he says. "One only need to look around at the infrastructure that we rely on daily to see the real-world impact of what we do." In his profile readers will learn more about his research and his interest in studying the response of structures to dynamic loading including earthquakes, wind, and blasts and proposing new solutions to mitigate damage and loss of life.

Bettering the world we live in is not confined to just our faculty. We are preparing for the future as well. Kevin Fries just graduated from CEE. Growing up, "I wanted to reach out and help those who need help the most," he says. He has realized that goal. Fries is an active member of Engineers Without Borders and wants to help better the world through his work as an engineer.

In an effort to support student such as Kevin and programs such as Engineers Without Borders, alum Marvin Weissberg, a great admirer of the university's Engineers Without Borders, recently he set up an endowment for the program and is providing scholarships to students as well. Weissberg is the founder and chairman of the board of Weissberg Corp. The company is one of Washington, D.C.'s major commercial real estate development companies.

Other profiles include Qingbin Cui, a faculty member here at CEE since 2008, who brings a world of experience as a teacher and \, researcher and with extensive industry experience. I think readers will be impressed with his achievements and accomplishment as a young assistant professor.

And then there is Angela Bobich who joined CEE November of last year as director of administrative services. Not only is she a graduate of the university but has along and extensive career working at her alma mater. Prior to joining CEE, "I had grown to really enjoy working in higher education," she says. "I was surrendered by people who were bettering themselves and their lives."

Finally, I especially enjoyed our last article. We profile ENCE 305 – Fundamentals of Engineering Fluids. This past spring Barton Forman, the Deborah J. Goodings Professor in Engineering for Global Sustainability, taught ENCE 305 – Fundamentals of Engineering Fluids for the first time. And as such, taught undergraduates for the first time. He made quite an impression on students such as Ryan McCullough, who described the course as the "best class I've ever taken."

And, that is why we are here – working to better the world around us and inspiring young minds in the process.

A handwritten signature in dark ink that reads "Ali Haghani".

Professor Talks about His Research in Structural Dynamics and its Potential Benefits to Society



Professor Brian Phillips, who joined the CEE faculty in the fall of 2012, sees his research and the research of those in his field of engineering as a “direct benefit to society,” he says. “One only need to look around at the infrastructure that we rely on daily to see the real-world impact of what we do.”

Professor Phillips received his undergraduate degree from the University of Pittsburgh in 2006; his master’s degree from the University of Illinois in 2008 as well as his Ph.D. from Illinois in 2012; all in civil engineering.

He recently talked about his research to Civil Remarks.

Could you briefly describe your area of research and what it involves?

My current area of research focuses on structural dynamics. I am interested in studying the response of structures to dynamic loading including earthquakes, wind, and blasts and proposing new solutions to mitigate damage and loss of life. My research involves a balance of theoretical studies, numerical simulation, and experimental testing.

How did you get into this area of research and why?

I became interested in the area of structural dynamics and in particular earthquake engineering after visiting Japan. I saw how the industry there responds to the challenge of limited flat land and interconnecting countless smaller islands with magnificent bridges, all with the ever-present threat of catastrophic earthquakes. I was impressed by the engineering challenges of designing for unpredictable and extreme loads which push structures to behavior that is difficult to model. Since joining this area of research, I have accumulated extensive experience in experimental testing, hybrid simulation, structural control, and structural health monitoring.

What do you hope to accomplish with this particular research? What do you find most challenging about your research and most rewarding? And why?

Through my research, I hope to improve the resiliency of civil infrastructure to dynamic loading. Since my area of research involves complex behavior of the loading, soil, foundation, and

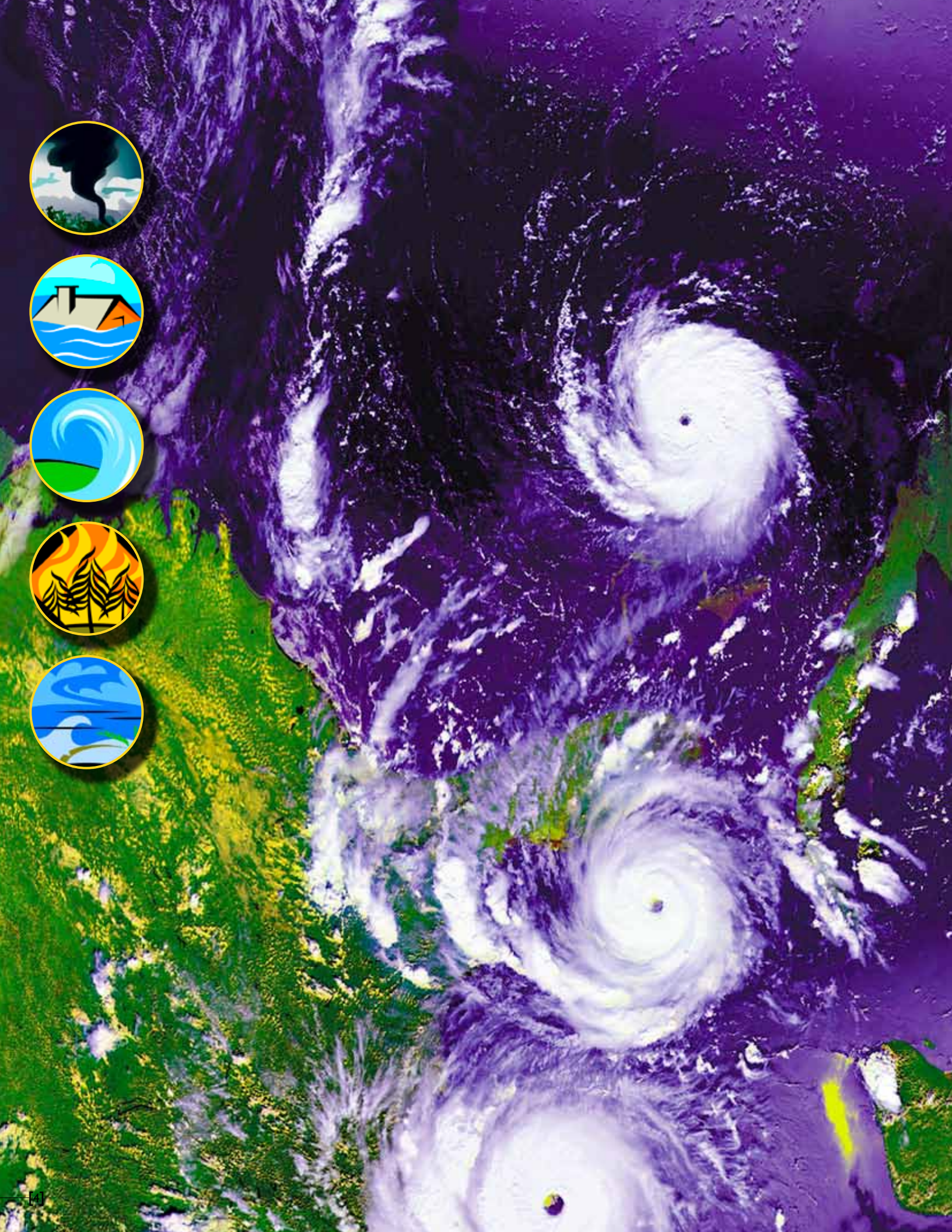
structure, one of the most challenging tasks is accurately capture the interaction of all system components while making assumptions necessary to conduct numerical simulations and experimental tests. The most rewarding aspect is discussing research ideas with colleagues and students. These discussions often bring other points of view, sometimes more practical and sometimes more innovative, but always advancing the state-of-the-art of civil engineering research.

Do you feel that CEE is the right environment for the type of research you want to do and why?

I am interested in seeing the products of my research implemented by the civil engineering industry. I take ideas from aerospace engineering, electrical engineering, and mechanical engineering and apply them to my area. As research becomes increasingly more interdisciplinary, I get to branch out into other fields, but in the end, tie it back to improving our infrastructure and the lives of people worldwide.

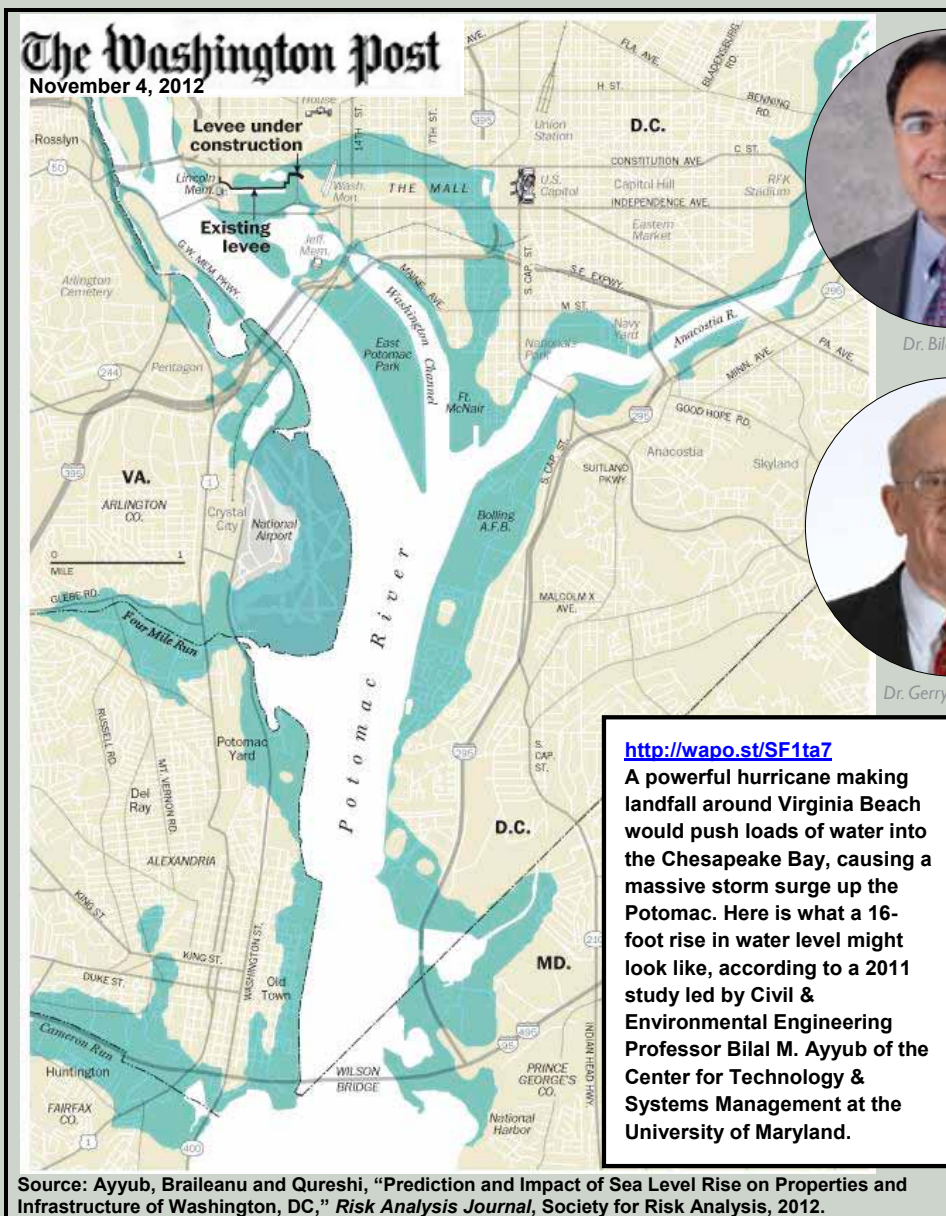
Will you involve students in your research? If so, how?

I serve as both research advisor and mentor for graduate students in my group. At the same time, we have many bright undergraduate students who are getting early research experience in my group. The students see research from all sides, from a review of the state-of-the-art ideas to conducting and analyzing experiments to writing up and disseminating the results. I try to tailor each student’s experience to what they hope to get out of research and their future career goals.



Shaping a Path to the Future

Symposium Addresses Natural and Human-Caused Disasters



Denise Kellett of Langhorne, Pa., was heading home from a vacation in Mexico with her family. "We could see the storm from the airplane," she recalls of Super Storm Sandy.

For years Kellett, her husband, two grown sons and younger daughter had spent summers at their shore house on Mystic Island in New Jersey. Sitting on the plane she wandered what

awaited her family at their Mystic Island home.

Sandy, which occurred in 2012, resulted in severe damage to many Atlantic coastal areas including flooding homes, tunnels, key transportation systems and shutdowns of critical elements of the power and other critical infrastructure systems.

Once at their shore home, the Kelletts would

be greeted by the flooding of the entire first floor of their home. "37 and a half inches high," says Kellett.

"In many ways our home away from home will never be the same," says Kellett.

To comfort herself, she looked to her memories — her three children at different stages of their growing up years scampering on the beach and splashing in the water and even chilly fall days when the family would bundle up and sit on the dock outside with a warm bowl of soup.

"We're devastated," she says.

And she is not alone.

Whether it be Hurricane Katrina, the recent earthquake in Japan or even the heat wave that left hundreds dead in France not long ago, the world is experiencing an onslaught of catastrophes. In fact, in 2011 more than a dozen billion-dollar weather-related disasters occurred.

These very issues were addressed in April when the University of Maryland hosted a symposium on Infrastructure and Community Resilience: Natural and Human-Caused Disasters. "According to the National Research Council, disaster resilience is a shared responsibility among citizens, the private sector and government," says CEE Professor Bilal M. Ayyub, who served as the symposium's chair. Besides Ayyub, Gerry Galloway, the Glenn L. Martin Institute Professor of Engineering, and Ali Haghani, CEE's chair, also assisted in organizing and participated in the event. All three are faculty members from CEE.



Dr. Bilal Ayyub



Dr. Gerry Galloway

In the new **U.S. News and World Report 2014 Best Graduate Schools** survey, released recently, the Clark School of Engineering continues to maintain its high rankings. The Clark School was 19th (and 11th among public schools).

Recent Clark School graduate **Erin Hylton**, a civil engineering major, has been awarded the prestigious *Boren Scholarship for International Study*, funded by the National Security Education Program. Boren Scholarships provide opportunities for undergraduates to study in world regions critical to U.S. interests.

Hylton will spend her first semester this fall studying at the Pontificia Universidade Catolica in Rio de Janeiro, Brazil, and the second semester at the Universidade Federal de Santa Catarina in Florianopolis, Brazil. After graduation, she plans on pursuing a master's degree in environmental engineering and likely a second public policy-related master's degree, as well.

The *Boren Scholarship* also comes with a one year public service requirement that Hylton plans to fulfill at either the State Department or USAID.

Hylton was the president of the **Engineers Without Borders University of Maryland Chapter** and also led the *Maryland Sustainability Engineering* student organization. She is an Honors student, a *Banneker-Key Scholar*, and an alumna of the Federal Semester Energy and Environmental Policy Program.

Hylton has achieved many accomplishments including receiving the Clark School's *International Award* and the Department of Civil and Environmental Engineering Chair's Award, and studying abroad at the Danish Technical University for a semester.

With 10 undergraduate awardees this year, the University of Maryland ranks #1 in Boren Scholarships nationally.

Aarae Alexander, an 18-year-old freshman at the Clark School was awarded a gold medal in the lightweight category of the Pan-American Martial Arts Championship. A civil engineering major, Alexander maintains a 3.1 GPA while training on Fridays and Saturdays at Team Lloyd Irvin's Martial Arts Academy in Camp Springs, Md.

"My parents signed me up in a martial arts summer camp when I was nine years old," she says. "Their intent was to

ensure that I'd be worn out by the time I got home every day. I enjoyed martial arts so much, I never wanted to go home."

A rising star in the female jiu-jitsu ranks, Alexander hoped to win her 6th world title at the International Brazilian Jiu-Jitsu Federation (IBJJF) World Championships on May 29-June 3, 2013, in Irvine, Calif. She currently holds five world championship IBJJF titles: 4 juvenile blue belts and 1 adult blue belt.

"What I like most about competing is the adrenaline rush that I get when I'm grappling," said Alexander. "I am extremely focused and am always strategizing. It's like playing chess. You always have to anticipate what your opponent is going to do next."

Alexander is enjoying her experience at the Clark School so far. After she graduates, she plans to design new and innovative road and bridge patterns to help decrease highway traffic.

The **Clark School** is proud to announce that 36 of its students have been accepted into the National Institutes of Standards and Technology's (NIST) *Summer Undergraduate Research Fellowship (SURF)* program in Gaithersburg, Md.

The NIST SURF program allows students majoring in engineering, science and mathematics to work side by side with leading researchers use cutting-edge technology and gain valuable hands-on research experience in NIST's six laboratories: Material Measurement Laboratory; Physical Measurement Laboratory; Engineering Laboratory; Information Technology Laboratory; Center for Nanoscale Science and Technology; and NIST Center for Neutron Research.

More than 600 student applications from 136 schools were received for the summer 2013 program. Of the approximately 190 students accepted into the program, 43 attend the University of Maryland, a record high – last year, a total of 30 university students were accepted. The 36 Clark School students participating in SURF represent seven of the Clark School's eight departments.

Keeping it in the Family

EWB Student Works as his Parents Did to Help those Most in Need



As a child, Kevin Fries and his siblings travelled the world as their parents worked to better the lives of those less fortunate. “I remember a couple of months living in Bolivia, for example,” he says. “And then there were shorter stays at places such as Peru, Guatemala, Belize and Mexico.”

“Both my parents work in the international development sector,” he explains. His father does work primarily with microfinance in giving loans to farmers. And his mother is an IT project manager. “Through her company most of her work involves setting up infrastructures at new office locations and training people here and abroad,” he says. His parents’ work has taken them to the Ukraine, Africa, Indonesia and Latin America.

As he grew up, there became no doubt what he would do with his own life. He would follow the path of his parent yet in his own way. “I wanted to reach out and help those who need help the most,” he says. And he wanted to do so as an engineer.

Fries, who graduated this past spring, remembers vividly visiting the university’s campus for the first time. “No doubt, the campus was beautiful,” he says. But there was something else that swayed his choice in a very big way. “The Engineers Without Borders chapter here is one of the most active, if not the most active, in the country” he says.

The young boy who travelled the world with his parents, as they made a difference in the lives of others, could prepare to do so himself at this university.

Prior to his graduation where he received a bachelor’s degree in civil and environmental engineering and a minor in project management, with a GPA of 4.0, Fries was president of Engineers Without Borders or EWB. As such he travelled to Brazil as project team member implementing a potable/non-potable waste system for a school on the island of Ilha das Pecos.

Even for the young man who had seen so much of the developing world, he was touched. “EWB and going to Brazil were the highlight of my college education,” he says, smiling. “And I was grateful that not only did I have the opportunity to be part of EWB, but that the university prepared us so well for what was needed to be done there.”

“There is nothing like it,” says Fries. Through the efforts of EWB, the people in the village of



Brazil had clean water and the schools did not need to close for the dry season because of lack of water.”

But his work did not stop with EWB. Fries, who is a member of Gemstone, the University Honors program and a recipient of an Engineering Honors citation, founded and is president of WAVES Corps at the university.

“The program creates life-enriching experiences in coastal communities through education programs that develop youth into

STUDENT PROFILE (cont. on page 12)



C.D. "Dan" Mote, Jr., former president and Regents Professor of Mechanical Engineering at the University of Maryland and the A. James Clark School of Engineering, has been elected as the next president of the National Academy of Engineering.



Professor **Steven Gabriel** has been named a member of the editorial board of the Journal of Energy Engineering. The journal is a publication of the ASCE. Gabriel also recently gave two talks on network equilibrium problems with a focus on energy. The first presentation was part of ISR's IAI Colloquia Series. The second venue was at Auburn University's Department of Industrial and Systems Engineering.



Professor **Gregory Baecher** was invited to the Ohio State University to give a T.H.WU Distinguished Lecture this past April. The subject of his talk was "From Reliability to Systems Engineering: The Evolution of Risk Analysis and Assessment in Civil Works".



Professor **Mark Austin** and his Ph.D. student Leonard Petnga won the Best Paper Award at the 13th Conference on Systems Engineering Research in Atlanta. The winning paper is "Ontologies of Time and Time-based Reasoning for Model-based Systems Engineering of Cyber-Physical Systems."



Professor **Amde M. Amde** recently gave a keynote paper at the international conference ACCTA 2013 in Johannesburg, South Africa. The conference was organized by Germany, South Africa and other European

partners and was attended by delegates from more than 40 countries with half the delegates coming from European countries.



Professor **Miroslaw Skibniewski** was informed of his election to membership in Poland's National Academy of Engineering. Following nomination by its Membership Committee, the Academy's General Assembly voted unanimously to admit Skibniewski as a member for his leadership and contributions in the field of construction engineering, and for his sustained service as editor of international scholarly journals in civil engineering and construction.



ASCE-EWRI Journal of Hydrologic Engineering has selected **Professor Richard McCuen** to receive the 2013 Outstanding Associate Editor Award for his service. The award was presented during the World Environmental & Water Resources Congress in Cincinnati, Ohio.



Professor Gang-Len Chang's Traffic Safety and Operations Center was awarded a project of \$542,778 over a period of 18 months to design and operate an Advanced Incident Response System for the Eastern Shore region. This project, sponsored jointly by FHWA/MSHA, is an extension of Chang's Intelligent Transportation Systems research over the past 10 years on the Ocean City and Eastern Shore. The focus of this phase is to provide the estimated traffic delay and duration due to a detected incident, including the predicted travel time during incident clearance operations, the criteria and models to guide any necessary detour operation, and the resulting time-varying traffic impact to both motorists and the entire region. The results of this research will be integrated with Chang's other \$1.5 million on-going projects to develop a test bed for advanced traffic management systems for the Maryland State Highway Administration.

Limitless Talents and Abilities

Meet CEE Assistant Professor Qingbin Cui

Qingbin Cui is an assistant professor who joined CEE in 2008. He is an educator, researcher and has extensive industry experience. Cui received his bachelor's degree in construction engineering and management with a minor in international project management from Tianjin University in China. He also received his master's from Tianjin University in technology economics in 2000 before receiving his PH.D. in civil engineering from Purdue University in 2005. Professionally, he has been an assistant professor of civil engineering in the Department of Civil, Construction and Environmental Engineering at the University of Alabama from 2005 to 2008 before joining CEE.

Cui is the recipient of numerous grants from federal, state, and private organizations. He is a member of the ASCE and has been the special issue editor of the ASCE Journal of Management in Engineering Special Issue on Engineering Management on Sustainable Development.

He is also an active member on campus and in the department, serving as faculty advisor on Project Management minor program, a popular program that enrolls more than 10% junior and senior engineering students. He also serves as faculty advisor for ASCE and ABC student chapters and for the concrete canoe competition team. Cui speaks frequently at conferences and has presented countless papers on his areas of research.

Below readers can get a better chance to know Cui.

How did you become interested in civil engineering?

I loved to build things as a kid. And then I selected construction engineering as my major in college. After working as an engineer on a job site, I came back to school and finished my doctoral degree. Now I feel it is very enjoyable

to motivate our students to pursue this career and promote technological innovation and industry development through research.

Could you briefly describe your area of research? What do you hope to accomplish through your research?

My current research focuses on two major themes: public private partnership and sustainable infrastructure. Working with FHWA and state transportation agencies, I explored whether, when, and why P3 and other innovative project delivery methods deliver value for money on infrastructure project development. My goal is to design the optimal procurement mechanism and contracting system that promotes both industrial competitiveness and public interest. On the subject of sustainable infrastructure, my research activities center on the computation and management of carbon emissions from construction materials and projects. I aim to build viable mechanism for green construction organizations to benefit financially from their sustainable efforts.

What classes do you teach and do you find teaching rewarding? If so, why?

I teach ENCE 422 – Project Cost Accounting and Economics and ECE 602 – Project Procurement Management, and co-organize research method seminars for doctoral students. Seeing students learn and succeed in the class and in their future career is the greatest reward. I also find teaching our students can generate new ideas for research.

Could you briefly talk about your industrial experience, with some example of the work you do?

My experience in industry started with a highway project funded by the World Bank. At that time, I worked as an estimator for a local highway agency in China. I also spent over five years at Sinopec, a company on the top list of



the Fortune 500 rankings. My job was to build industry and residential facilities in an oilfield.

Why were you interested in coming to CEE at the University of Maryland? And has the institution met your expectations?

Beside its incomparable location, I find the quality of our students is extraordinary. I also value the diversity and inclusiveness with the department and college.

Scores of students, faculty, staff, and alumni crowded the Kim Engineering Building Rotunda and lined the stairs and balconies of the building to witness the Civil and Environmental Engineering student team capture 1st place in this year's Clark School Alumni Cup.

The Clark School Alumni Cup is an annual engineering design competition that was started in 2012 by the University of Maryland Alumni Association's Engineering Chapter. Teams of students from each engineering discipline compete against each other in design, presentation and team spirit for the title of Best Engineering Discipline and Department of 2013 and the winning student team members have their names engraved on the Alumni Cup trophy in Glenn L. Martin Hall.

University of Maryland, College Park graduates earn the second-highest starting salaries among students from all 50 U.S. state flagship schools, according to a recent study. Only the University of California-Berkeley registered a higher median starting salary for graduates than the University of Maryland. The study was conducted by research firm PayScale.com and made available through College Measure.

Clark School of Engineering alumnus **Robert D. Rauch, P.E.**, has been appointed as a new member of the University System of Maryland Board of Regents. The appointment, made by Maryland Governor Martin O'Malley, was recently confirmed by the Maryland Senate.



Rauch is a principal with the civil engineering and construction management firm Robert D. Rauch & Associates, Inc., of Easton, Md. His sons, Casey and Dustin, both engineers from the University of Maryland, are associates at the firm.

After earning his B.S. in civil engineering from the University of Maryland in 1973, Rauch began his career with the Maryland Department of Natural Resources. In 1978, he became the state's youngest county engineer, serving for six years as director of public works and Talbot County engineer before his move to the private sector in 1984.

Stanley Zupnik, who received his bachelor's degree in civil engineering in 1959 and is founder of Majestic Builders of Chevy Chase, recently made a \$500,000 pledge to the A. James Clark School of Engineering Dean's Fund. In recognition of this generous gift, the Clark School will name the large lecture hall in the Jeong H. Kim Engineering Building Stanley Zupnik Hall. Zupnik, a real estate developer, also produced several films including the critically acclaimed "Glengarry Glen Ross."

With Zupnik's gift, the University of Maryland's Great Expectations Campaign exceeded its \$1 billion goal.

Giving Back

Successful Alum Supports Engineers Without Borders

Marvin F. Weissberg's success is beyond measure. As is his willingness to help others.

The young man who once was a door-to-door salesman, making a dollar any way he could, is today the founder and chairman of the board of Weissberg Corp. The company is one of Washington, D.C.'s major commercial real estate development companies.

Yet, he remembers what it is like to be in need. "I grew up in a family of five during the Great Depression and times were hard," he says. And he is well aware of those who are in need today. His philosophy is, "If you can make a difference in someone's life, why not?"

He is strong believer in civic participation, dedicating both his time and financial resources to the nonprofit sector. Proof of this is the Weissberg Foundation, a family foundation established to alleviate human suffering and broaden cultural understanding. "This foundation has been a great experience for not only my children, but their children," he says, eager to pass along the idea of giving back and helping others to his three children, their spouses, and his six grandchildren.

It is this way of thinking that makes Weissberg, who received his degree in civil engineering from the university in 1949, a great admirer of the university's Engineers Without Borders or EWB program. Recently, he set up an endowment for EWB and is providing scholarships to students involved with the university's program.

EWB is a nonprofit organization that partners with disadvantaged communities here and abroad to improve their quality of life through implementation of environmentally and economically sustainable engineering projects, while developing internationally responsible engineering students.

Not long ago, Weissberg and his son-in-law, Stuart Martin, were asked to meet with students

and faculty involved in the university's EWB program. Both men admired the dedication that the students and faculty had for the EWB program.

The Weissberg Foundation has made grants to more than 200 nonprofit organizations in the Washington Metropolitan area as well as internationally. And, Weissberg was also on the initial Board of Directors of the National Democratic Institute for International Affairs. As such, he participated with task forces in new evolving democratic governments around the world. He traveled extensively to observe elections and promote civil education for democracy.

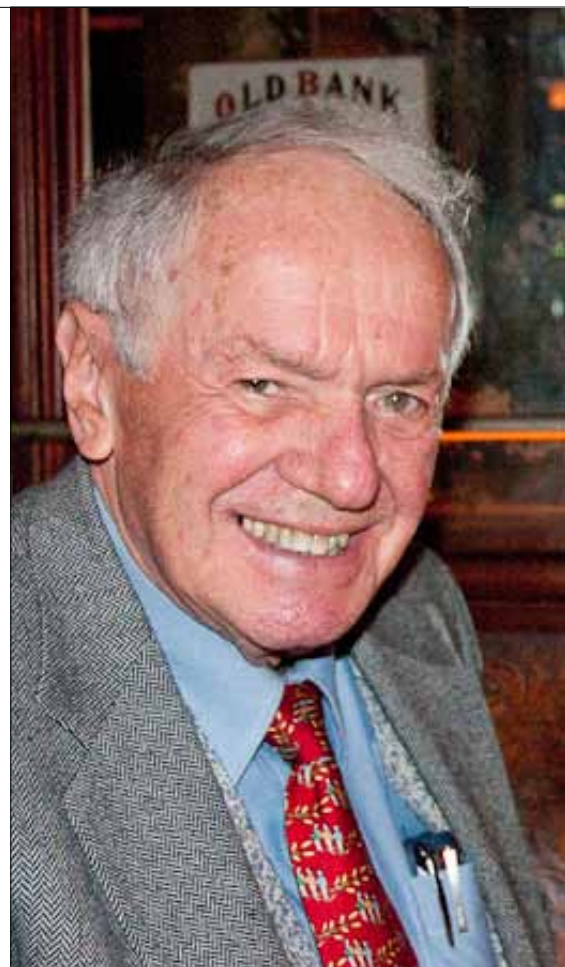
Weissberg has taken a long path from the boy born in South Bronx, the son of a tailor. "In my family we were raised to have great empathy for other people who were in need," he says. "It was just the way I grew up."

His parents moved to Washington, D.C., when he was in high school. After graduation, he attended the University of Maryland School of Engineering. He left school to join the army for two years, but returned after the war to complete his degree in engineering.

Trying to find himself, he hitchhiked south to Miami in search of a job as an engineer, but jobs were scarce. Instead, Weissberg took a job selling appliances door to door to earn a living. Times were hard and money did not come easily.

Eventually, Weissberg came back north and worked as an engineer for a period of time. He then started in the real estate business and soon went on to building small shopping centers, office buildings, apartment houses, hotels and mixed-use developments. Adding, "I was lucky to be in the right place at the right time." And he was determined to make the most of it.

Among his many projects, the one he holds most dear was the redevelopment of a 150-year-old building known as the Flour Mill in



Georgetown. This mixed-use development earned an award for the Achievement of Excellence in Historic Preservation from the American Institute of Architects.

When he talks about EWB, you can hear the excitement in his voice. "It does my heart good to see young people standing up and saying I want to do something good for the world," he says. And by establishing an endowment and scholarships for the EWB program at the university, Weissberg is doing something good as well.

As is his way.



STUDENT PROFILE (cont. from page 7)

healthy and empowered adults,” he explains. Adding, “There is also Surf ‘Voluntourism’ programs that engage travelers and transform their views of the world and themselves.” WAVES traveled to Lobitos, Peru, this past winter to help construct a community education center.

Despite his many outside activities, Fries has remained busy in many other ways. He has worked as an intern for Trident Engineering

Association in Annapolis, worked for ECS Mid-Atlantic, LLC, in Frederick, Md., as an engineering technician; conducted independent research with a professor on the calibration of curve numbers widely used in hydrologic design; and worked through the Keystone Center tutoring students taking Mechanics I and II

Now that he has graduated, he plans to acquire his Ph.D. in environmental engineering.

“The world is changing and there is so much that needs to be done in the developing world,” he says. “I have seen it myself.”

And worked to do something about it. The little boy in Bolivia has grown into a dedicated engineer.

A University Connection

*CEE Staff Member Brings Extensive Knowledge
and Experience of University to Job*

By the time Angela Bobich had joined CEE November of last year as director of administrative services, “I had grown to really enjoy working in higher education,” she says. “I was surrendered by people who were bettering themselves and their lives.”

Bobich received her bachelor of science in mathematics degree at the University of Maryland in 1994 and would go on to receive her master of public management, specialization – social policy and higher education through the university’s School of Public Policy in 2000. She has worked at a variety of positions at the university.

“I’ve had this benefit of having all these different experiences,” she says.

Through her work with CEE, “I’m responsible for the business operations of the department,” says Bobich, “from financials, to personnel, to facilities.”

It has been a rather long path to her current position. But Bobich is one that favors a challenge, as her job experience shows.

“I’ve always enjoyed expanding my own knowledge in different areas of work – understanding how and why things are done as they are,” she says.

Shortly after she received her bachelor’s degree, Bobich started her career in higher education at the Math Center at Montgomery College in Rockville, Md., as an instructional associate. She was there for a little over two years, and then decided to pursue her master’s degree.

While pursuing her master’s degree, Bobich came to work at the university as a graduate assistant in research and marketing for the Office of Undergraduate Admissions. Bobich had found her place, and it was at the University of Maryland.

As she weighed her career options at the end of her graduate program, the director of Career Services in her program passed her a job announcement for a position on the campus within the Office of Institutional Research. This seemed like a great opportunity to combine her analytical and numeric skill sets with a desire to help influence decision-making processes within higher education settings. She stayed with the Office of Institutional Research and Planning for six years and serving as a senior research policy analyst and research analyst. During this time she was an elected board member of the Southern Association of Institutional Researchers from 2007 to 2009. In this role she developed training and professional development opportunities for higher education professionals in the areas of institution research, planning, accreditation and assessment. She also planned and executed all aspects of 22 training workshops at two separate annual conferences.

“I can’t say that I expected to be at the university this long,” says Bobich. “But here I am and with no regrets.”

Her main work experience would later come from her years with the university’s Office of the Senior Vice President and Provost. In that role she would take on many positions and responsibilities.

“I learned as much as I could while I was there,” she says.

Bobich certainly did. Before her current job with CEE, she ended her career in the Provost Office as director of decision support and analysis. Her last position found her providing analytical and planning expertise in support of administrative, financial and program development activities. “I always enjoyed the work I did,” she says. “But I also was interested in learning new things and experiencing new projects.”



“I’ve not been in an academic department before,” she says, “So, I really enjoy meeting new people and working with the faculty and students and learning about the research that takes place within the department.”

And while her work at CEE keeps her busy, she chuckles when she talks about her “other job.” The one at home. She is the mother of a two-year-old daughter named Claire. “I keep busy chasing after her,” she says.

Bobich and her husband also enjoy wine tasting, “So it’s good we live in Virginia, in wine country,” she says.

STAFF PROFILE (cont. on page 14)

Symposium Announcement

Sponsors	Infrastructure & Community Resilience: Natural & Human-Caused Disasters	<div style="border: 1px solid black; border-radius: 50%; padding: 10px; text-align: center;"> April 11, 2013 Marriott Inn & Conference Center, University of Maryland University College, MD </div>
   	About the Symposium	
Supporting Organizations	Background	
   	<p>Recent storms, such as Sandy in 2012, resulted in severe damage to many Atlantic coastal areas including flooding of homes, tunnels, key transportation systems, and shutdowns of critical elements of the power and other critical infrastructure systems with resultant interruption in commerce and daily life. According to the National Research Council, disaster resilience is a shared responsibility among citizens, the private sector, and government. Increasing resilience to disasters requires bold decisions and actions that may pit short-term interests against longer-term goals. The states of Maryland, Delaware and Virginia and the District of Columbia share similar challenges and must work together to develop a regional approach to improving regional community resilience.</p>	
Objectives	<p>The objective of this symposium is to present trends and needs relating to resilience in order to (1) enhance regional resilience through multi-state collaboration and to achieve Maryland Governor O'Malley's vision of one Maryland, prepared and secured, (2) build system resilience including infrastructure and communities, (3) develop risk management strategies including risk identification and assessment, (4) develop public-private surge in capacity for response, and (5) develop a plan to move forward in the tri-state region with resilience development efforts. The symposium focuses on the tri-state region as a case study using lessons learned from other mid-Atlantic areas such as ones impacted by Storm Sandy. The Federal government, the states and their land grant universities are working together to achieve these objectives.</p>	
Discussion Topics	<ul style="list-style-type: none"> • Lessons learned from Sandy • Forecasting future storms and sea level rise • Measuring progress in achieving resilience • Risk management methods • Building capacities and their surge plans • Potential solution tracks • Research needs and directions 	Contacts for Additional Information Professor Bilal M. Ayyub ♦ ba@umd.edu ♦ (301) 405-1956 Department of Civil & Environmental Engineering Professor Gerry Galloway ♦ gegallo@umd.edu ♦ (301) 405-1341 University of Maryland Professor Ali Haghani ♦ haghani@umd.edu ♦ (301) 405-1963 College Park, MD 20742

With organizations such as NIST, NSF and FEMA also participating, the symposium addressed such issues as defining resilience, coordination and support needs, research needs and community resilience needs. Discussion topics included lessons learned from Sandy, forecasting futures storms and sea level rise, measuring programs in achieving resilience, risk management methods, building capacities and their surge plans, potential solution tracks and research needs and directions.

The objective of the symposium was to present trends and needs relating to resilience in order to:

- 1) enhance regional resilience through multi-state collaboration and to achieve, for example, the Maryland's governor's vision of one Maryland, prepared and secured;
- 2) build system resilience including infrastructure and communities;
- 3) develop risk management strategies including risk identification and assessment;
- 4) develop public-private surge in capacity for response; and
- 5) develop a plan to move forward in the tri-state region and D.C. with resilience development efforts.

Presentations were made on sea level rise and flood risk; power distribution resilience, nuclear power generation resilience; transportation resilience and cyber resilience, just to name a few.

"The ability of communities to recover from such disastrous events is reflected in the resilience that they have been able to build within their communities," says Ayyub.

Symposium participants represented the federal, state and local governments from Delaware, Maryland, Virginia and the District of Columbia as well as the National Academy of Engineering and business and universities with interests and expertise in infrastructure and community.

In other words, "The time to prepare ourselves is now," says Galloway.

STAFF PROFILE (cont. from page 13)



On a sunny weekend day, the family enjoys hiking and enjoying time together.

And while she enjoys days away from the office, she is also enjoys days in the office. "I find myself learning something new every day," she says. "It keeps my job interesting. It keeps it fresh."

Making an Impact: First-Time Teacher of Fundamentals of Engineering Fluids Inspires Students



This past spring Barton Forman, the Deborah J. Goodings Professor in Engineering for Global Sustainability, taught ENCE 305- Fundamentals of Engineering Fluids for the first time. And as such, taught undergraduates for the first time.

According to student Ryan McCullough, both Forman and the class were a success. "I knew this was going to be a challenging class. But it turned out to be the best class I've ever taken," says McCullough, who is majoring in civil engineering on a structural track.

"ENCE 305 - Fundamentals of Engineering Fluids examines the theoretical bases for fluid statics and dynamics, including the conservation of mass, energy and momentum," explains Forman. "Modeling of hydraulic systems are introduced. Pipe flow and open-channel hydraulics are emphasized with applications to real-world problems."

The rationale for this course is to gain fundamental knowledge of compressible and incompressible fluids; understand fluid properties, dimensions and units; learn the fundamental laws of mechanics as applied to fluids; understand the

limitations of theoretical analysis and the determination of both correction factors and friction factors; and apply the relevant theory to problem solving exercises.

"My goal was for students to have a thorough understanding of what they were being taught," says Forman.

It was that approach that had the most impact on McCullough.

"I found this class so engaging," says McCullough. "Professor Forman explains everything so well. You were encouraged to ask questions in class and seek him out outside of class if you didn't understand something."

McCullough had such a positive experience that he plans to include engineering fluids in his professional work. "It was definitely a result of this class," he says.

As for Forman, he will continue to teach ENCE 305 and no doubt impact more students.

HELLO!

We'd Love To Hear From You!



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In your update, please be sure to include the following information:

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- DEGREE(S): GRADUATION YEAR(S)
- HOME ADDRESS: CITY: STATE: ZIP+4
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- EMPLOYER ADDRESS: CITY: STATE: ZIP+4
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- SHORT BIO ON LIFE AFTER GRADUATION FROM UMD

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