

## Alumni Registration & Updates

The Department of Civil and Environmental Engineering is always interested in how our alumni are doing. We hope you will take time to send your updates to [jmueller@lsu.edu](mailto:jmueller@lsu.edu) or, if you prefer, you can “snail mail” them to

**Department of Civil and Environmental Engineering  
Louisiana State University  
3418 Patrick Taylor Hall  
Baton Rouge, LA 70803-6405**

Please include basic information such as your full name, year of graduation, degree, mailing address, email address, telephone number, company, and your title/position. For your update, please include information on your recent professional and personal developments, along with a high-quality photo if available.



Connect with us on Facebook! Search for “LSU Department of Civil and Environmental Engineering” and click “like” for news and updates from the Department!

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## Message from the Chair



As another academic year comes to a close, it is with great pleasure that we bring to you the latest news of the Department. As evidenced by the highlights included in this edition of our newsletter, the Department of Civil and Environmental Engineering remains on a path of educational excellence while maintaining focus on continuous improvement of all of our programs. With the completion of the latest ABET accreditation process, our undergraduate programs continue to maintain accreditation. Also, with the recent release of the 2013 edition of U.S. News & World Report's "America's Best Graduate Schools" our civil engineering graduate program improved from 65 out of 111 programs in the 2012 report to 54 out of 106 programs in the 2013 report. As always, our goals in the department remain very ambitious as we continue our efforts to become internationally and nationally prominent, to maintain our excellence in education, and to continue on our track of developing and expanding research and scholarly activities.

On that note, I am delighted to finally report the approval of the new Master's degree in Coastal and Ecological Engineering at LSU by the Louisiana Board of Regents. This new program will be effective summer 2012 and we expect the first graduates of the program this fall. The initiative to establish this new program officially began in 2006 in response to the need for qualified coastal and ecological engineers within the consulting community and to conduct the research necessary to properly rebuild, protect and restore the Louisiana coast. Protection, restoration and rebuilding will require trained coastal and ecological engineers possessing coastal engi-

neering knowledge dealing with the river and delta sediments, coastal infrastructures, and this region's ecosystem. In addition, subsidence in the Mississippi delta region, loss of our wetlands, as well as coastal erosion have increased the need for such a program. Hurricanes Katrina and Rita, which reeked havoc on the Gulf Coast accelerated the commitment of the department to developing this program and a team of faculty and dedicated alum have worked diligently for the approval of this new degree program.

Also, at our annual CEE Hall of Distinction Banquet, we proudly welcomed two new members: Dr. Rodolfo J. Aguilar and Lloyd Guillory. Dr. Aguilar, who has earned five degrees including a BS in Architecture and an MS in Civil Engineering both from LSU, is the Chairman and CEO of Pyburn & Odom MCE, LLC. Guillory, who received his BS in Civil Engineering from LSU, is a Project Director of Gulf of Mexico projects for ExxonMobil. He is also a long-standing member of the CEE External Advisory Board. Both gentlemen are excellent additions, bringing the total number to twenty-seven distinguished members since 2001 when it was first initiated.

In closing, I would also like to congratulate our undergraduate students for their superb participation in recent competitions. The ASCE student chapter's steel bridge team placed 1st at the Deep South Regional Competition, earning them a spot at nationals. At the WERC International Design Competition, the environmental engineering students won the Freeport McMoran Innovation in Sustainability Award. They have all represented the department very well.



### ASCE Students Participate in Deep South Regional Conference

This year's American Society of Civil Engineering (ASCE) Deep South Regional Conference was hosted March 29-31 by the University of Tennessee at Martin, located in Martin, TN. The LSU ASCE Student Chapter participated in the Concrete Canoe, Steel Bridge, and Mead Paper competitions.

The LSU Steel Bridge team members include David Ziegler, Adam Milling, Mark Genre, Jacob Trowbridge, Kenny Lirette Jr., Chris Sciortino, Morgan Hidalgo, Ian Bizette. Due to the success of earning 1st place at regionals, the team will be competing in the National competition that will take place on May 25th and 26th at Clemson University, located in Clemson, SC. Sincere thanks to the following sponsors: LSU Department of Civil and Environmental Engineering, Toledo Exploration Company, ILSI Engineering, Walter K. Rainbolt Jr., Sigma Consulting Group, INC., Curtis Engineering Associates LTD., M&E Consulting, Forte and Tablada, Sigma Engineers and Construction, CSRS INC., Burk-Kleinpeter, Inc. and Julien Engineering & Consulting, Inc. Also, special thanks to David Robertson and Kirby Hebert.

The LSU Concrete Canoe team consisted of Joe Ory, Clay Spencer, Javier Sanchez, Kristina Galindo (team co-captain), Samantha Huffman, and Lesley Cates (team co-captain). Though the team did not place overall, they did place third in the design paper and second in the women's endurance race. The team would like to thank sponsors: Forte & Tablada, Ardaman & Associates, Inc., CSRS, Gulf Engineering & Consultants (GEC), Terracon, Duplantis Design Group, PC (DDG), ETEC, Fugro, Acadian Engineers Inc., Resource Consulting and Engensus Engineering and Consulting.

Both teams would also like to thank the Department of Civil and Environmental Engineering for their support, along with faculty advisor Dr. Ayman Okeil and CEE staff member Dave Robertson for making their participation in the regional competition possible.

For more information about the LSU ASCE Student Chapter, please visit them online at <http://lsuasce.weebly.com>.



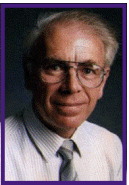
established in 2009 by the Journals Division of ASCE to recognize the altruistic contributions of dedicated reviewers.



### **Drs. Abu-Farsakh and Zhang Receive Funding**

Drs. Murad Abu-Farsakh and Guoping Zhang, faculty in the

LSU Department of Civil and Environmental Engineering, have received approximately \$300K in funding from the Board of Regents (BOR) for a research project titled "An Integrated Computational and Experimental Study of Driven Pile Setup in Soft Clays" The main objective of this research project is to develop, via advanced laboratory testing, field instrumentation and testing, and finite element numerical modeling, a fundamental understanding of the physical and scientific mechanisms underlying the increase in pile capacity with time (or pile setup) phenomenon. Support and financial commitment for this project are from Cajun Deep Foundations, LLC, Boh Bros. Construction Co., LLC, the Pile Driving Contractors Association Gulf Coast Chapter, Eustis Engineering Services, LLC, the Louisiana Transportation Research Center (LTRC) and the Louisiana Department of Transportation and Development (DOTD).



### **Dr. John Metcalf Receives Roads Australia Award for Technical Excellence**

Dr. John Metcalf, LSU CEE Professor Emeritus, recently received the Roads

Australia Award for Technical Excellence. As a world-leading expert on soil stabilization and one of the Australian pioneers and champions of low-cost roads and statistical quality control in both materials testing and road construction, Dr. Metcalf has received this award in recognition of his contributions to road research. His international awards include the first PIARC medal in 1991, and the James L Todd medal of the Louisiana Engineering Society in 2006.



### **Dr. Dean Adrian Recognized for 25 Years**

Congratulations to Dr. Donald Dean Adrian, Professor in CEE, who has been recognized for achieving twenty-five years of service at LSU.



### **Dr. Michele Barbato Receives TAF Award**

Dr. Michele Barbato was awarded a 2012 Tiger Athletic Foundation (TAF) Undergraduate Teaching Award. The TAF Undergraduate Teaching Award, a one-time, \$1,000 honor, recognizes up to four full-time faculty members annually for extraordinary classroom teaching. In choosing award recipients, TAF considers nominees' impact on and involvement with students, contributions to the profession of teaching, and a focus on scholarship in teaching and learning. The award was presented to Dr. Barbato at the annual LSU Distinguished Faculty Awards Reception, which was held on May 1, 2012, at the Lod Cook Alumni Center.



### **Promotion and Tenure**

Dr. Mostafa Elseifi was recently promoted to Associate Professor with Tenure. Drs. Q. Jim and Clinton Willson were promoted to Full Professor status.



### **CEE Faculty Award Recipients**

Congratulations to

the awardees of the 2012 Department Faculty Awards who were recognized at the annual CEE banquet, held in April. Dr. Ayman Okeil, associate professor, was selected for the 2012 Faculty Achievement Award in recognition of his outstanding contribution to not only teaching but also for his excellent leadership as advisor for the LSU ASCE Student Chapter and his overall service to the department. For her diligent work at providing a high quality educational experience for undergraduate students enrolled in foundational engineering courses at LSU Kerry Reed, adjunct instructor, was awarded the 2012 Departmental Educational Achievement Award. Dr. George Z. Voyiadjis, Department Chair, was recognized for his outstanding contributions and tireless commitment which has resulted in the highest levels of achievement for the Department as a whole.



### Dr. George Voyiadjis Receives Khan International Award

Dr. George Z. Voyiadjis (Boyd Professor, Chair and Bingham C. Stewart Distinguished Professor of Engineering in the Department of Civil and Environmental Engineering) has been awarded the Khan International Award for outstanding contributions to the field of plasticity over a period of twenty years (1991-2011), especially to the areas of multi-scale modeling and inelastic localization. This award was presented to Voyiadjis at the 18th International Symposium on Plasticity and Its Current Applications, held at The Rio Mar Resort in San Juan, USA January 3-8, 2012. Voyiadjis is pictured far right, with the other medal recipients from the last seven years.



### Dr. Clinton Willson Receives Award from the LA Engineering Foundation

Dr. Clinton Willson was awarded a 2012 Louisiana Engineering Foundation Engineering Faculty Professionalism Award as the LSU recipient. The objectives of the Engineering Faculty Professionalism Award are to bring to the attention of all faculty those members who are licensed professional engineers at their university; to present registration in a positive light which should encourage faculty to work toward licensure and professionalism; and to benefit the students and the profession with the promotion of professionalism in the universities. Of the other three recipients, Dr. Kenneth McManis (LSU CEE alum and Hall of Distinction member) also received the award. Recipients were presented with their award plaques at the 16th LA Joint Engineering Societies Honors and Awards banquet in January 2012.



### Dr. Louay Mohammad Receives and Team Win Poster Contest at TRB

At the Transportation Research Board's (TRB) 91st annual meeting in Washington, D.C. winners of the asphalt poster contests were awarded a special Asphalt Institute prize. For several years, the Asphalt Materials Section committees have sponsored sessions that have been combined into one large poster session. This combined session serves as an excellent opportunity for asphalt technologists to come together in a single location at an otherwise busy TRB meeting to review the latest research concerning the asphalt industry. This year to address the large quantity of submitted papers, there were two combined poster sessions. The winner from the first half of the poster session, and the overall runner-up, was entitled "Use of Sweep Test for Emulsion and Hot-Asphalt Chip Seals: Laboratory and Field Evaluation" by Nazimuddin Wasiuddin, Amanda Marshall, Nibert Saltibus, Aziz Saber (all from Louisiana Tech University), Chris Abadie (Louisiana Department of Transportation and Development) and Louay Mohammad (Louisiana State University.)



### Dr. Guoping Zhang Awarded Grant from LSU BP Gulf Research Initiative

Dr. Guoping Zhang (Co-PI), with Drs. Gary King (PI) and Mark Hester (Co-PI), was awarded an \$800k grant from the LSU BP Gulf Research Initiative to conduct a multidisciplinary analysis of linkages among wetland vegetation, rhizosphere microbial communities and soil stability in response to oiling. Zhang's role in this collaborative effort focuses on both in-situ and ex-situ characterization of saltmarsh soil strength and stability and on the formulation of a physics/mechanics-based soil stability model.



### Dr. Michele Barbato Awarded 2011 Outstanding Reviewer Award

Dr. Michele Barbato was awarded the 2011 Outstanding Reviewer Award for the ASCE Journal of Structural Engineering. This award is given annually to reviewers selected by the ASCE journals' editors for their exemplary contributions to voluntary peer review. The Outstanding Reviewer Award was es-

### EVEG Students Have Success at the WERC International Environmental Design Competition

We are pleased to report that the LSU Environmental Engineering (EVEG) students had a very successful participation in the 2012 WERC Design Contest in New Mexico this year. LSU students won one of the big awards at the competition, the Freeport McMoran Innovation in Sustainability award. The award came with a \$2500 cash prize. The students were able to take a smaller version of the trophy home to LSU (large trophy pictured). The group also won a second place task award with a \$1000 cash prize. The "aquaponics" team that won the awards included Sarah Simmons, Brian McCormick, Matt Rodrigue, Jacob Zeairs, Tori Ocmand and Jena Milliner. The two other LSU teams also did extremely well even though they didn't place in the tasks. The judges were full of praise for all three teams. Com-

petitors included Duke University, UC-Riverside, Utah State, New Mexico, U. of Arkansas, Harvey Mudd College (California), Rose Hulman Inst of Technology, Northern Arizona, Idaho, Montana Tech, Ohio U., and Roger Williams (Rhode Island). CEE faculty members Drs. W. David Constant, Ron Malone and John Pardue worked with the teams this year.



### CEE Grad Student Stuart Adams Merges Engineering With Entrepreneurism

Stuart Adams, PhD student in the Department of Civil and Environmental Engineering at LSU, has demonstrated the

ingenuity of a well-rounded engineer through his multiple product concepts and business acumen. One such concept and winner of the 2009 Mississippi Technical Alliance Business Plan Competition's Student Division is the "Hurricane", a hurricane-shaped, cinnamon-sugar, pull-a-part pastry with an "EYEcing" dessert sauce placed in its center. The "Hurricane" was inspired by both Adams's dissertation research, which involves mitigation and analysis techniques of hurricane-structure interaction; as well as an opportune king cake purchase. An integral part of the "Hurricane" concept is hurricane awareness as a hurricane tracking chart with a checklist of necessities is incorporated into the packaging and used to educate consumers on hurricane preparedness.

Along with business partner, LSU MBA student Lexi DeBrook, Adams plans to launch a Kickstarter campaign in late May to begin selling custom, hurricane-themed bakeware (pans, cookie cutters, pancake molds, etc.). Adams designed many of these items using SolidWorks and prototyped the bakeware using LSU's CxC Engineering Communications Stu-

dio's 3D printer. Sweet and savory "Hurricanes" should be available for purchase at grocery stores throughout Louisiana and Mississippi in late August.

Other successful product concepts of Adams include Relevent.me, the winner of the inaugural Louisiana StartUp Weekend Competition held at LSU in April of 2011; the TempTuner, which Adams took to the finals of an international invention competition in 2011; and Scoringo, a finalist in the 2012 StartupBus Competition at South By Southwest (SXSW) and winner of the 2012 LSU MBAA Pitch Contest. Adams ideated each of these concepts, recruited team members for Relevent.me and Scoringo and helped orchestrate the success as the team leader. Adams' knack for entrepreneurial endeavors was particularly evident in the 2012 StartupBus competition as Adams was one of just 30 entrepreneurs selected to represent Louisiana in the prestigious competition.

Adams attributes much of his success to the skills he has learned as a CEE student at LSU and as a former CEE student organizations officer. Problem solving and technical writing skills have helped Adams advance in business plan competitions, secure two United States trademarks and file multiple provisional patents. Additionally, the ability to articulate complex concepts has aided in winning several competitions and helped secure investment opportunities for Adams's concepts.

### Coastal and Ecological Engineering Master's Program Approved by the LA Board of Regents

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It is great pleasure that we announce that the M.S. in Coastal and Ecological Engineering graduate program has been approved by the LA Board of Regents, effective summer 2012. The first set of graduates from the program are expected for fall 2012 commencement.

This program, jointly administered by the Department of Oceanography and Coastal Sciences, was initiated in 2006. A dedicated team of faculty, alum and CEE External Advisory Board members have worked diligently since then to push for the program's approval.

This program came as a response to the need for qualified coastal and ecological engineers within the consulting community and to conduct the research necessary to properly rebuild, protect and restore the Louisiana coast. Protection, restoration and rebuilding will require trained coastal and ecological engi-

neers possessing coastal engineering knowledge dealing with the river and delta sediments, coastal infrastructures, and this region's ecosystem. In addition, subsidence in the Mississippi delta region, loss of our wetlands, as well as coastal erosion have increased the need for such a program. With fairly natural disasters such as hurricanes Katrina and Rita, which reeked havoc on the Gulf Coast, the need for a program such as this was accelerated.

The curriculum requires twenty-four hours of coursework for the degree. Also, a list of mandatory preparatory courses have been established to accommodate students enrolling in the program without degrees in engineering. For up-to-date information about the implementation of this new program and the coursework requirements, please continue to visit the CEE website ([www.cee.lsu.edu](http://www.cee.lsu.edu)) as more information will be posted there in the next couple of months.



### BR Branch of ASCE Hosts Networking Event

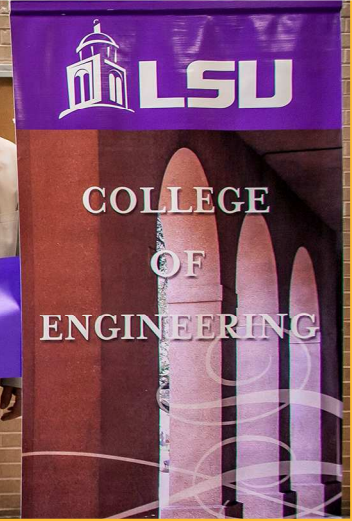
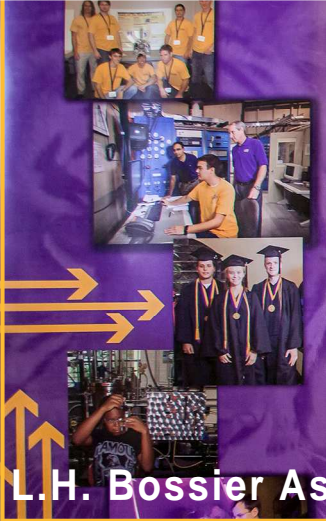
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In April, 2012, The Baton Rouge Branch of the American Society of Civil Engineers hosted a networking and career counseling event for civil and environmental engineering students from Louisiana State University and Southern University. The event, held in the Frank J. Germano Center in the LSU Department of Civil and Environmental Engineering, was attended by almost fifty students from both universities. Participating companies included: ABMB, CSRS, Engensus, Ford Bacon & Davis, Fenstermaker, GSA, HNTB, and Fugro.

At this event, students were provided the opportunity to network with professionals in their field and to learn about internships, summer jobs and even full

time employment opportunities that may be currently or soon available with the event participants. Donations received from participating companies went towards each student chapter's ASCE program to help fund activities such as the concrete canoe competition, steel bridge competition, and other events that provide students with team building, leadership skills and civil engineering design. The proceeds totaled \$1,600 and were split according to the number of participants from each student chapter.

A special thanks to the BR Branch of the ASCE for organizing this event and to all participating companies and students.



## L.H. Bossier Asphalt Lab Dedication Ceremony

A dedication ceremony was held on May 16 to unveil the new L.H. Bossier Asphalt Laboratory, housed in the LSU Department of Civil and Environmental Engineering. This laboratory, located in Patrick Taylor Hall, will be used for undergraduate and graduate classroom demonstrations and laboratory classes. Courses to be taught in this lab include CE3700 (Engineering Materials Lab), CE4650 (Intro to Asphalt Mixture Design) and CE4670 (Fundamentals of Pavement Design). When not occupied for classes, the lab will be used for student and faculty research involving the composition and qualities of different types of asphalt, and ways to improve its installation, function and longevity.



### ◀ Bryan Bossier, President and CEO of Diamond B. Construction Co.

Bossier holds a B.S. in Business from LSU. His father, Leonard H. "L.H." Bossier, was born and raised in Baton Rouge. Following L.H.'s military service, he obtained a B.S. in Mechanical Engineering from LSU in 1950, and was only a few credit hours shy of a Civil Engineering degree. After graduating, L.H. began working building roads. He became an entrepreneur in 1952, ultimately launching several businesses including Diamond B. Construction, an asphalt pavement enterprise. Bossier's concentration has been in asphalt work throughout Louisiana, as well as Texas and Mississippi.

### Dr. George Z. Voyiadjis, Chair of CEE ▶

"Civil engineers design roads, bridges and highways, our infrastructures," said George Z. Voyiadjis, Boyd Professor, Chair and Bingham C. Stewart Distinguished Professor of Engineering, LSU Department of Civil and Environmental Engineering. "This lab will provide our students with cutting edge technology and instruction so they can help to design roads which cost less, ride smoother and last longer. We are profoundly grateful to Bryan Bossier and Diamond B Construction for providing this extraordinary lab for use by our students and faculty. We also commend Bryan and his dad and their company for their efforts to provide better roadways throughout Louisiana."





### Dr. Clinton Willson Appointed President of ASCE BR Branch



The Department of Civil and Environmental Engineering would like to congratulate Dr. Clinton Willson on his recent appointment as President of the Baton Rouge Branch of the American Society of Civil Engineers. As a longtime and active member of ASCE, Willson has served on the ASCE BR Branch Board of Directors since 2006. He served as a Director, Secretary-Treasurer, Vice President, and then President-Elect prior to his recent appointment as President.

Pictured are a large majority of the board. From left to right: Jennifer Richmond, Danielle Welborn, Steve Gunter, Clint Willson, back row: Rudy Simoneaux, Sam Amoroso, Kirk Lowery and Adam Smith. When asked about major goals for his term, Willson stated that building upon the recently released Louisiana Infrastructure Report Card by educating the public and our policy makers on the value of civil infrastructure in our daily lives was at the top of his list. A number of ASCE BR Branch members played a large role in this Section activity. “We owe it to all of them and to the public to ensure that the results and messages are as widely disseminated as possible” said Willson, who is also turning his focus to ensuring that current and future civil engineers have the skills and tools to meet the challenges imposed by our critical and, in all too many cases, aging infrastructure. Willson also aims to spotlight the 50th Anniversary of the ASCE Baton Rouge Branch, increase the ASCE and Branch presence through outreach and educational activities, and provide a technically relevant and strong 2012 Louisiana Section Spring Conference (to be held in Baton Rouge, May 10-11).

### LSU and UNO Receive Federal Transportation Grant

The Gulf Coast Center for Evacuation and Transportation Resiliency, housed in the Department of Civil and Environmental Engineering (CEE), was recently awarded an extension of its sponsorship from the U.S. Department of Transportation. This Center has been led by CEE Professor Dr. Brian Wolshon since 2008 and who is now supported by Katherine Spansel, the Center’s Technical and Outreach Program Manager, who recently returned from LSU after working for firms in Arizona and California. Beginning in 2012, the Center grew to become a member of the Southwest University Transportation Center, built from a consortium of universities led by Texas A&M University. The consortium also includes UNO, Texas Southern and the University of Texas at Austin and will now be part of 22 University Transportation Centers across the country that will address critical transportation challenges facing the nation. The department is excited to partner with Texas A&M, their Texas Transportation Institute (TTI), and these other institutions to create a winning team for future federal grants.

LSU’s \$1,000,000 annual operating budget will support projects by LSU CEE faculty and students as well as many more from the University of New Orleans who are working to find solutions to a wide range of challenges that directly impact Louisiana communities and affect the efficiency of the nation’s transportation system. Additional co-funded projects are also being developed in collaboration with the Louisiana Department of Transportation and Development and the results of this work will be shared with the national transportation community to encourage greater progress through collaboration.

For the latest news and more information about the Gulf Coast Center for Evacuation and Transportation Resiliency, visit <http://www.evaccenter.lsu.edu/>





Clayton Award Recipients: Undergrads on top step (l-to-r) Sartin, Farlow, and Bordelon and grad students on bottom step (l-to-r) Parr and Scherr

### Josh Sartin (BCE) and Scott Parr (PCE) Receive Clayton Awards

The Department of Civil and Environmental Engineering would like to congratulate Josh Sartin, undergraduate student in civil engineering, who is a recipient of the 2011-2012 award. Also, PhD civil engineering student Scott Parr received a 2011-2012 Clayton Engineering Excellence Award for Outstanding Graduate Student.

Established through an endowment by 1959 LSU graduates Donald W. and Gloria Pichon Clayton, the Donald W. Clayton Engineering Excellence Award for Outstanding Undergraduate Students recognizes the “Outstanding undergraduate students in engineering who have demonstrated exemplary character, scholarly accomplishment, leadership and have served as a good role model and ambassador for the College of Engineering. The Clayton Engineering Excellence Award for Outstanding Graduate Student is granted each year to an outstanding graduate student (s) who exhibits extraordinary character, scholastic achievement and evident leadership in the College of Engineering.

### Danial Faghihi Shahresta (PCE) Receives the Dissertation Year Fellowship

Congratulations to Danial Faghihi Shahresta, a graduate student in the Department of Civil and Environmental Engineering, who has been selected for a prestigious Graduate School Dissertation Year Fellowship for the academic year 2012-2013. Faghihi’s research topic is “Continuum and Crystal Stain Gradient Plasticity with Energetic and Dissipative Length Scales.”

### Jaworski Sartin (PCE) Receives BD Fellowship

Congratulations to Jaworski Sartin, a Department of Civil and Environmental Engineering doctoral student specializing in the area of transportation systems engineering. Sartin was awarded a BD Fellowship through the “Bridge to the Doctorate” project at Louisiana State University. This LSU/BD award is made possible through the Louis Stokes – Louisiana Alliance for Minority Participation (LS-LAMP) funded by the National Science Foundation. The LS-LAMP BD Fellowship encourages students from underrepresented groups to pursue Ph.D. degrees in Science, Technology, Engineering and Mathematics (STEM) disciplines at LSU.

### Students Receive William A. Wintze Jr. Memorial Scholarship

Two LSU civil engineering undergraduate students, Mary Bratton and Matthew Stewart, have each been awarded the \$1,000 William A. Wintze, Jr. Memorial Scholarship from the Baton Rouge Chapter of the Louisiana Engineering Society. The scholarship was established to honor deserving undergraduate engineering students at LSU and Southern University. Bratton and Stewart were presented with the award at the LES’s Engineer’s Week Banquet held in February.

### Sam Cooper III and Meisam Akbarzadeh (PCE) Receive Scholarships

The LSU Gulf Coast Center for Evacuation and Transportation Resiliency (<http://www.evaccenter.lsu.edu/>) recently awarded two scholarships to students pursuing doctoral degrees in transportation related fields. The students receiving the awards are Samuel Cooper III and Meisam Akbarzadeh, both PhD students in the Department of Civil and Environmental Engineering. Cooper is studying sustainable pavement materials under the direction of Dr. Louay Mohammad and Akbarzadeh is studying travel demand modeling mass evacuation scenarios under the direction of Dr. Chester Wilmot. The scholarships will be used to support their travel to the 91st Annual Meeting of the Transportation Research Board in Washington, D.C.

### Scott Parr (PCE) Receives Student of the Year Award

Scott Parr, a PhD student in the Department of Civil and Environmental Engineering, received the 2011 Gulf Coast Center for Evacuation and Transportation Resiliency Student of the Year award. Scott was honored for his research involving the impacts of police traffic control during emergencies and planned special



Jessica Addison (iPcture courtesy of Office of Communications and University Relations events)

### Jessica Addison (BCE) Honored As Member of the 2012 Tiger Twelve Class

Jessica Addison, an undergraduate student in the civil engineering program, has been named one of this year's Tiger Twelve, which recognizes student leaders university-wide for their campus and community service. Addison serves as president of Tigers Against Trafficking and is involved with Leadership LSU, Trafficking Hope and Healing Place Church. Af-

ter graduation, Addison plans to become more involved with fighting human trafficking around the world along with pursuing a career as a licensed PE civil engineer.

### Undergraduate Scholarships Awarded by CEE

At the annual ASCE student chapter banquet, scholarships were presented to the following undergraduate students from the Department of Civil and Environmental Engineering:

- Adam Catanzaro (Chevron Texaco Scholarship in Civil Engineering)
- Sarah Cochrane (A.W. Nolan, Jr. Endowed Scholarship in Civil Engineering)
- Philip Goppelt (Chevron Texaco Scholarship in Civil Engineering)
- Laura Iverson (Erin Krielow Lahr Memorial Scholarship)
- Dustin Mayard (A.W. Nolan, Jr. Endowed Scholarship in Civil Engineering)
- Tobenna Ofordeme (Dr. Frank J. Germano Memorial Scholarship)
- James Parker (Frank P. Mineo Scholarship)
- Javier Sanchez (Dr. Frank J. Germano Memorial Scholarship)
- Matthew Stewart (Chevron Texaco Scholarship in Civil Engineering)
- Patrick Stiegman (Joseph W. Carmena, Sr. Memorial Scholarship)
- David Ziegler (Dr. Frank J. Germano Memorial Scholarship)
- Ariel Carmichael (Chevron Texaco Scholarship in Civil Engineering)

### Where are they now?

Dr. Jose Noe Martinez Guerrero, who received both his master's and PhD in civil engineering from Louisiana State University (LSU), is currently serving as Vice President for Property, Facilities and Business of the University System at the University of Guanajuato (Mexico).

After his graduate education at LSU, Dr. Guerrero returned to Mexico to serve as a professor and consultant of structural engineering. He served as the public city works director of his home town in Apaseo el Alto, Guanajuato and also as coordinator of the structural engineering program at the State University of Queretaro. During that time (2001) he

was awarded the ASTM and PLTA Industries Research Medal of Merit for the research he conducted while at LSU. Also, in 2002, during the celebration of the 200th anniversary of the city of Apaseo el Alto Dr. Guerrero was named as one of the most distinguish people by the city Major Martin Malagon (now State Secretary of the State of Guanajuato). Shortly after, Dr. Guerrero joined the faculty of the CE Department of the University of Guanajuato where he has since served as a full time professor of structural engineering along with an appointment as Vice Dean of the College of Engineering from fall of 2008 to spring of 2011. He now serves as the Vice President for Property, Facilities and Business of the University System.



### International Symposium Held In Honor of Boyd Professor George Z. Voyiadjis

In April 2012, Hanyang University in Seoul, Republic of Korea hosted an international symposium on Modeling Material Behavior at Multiple Scales to honor the seminal contributions of Boyd Professor George Z. Voyiadjis in microstructure plasticity and instability, on the occasion of his 65th birthday. The title of the symposium was "Modeling Material Behavior at Multiple Scales", and it consisted of presentations and discussions for two days. It was attended by researchers from USA, France, Belgium, Poland, Korea, China, Japan, India, Jordan and the United Arab Emirates, including university professors and researchers from national labs and industry. The technical papers associated with the presentations will be published in a special 2013 issue of the American Society of Mechanical Engineers, Journal of Engineering Materials and Technology.

Professor Voyiadjis, Boyd Professor at LSU and Chair of the Department of Civil and Environmental Engineering, is a world leader in plasticity and damage mechanics of metals, metal matrix composites, polymers and ceramics. His research has been performed on developing numerical models that aim at simulating the damage and dynamic failure response of advanced engineering materials and structures under high-speed impact loading conditions. This work will guide the development of design criteria and fabrication processes of high performance materials and structures under severe loading conditions. Emphasis is placed on survivability area that aims to develop and field a contingency armor that is thin and lightweight, but with a very high level of an over-pressure protection system that provides low penetration depths. The formation of cracks and voids in

the adiabatic shear bands, which are the precursors to fracture, are mainly investigated.

He is the recipient of the 2008 Nathan M. Newmark Medal of the American Society of Civil Engineers and the 2012 Khan International Medal for outstanding life-long Contribution to the field of Plasticity.

Professor Voyiadjis has also received numerous other awards and distinctions, including: editor of the Journal Nanomechanics and Micromechanics, American Society of Civil Engineers, recipient of the 2012 Associate Editor Award to the Journal of Engineering Mechanics, and the most cited author 2005-2008 by the International Journal of Solids and Structures. His professional and honorary society memberships include: Fellow of the American Academy of Mechanics, Associate Fellow of the American Institute of Aeronautics and Astronautics, Fellow of the American Society of Civil Engineers, Fellow of the American Society of Mechanical Engineers and a member of the American Society of Engineering Education.

He has over 240 referred journal articles and 17 books (10 as editor) to his credit. Over fifty graduate students (28 Ph. D.) completed their degrees under his direction. He has also supervised numerous postdoctoral associates. Voyiadjis has been extremely successful in securing more than \$15.0 million in research funds as a principal investigator from the National Science Foundation, the Department of Defense, the Air Force Office of Scientific Research, the Department of Transportation, and major companies such as IBM and Martin Marietta. He has been invited to give plenary presentations and keynote



2012

Lloyd Joseph Guillory, Jr., joined ExxonMobil in 1985 after receiving a Bachelor of Science in Civil Engineering from LSU and a Master of Science in Engineering from the University of Texas at Austin. His career includes over 27 years in upstream oil and gas development projects and production operations, both domestically and internationally. His experience includes leading broad, highly technical, multi-billion dollar projects ranging from offshore deep-water developments to on-shore oil & gas processing and liquefied natural gas (LNG) facilities. These global projects have been planned and executed in highly diverse government, cultural, socio-economic and environmental conditions including the North Sea, West Africa, Australia, Papua New Guinea and the Gulf of Mexico. The total value of projects managed exceeds \$15 billion.

From 1985 to 1995, Guillory held various management positions in New Orleans associated with ExxonMobil's development and production operations in the Gulf of Mexico. During this time, he evaluated and successfully identified novel, lower cost structural concepts which helped to enhance ExxonMobil's ability to develop smaller resources more economically in the Gulf of Mexico. In 1996, Guillory moved to Norway and led the \$1.3 billion technical development of ExxonMobil's first successful Floating, Production, Storage and Offloading (FPSO) facility in the North Sea. The technical, contracting and project management approaches utilized on this North Sea project formed the foundation for approaches used on other successful ExxonMobil FPSO projects in Nigeria and Angola.

After returning from Norway in 2000, Guillory served as lead executive on multiple projects including a \$3 billion subsea and pipeline development in Angola, a \$5 billion LNG facility in Papua New Guinea and a \$4B subsea development in 4500 ft of water in the Gulf of Mexico. Guillory is considered an expert within ExxonMobil in the areas of execution planning, construction management, fixed offshore structures and offshore installation, and from 2006 to 2008, he also held various management positions within ExxonMobil Development Company to build organizational capacity in these areas.

Most recently, Guillory led an unprecedented Gulf of Mexico industry initiative to develop a new, rapid response well containment system for improving the oil and gas industry's ability to respond to a subsea well control event. In this role, he led efforts to establish the Marine Well Containment Company, a not for profit, independent company that will own and maintain this new system for rapid response, and worked to attract membership from Gulf of Mexico oil and gas operators. He was responsible for ensuring key state and federal policy makers were kept informed of plans, progress and details of the system, including briefings with US Senators, US Congressmen and the National Commission on the Deepwater Horizon Oil Spill. This initiative played an important role in restoring confidence with regulators and government that led to the 2011 resumption of drilling operations in the Gulf of Mexico and which continues to have high government visibility and broad industry impact. Overviews of this initiative were presented by Guillory at The Energy Summit 2010 held at the LSU Center for Energy Studies, at the Center for Strategic and International Studies (CISC) in Washington DC, and at The Clean Gulf Deepwater Offshore Prevention and Response Conference in Orlando, Florida.

Guillory is currently a member of the LSU Civil and Environmental Engineering External Advisory Board, was a member of the Forever LSU fund raising campaign for the Department of Civil and Environmental Engineering, has personally funded an endowed professorship in the Department, is a Registered Engineer in the State of Louisiana and has published research in the Journal of Engineering Mechanics. Guillory previously managed ExxonMobil's engineering recruiting program at LSU and currently acts as the program's Executive Liaison. Under Guillory's leadership, ExxonMobil's LSU recruiting efforts have been responsible for ExxonMobil hiring over 150 LSU engineering graduates for full time employment.



### **Ara Arman Presented with Recognition Award**

At the annual CEE External

Advisory Board meeting, Dr. George Voyiadjis (Chair, CEE) and EAB board members presented Mr. Ara Arman with an award for his exemplary involvement with and support of the Department of Civil and Environmental Engineering External Advisory Board from 2001 until 2011. Mr. Ara Arman joined the Louisiana Department of Highways shortly after receiving his master's degree from the University of Texas, Austin in 1956. His involvement in and with CEE at LSU began in 1963 when he joined the university as an Assistant Professor. He was promoted to Associate Professor in 1967 and full Professor in 1970. He also served as the Assistant Director of the Division of Engineering Research from 1965-1976. In 1976 Mr. Arman became the Chairman of the Department of Civil Engineering and in 1980 he began an appointment as Associate Dean for Instruction and Undergraduate Studies, a position which he held for seven years. He effectively participated in the legislative establishment in 1986 of the Louisiana Transportation Research Center (LTRC), jointly sponsored by LSU and the Louisiana Department of Transportation and Development. Mr. Arman served as the founder and director of LTRC until 1989 when he retired from LSU. Mr. Arman's tireless dedication and contributions to CEE at LSU have not wavered.

### **Dr. Y. Hatipkarasulu Receives Outstanding Educator Award**

Dr. Yilmaz Hatipkarasulu, who received both his master's and PhD in civil engineering from Louisiana State University, was recently named as the Associated General Contractors of America (AGC) Education and Research Foundation's 2012 Outstanding Educator, a prestigious national recognition in construction discipline. As this year's recipient, Dr. Hatipkarasulu will be flown out to AGC's 93rd Annual Convention in Hawaii, where he will be presented with the official award. Dr. Hatipkarasulu is currently serving as an assistant professor and coordinator of the Construction Science and Management (CSM) Program at the University of Texas at San Antonio (UTSA).

### **Mark LeBlanc Sails in London Paralympics**

Mark LeBlanc, a 2008 graduate of the LSU civil engineering undergraduate program, will compete in the 2012 Paralympics (to be held in London) as part of the U.S. Disabled Sailing Team Alphasgraphics.

A third generation sailor, his passion sprung at a young age and he began competing at only 11 years old. Born with only one arm, LeBlanc has not allowed his disability to become an obstacle. He participated in the 2012 International Association for Disabled Sailing world competition in Florida where, as the top American to finish, he scored eighth overall in the single-handed 2.4 meter class. After enduring a rigorous and expensive training schedule that will take him all over the world, LeBlanc will journey to London to compete in the 2012 Paralympics.

### **Mark McConnell Appointed Deputy Executive Director-Chief Engineer of MDOT**

The Mississippi Department of Transportation (MDOT) has appointed Mark McConnell, who received his bachelor's degree in civil engineering from LSU in 1987, to the position of deputy executive director-chief engineer. McConnell, a 24-year employee of MDOT, will oversee highway and bridge construction projects as well as MDOT's maintenance program throughout Mississippi. He will also oversee MDOT's divisions and districts.

### **David Sauls Elected Chairman of GeoEngineers' Board of Directors**

David P. Sauls, LSU civil engineering alum, was recently elected to the position of Chairman of its Board of Directors of GeoEngineers. He earned an M.S. in civil engineering from the Massachusetts Institute of Technology and a B.S. in civil engineering from Louisiana State University. Sauls has 28 years of experience in geotechnical engineering, is licensed in 13 states and Saskatchewan, Canada and has received numerous awards for his technical achievements. He is a Principal Geotechnical Engineer and Business Unit Leader for GeoEngineers' Baton Rouge (LA) and Springfield (MO) offices. Sauls is based in Baton Rouge, where he provides designs for supporting infrastructure, develops new business and helps steer the company's future.

## CEE Honors Aguilar and Guillory

In April 2012, the Department of Civil and Environmental Engineering (CEE) held its annual Hall of Distinction Banquet at the Lod Cook Alumni Center to honor its latest inductees: Dr. Rodolfo J. Aguilar (2011) and Lloyd Guillory (2012). In addition to the inductees and their guests, also in attendance were current CEE Hall of Distinction members, members of the CEE External Advisory Board, CEE faculty and staff.

Including the two recent inductees, the CEE Hall of Distinction now includes twenty-seven members. Initiated in 2001, CEE created the Hall of Distinction to recognize individuals who have made stalwart contributions to the profession. Candidates are carefully selected based on distinguished professional achievement and service to Civil and Environmental Engineering. Inductees have made substantial impact in their field and to the Department of Civil and Environmental Engineering at LSU. In honoring these individuals, the Department intends through them to recognize all those who have contributed to engineering excellence.

Also recognized were recipients of the 2012 faculty awards. Dr. Ayman Okeil, associate professor, received a Faculty Achievement Award. Kerry Reed, adjunct instructor, received a Departmental Educational Achievement Award. Receiving a Departmental Service Award was Dr. George Z. Voyiadjis, Department Chair., who was also surprised with an additional award from the CEE External Advisory Board for his service to the Department.





2011

Dr. Rodolfo J. Aguilar is the Chairman and CEO of Pyburn & Odom MCA, LLC, one of the oldest and most reputable civil, mechanical and electrical engineering consulting firms in the state of Louisiana. His formal education includes an impressive five degrees. Aguilar's professional career spans over 50 years as a professor, engineer, architect, developer, banker, entrepreneur, investor and business owner. He has taught at six different universities in nine different fields, including Louisiana State University.

Aguilar's educational background is extensive and quite diverse. He earned a B.S. in Architectural Engineering, a Bachelor of Architecture, and an M.S. in Civil Engineering from Louisiana State University; a Master of Business Administration from Tulane University; and the Ph.D. in Civil Engineering (Structures) from North Carolina State University, where he was a Ford Foundation Fellow. Aguilar was a National Science Foundation Fellow at the Illinois Institute of Technology (1962) and at the University of Michigan (1965). Aguilar joined LSU as an Assistant Professor of Civil Engineering in 1964. He was promoted to Associate Professor in

1966 and to Full Professor in 1969. Until 1985 he taught courses in civil engineering, construction, architecture and finance. During his tenure at LSU he served as director of the Center for Latin American Affairs, 1982-1985. His contribution to academia also includes service as Professor of Practice of Real Estate Finance, and Entrepreneurial Management in the A.B. Freeman School of Business at Tulane University from 1989 to present.

Aguilar is Professor Emeritus of Architecture and Professor Emeritus of Finance at LSU. He is a registered Architect, a Professional Engineer (Civil Engineering), a Professional Land Surveyor, a Certified General Real Estate Appraiser, holding the MAI designation, and a Licensed Real Estate Broker in Louisiana.

Aguilar has published two textbooks and over sixty technical articles and monographs. He has engaged in a wide range of professional activities, and has received many professional and civic awards, including the Halliburton Award for Excellence in Teaching (1967), and the Louisiana Engineering Society's Award of Merit as Louisiana's Most Promising Engineer (1972). He has held several directorships and board positions in banking and business, and has contributed to the community in many endeavors. Aguilar has been the architect and structural engineer of record and the developer of a variety of real estate projects, ranging from multi-family housing to condominiums, hotels (Baton Rouge Hilton Hotel), shopping centers, and office and medical buildings, with an aggregate value much in excess of \$100 million. He has served as Chairman of the Board of Community Bank of LaFourche (1974-1977); Chairman of the Executive Committee of the Board of American Bank of Houma (1974-1977); Chairman of the Architect Selection Board for the State of Louisiana (1975-1976); member of the Louisiana Board of Commerce and Industry (1970-1980); Chairman of the State Job Training Coordinating Council (1984-1988); member of the Board of the Mental Health Association of Greater Baton Rouge (1976-1982); member of the Board of Trustees of Parkland Hospital (1986-1987); President of the Tulane Alumni Association, Baton Rouge Chapter (1996-1998); Chairman of the Chapter Cities Committee of the Tulane Alumni Association (1998).

Aguilar's experiences as Chief Executive Officer of several engineering, architectural, and entrepreneurial companies; his participation in the banking industry, and on other boards; and his continued interest as a business professor have brought to Pyburn & Odom MCA the leadership to amplify and surpass Pyburn & Odom MCA's half century of engineering excellence.

Aguilar's family, six sons, two daughters and, soon to be, thirteen grandchildren, have become integral members of the Baton Rouge and New Orleans communities. His extensive family includes attorneys, and business men and women. His wife, Marilyn, and four children are LSU graduates.