College of Engineering
Department of Civil & Environmental Engineering

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ALUMNI REGISTRATION & UPDATES

The Department of Civil & Environmental Engineering is always interested in how our alumni are doing. We hope you will take the time to send your updates to **jmueller@lsu.edu** or, if you prefer, you can "snail mail" them to:

Department of Civil and Environmental Engineering
Louisiana State University
Attn: Julie Mueller
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.

Thanks for staying in touch!

To connect with the LSU College of Engineering, please visit
www.eng.lsu.edu/alumni/update

Volume 14 Spring 2015

DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING

CEE IN FOCUS
SPRING 2015 VOLUME 14

FROM THE DEPARTMENT CHAIR

A letter from George Z. Voyiadjis

As another academic year comes to a close, it is with great pleasure that we bring to you the latest news of the Department of Civil and Environmental Engineering (CEE).

First and foremost, I would like to announce that we have inducted three new members into our CEE Hall of Distinction: Dr. Pradeep Kurup (2014), Michael Songy (2015) and Ronnie Hebert (2015). Dr. Kurup received his Ph.D. in Civil Engineering from LSU in 1993 and is currently a Distinguished University Professor in the Department of Civil and Environmental Engineering at the University of Massachusetts Lowell. Mr. Songy, a 1979 graduate of our B.S. in Civil Engineering program, is a founding Principal and CEO at CSRS. Mr. Hebert, President and CEO of Environmental Technical Sales, Inc. (ETEC), received his B.S. in Civil Engineering from LSU in 1969. All three inductees, recognized at our annual banquet, are excellent additions to our CEE Hall of Distinction.

The CEE faculty are working on designing solutions for our coast and waterways. They are also engaged in developing safe and cost-effective physical and intelligent transportation infrastructure.

As always, our newsletter also brings to you highlights of recent student and faculty awards and achievements. Of special note in the student highlights section, two of our spring Ph.D. graduates are father and son: Sam Cooper Jr. and Sam Cooper, III. Both were advised by Dr. Louay Mohammad and are employees at the Louisiana Transportation Research Center (LTRC).

As we approach a new academic year and in the midst of the Patrick F. Taylor building renovation that is already well underway, CEE will be busily preparing for an ABET accreditation visit. Also this fall, we will be welcoming two new faculty members: Dr. Navid Jafari, who is a graduate of the University of Illinois (Champaign-Urbana), specializes in coastal/geotechnical engineering. Dr. Chao Sun, a graduate of Rice University, specializes in coastal structures. We look forward to featuring both of them in our fall newsletter.

Sincerely,

Dr. George Z. Voyiadjis
Boyd Professor, Chair
Bingham C. Stewart Distinguished Professor

College of Engineering
Department of Civil & Environmental Engineering

IN THIS ISSUE







A FOUNDATION OF EXCELLENCE PROGRAM

ASCE STUDENT CHAPTER COMPETES IN DEEP SOUTH REGIONAL COMPETITION

This past March, the American Society for Civil Engineers (ASCE) at LSU student chapter participated in the 2015 Deep South Regional Competition hosted by the University of Mississippi.

The steel bridge team received first place for the steel bridge in the construction speed category. This year's team members were Brad Jacobs (Captain), Patrick Stiegman (Co-Captain), Laura Iverson, Penny Lala, Miranda Vidrine, Nicole Bell, Joe Boley, Brandon Boucher, and Chris Watson. The team would like to thank sponsors AISC, American Pride Fabricators, CB&I and Shread-Kuyrkendall and Associates for their support.

The concrete canoe team received first place in women's sprint category and third place overall. This year's team members were Brendan Copley (Captain), Alicia Fortier (Co-Captain), Christa Cook, Amy Olson, Enrico Targa, Daniel Gutierrez, and Adam Linson. The group also received second place for the Mead paper, written and presented by Laura Iverson. A big thank you to sponsors C.H. Fenstermaker & Associates; Waskey Bridges, Inc.; Ardaman & Associates, Inc.; SJB Group, LLC; Acadian Engineers & Environmental Consultants, Inc.; Lafarge; Forte & Tablada; Aucoin & Associates, Inc.; and Professional Technical Support Services, Inc.

The ASCE student chapter would like to thank faculty advisor Dr. Michele Barbato and CEE staff member David Robertson for their guidance and support.

Please visit online at **http://lsuasce.weebly.com** for more information about ASCE at LSU. Students are encouraged to join their Facebook page (ASCE at LSU) to receive updates from the group, including information on upcoming meetings and activities.

simulator as a test bed for exploring the benefits of connected vehicle technology which offers dynamic wireless exchange of data between vehicles for improving traffic safety and operation. Successful implementation of connected vehicles applications will have substantial economic benefit for states with high crash rates such as Louisiana.

Dr. Celalettin "Emre" Ozdemir, Assistant Professor in CEE, was selected as one of 35 junior faculty to receive a ORAU Ralph E. Powe Junior Faculty Enhancement Award. "The awards recognize faculty members for their work in any of five science and technology disciplines: engineering or applied science; life sciences; mathematics and computer science; physical sciences; and policy, management or education" and comes with a $10,000 research grant.

Dr. Frank Tsai , Associate Professor in CEE, received a grant from the Louisiana Board of Regents, Industrial Ties Research Subprogram (ITRS) and industrial cash match, a total of $226,231, to develop a conjunctive management framework that takes advantage of the Baton Rouge multi-aquifer system to mitigate saltwater intrusion in the Baton Rouge area. The project aims at working with the Capital Area Ground Water Conservation Commission (CAGWCC) and industrial partners (ExxonMobil and Georgia-Pacific) to find science-based economically feasible solutions to reduce saltwater intrusion threats to public supply wells and industrial wells. Results of on-going Baton Rouge saltwater intrusion studies can be found on the website: **https://sites.google.com/site/franktctsai/home/saltwater-intrusion-in-the-baton-rouge-area**

C 4 G
CENTER FOR GEOINFORMATICS
LOUISIANA STATE UNIVERSITY

C4G ESTABLISHES SCIENTIFIC PARTNERSHIP WITH SPACE & EARTH GEODETIC ANALYSIS LAB

In June 2015, the LSU Center for GeoInformatics (C4G) established a scientific partnership with the Space & Earth Geodetic Analysis Laboratory (SEGAL) at the Universidade de Beira Interior (UBI) and Instituto Dom Luis (IDL), Portugal. This cooperative provides a framework for advancing geodetic analysis and modeling endeavors pursued by both entities. The partners will collaboratively pursue research and support for the precise point positioning of GPS/GNSS data, gravimetric geoid modeling, and the application of emerging geo-informatics technologies and services. A letter of intent between the two institutions was approved by Dr. Hector O. Zapata, executive Director of the LSU International Programs and Dr. Rui Manuel Silva Fernandes, director of the SEGAL at UBI.

Over the coming months, the C4G and SEGAL will develop new tools and automation scripts for analyzing Global Navigation and Satellite Systems (GNSS) data. These efforts are essential for studying subsidence, measuring tectonic motions, assessing climate change, and more. Additional activities may include technical support, publication cooperatives, and coordinated training and outreach events.

"Subsidence is a leading cause, if not the principal driver of wetlands losses in Louisiana," C4G researcher Joshua Kent said. Findings published by the U.S. Geological Survey (USGS) indicate that Louisiana's coastal wetlands are lost at a rate of 24.1 mi^2 (62.4 km^2) per year since 1932. "That's nearly one football field every hour." Boyd Professor and C4G Director, George Z. Voyiadjis added that, "modelling of subsidence processes in coastal Louisiana involves a variety of causes including tectonic activities, Holocene sediment compaction, fluid withdrawal, etc." The C4G leverages its vast network of continuously operating GNSS reference stations (CORS) to record positional changes across the State and the northern Gulf of Mexico. "We will work together to develop automation scripts and processing routines that can more quickly produce the data we need to improve our subsidence models."

Congratulations to **Dr. George Z. Voyiadjis**, CEE Department Chair and Boyd Professor, for being elected to Distinguished Membership in ASCE Class of 2015. The highest honor ASCE can bestow, Distinguished Membership is awarded by ASCE's Board of Directors to members who have "attained eminence" in their civil engineering specialty, as stated in the Society's bylaws. The new class of 2015 comprises 13 professionals highly regarded for their contributions as practitioners or academics.

Dr. Frank Tsai, Associate Professor in CEE, was recently appointed as the new Director of Louisiana Water Resources Research Institute (LWRRI). The LWRRI is part of the National Institutes for Water Resources (NIWR) authorized by Section 104 of the Water Resources Research Act of 1984. The mission of the LWRRI is to (1) plan, facilitate and conduct research to aid in the resolution of State and regional water problems, (2) promote technology transfer and the dissemination and application of research results, (3) provide for the training of scientists and engineers through their participation in research, and (4) provide for competitive grants to be awarded under the Water Resources Research Act. The LWRRI is a multidisciplinary center for addressing water issues in the state, drawing on faculty from multiple departments and universities. In this regard, the LWRRI serves as a resource for state officials who want unbiased, scientifically defensible information on how to address the state's water problems. More information can be found in the institute's website **http://www.lwrri.lsu.edu/**

Dr. Louay Mohammad, Irma-Louise Rush Stewart Professor in CEE, was recently appointed to the Louisiana Professional Engineering and Land Surveying Board Transportation Engineering Practice Committee. He was also recently appointed as a member of the Transportation Research Board Committee on Characteristics of Asphalt Paving Mixtures to Meet Structural Requirements (AFK50).

Dr. Sherif Ishak, CEE Professor and College of Engineering Interim Associate Dean for Academic Affairs, was recently appointed as a chair of the TRB Committee on Artificial Intelligence and Advanced Computing Applications (ABJ70). The purpose of the committee is to provide a focal point for expert system research activities across the various transportation-related disciplines, and to act as a forum for the evaluation and dissemination of information relative to the benefits of the technology to the transportation profession. The committee is poised to play a critical role in transportation research and applications in the coming years by studying how to best take advantage of recent computational advances to help address specific transportation challenges.

Dr. Ishak was also selected to serve on a NCHRP panel for Connected and Automated Vehicles. This panel is charged with maintaining and executing research aligned with the Connected and Automated Vehicles (CV/AV) roadmap developed by NCHRP 20-24 (98). CV technologies are currently under development to enable safe, interoperable networked wireless communications among vehicles (V2V), the infrastructure (V2I), and travelers' personal communication devices (V2X). Such technologies will reduce highway crashes; provide data for assessing the performance of the transportation system; provide continual access to accurate information on the operation of the system to travelers; and reduce unnecessary stops, delays, and emissions. AV technologies are also under development and will significantly change fundamental planning, design, and operational characteristics for the road network.

Dr. Ishak received two research grants from the Louisiana Transportation Research Center (LTRC) to undertake research in key transportation areas. The first grant ($99,521) is to explore the recently collected naturalistic driving data by the Federal Highway Administration's (FHWA) Strategic Highway Research Program (SHRP) 2. The data contains over 5,000,000 trip summary records of 3,400 drivers and vehicles that participated in a naturalistic driving study in several regions of the United States. This project is expected to outline the development of a distraction index that will shed more insight into the effects of distracted driving on Louisiana drivers. The second grant ($150,000) applies the LSU driving

EVEG STUDENTS HAVE SUCCESS AT WERC

Two teams of LSU environmental engineering students participated in the 25th annual WERC conference in New Mexico, competing against 20 other schools. The students won the Freeport McMoran Innovation in Sustainability award, which came with a $2,500 cash price. The team, led by HaLeigh Engler, won this award for their design of a hydroponic waste treatment food production system. A team led by Kelsey Walls also won a judges innovation award for a novel oil:water separation system. This award came with a $500 cash award.

KENILWORTH STUDENT, WITH ASSISTANCE FROM CEE FACULTY & GRAD STUDENTS, WINS SCIENCE FAIR PROJECT

Kenilworth Science and Technology (KST) Charter School student Que'asia Stafford's science fair project on coastal protection alternatives has earned the School Honorable Mention Award in Pollution Prevention from the Louisiana Department of Environmental Quality. This small scale study would help reduce pollution by finding an alternative to limestone consumption for building coastal protection structures. The suggestion was to use fluorogypsum, a byproduct of hydrofluoric acid production. The study showed that it may be possible to use this byproduct in coastal protection constructions and reduce the production of limestone and release the land currently used for storing fluorogypsum.

Que'asia worked with Drs. M. Teresa Gutierrez-Wing and Michele Barbato of the LSU Department of Civil and Environmental Engineering for the project, as well as graduate students C. Davis Lofton, Yasser Bigdeli and Sogand Karbalaieali.

GEAUX ENGINEERING

Pictured above (left to right): Dr. Ayman Okeil, Sam Greenwood, Brandon Bollich, Marc Hoffmann, John Boothe and Abdullah Al Hashim.

CE4460 VISITS BOYKIN BROTHERS, INC.

On March 23, students enrolled in the capstone project class (CE 4460 Design of Bridges), along with instructor Dr. Ayman Okeil, visited a precasting plant. The students were able to tour the plant and see production steps of several ongoing projects. Mr. Greenwood explained to the students the ins and outs of precast concrete production. They listened to how forms are prepared, reinforcement is placed and prestressed, and went into the concrete batch plant control room. Field trips such as these provide students an opportunity to see "real world" applications of the engineering principles and practices.

The visit was arranged by Mr. Paul Fossier, Louisiana State Bridge Engineer, who also guest lectures the course, and Mr. Sam Greenwood from Boykin Brothers, Inc. in Baton Rouge.

2014-2015 UNDERGRADUATE SCHOLARSHIP AWARD RECIPIENTS

Please join the department in congratulating the following 2014-2015 undergraduate scholarship recipients. The award committee selected students who have demonstrated academic excellence and meet the criteria specific to each award.

A.W. Nolan Jr. Scholarship
Alyssa Bienes
Garrett Johns
Rachel David

Baton Rouge Water Company Scholarship
Amy Olson
Kelsey Schmaltz

C. Carter Brown Book Fund
Robert Davis

Chevron Texaco Scholarship in Civil Engineering
Jarrett Logan
Joseph Bresowar
Claudia Caldera
Rebecca Laporte
Jacob Watts

Dr. Yalcin B. Acar Memorial Scholarship
Jarrett Logan
Robert Davis

Environmental Technical Sales, Inc. Scholarship
Austin Ollar
Kevin Brown

Erin Krielow Lahr Memorial Scholarship
HaLeigh Engler
Rebecca Laporte
Alyse Aldridge
Mollie Campbell

Frank J. Germano Memorial Scholarship
Elizabeth Hutchinson
Kyle Haigler
Rolando Campoblanco
Joseph Bresowar
Marisa Bordes

Frank Mineo Scholarship
Phillip DiBenedetto
Travis Honore'
Hannah Pittman

James A. Nugent, Jr. Scholarship
Kyle Kessler

Joseph W. Carmena, Sr. Memorial Scholarship
Marisa Fanguy

L. Ralph ('49) and Jacqueline L. Dartez Scholarship
Jason Xu
Jason Xu

McDermott Scholarship
Matthew Ketterer

Ray Kazmann Memorial Scholarship
Jeremy Vezina
Victoria Sample

Robert E. Watson, Jr. Memorial Scholarship
Sarah Belanger

Stanley M. and Hilma R. Cothren Scholarship
Evan Luke
Jacob Watts

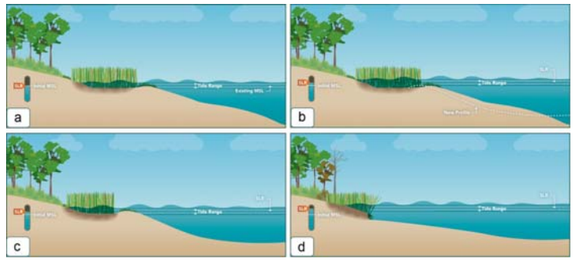
Uniroyal Chemical Environmental Eng. Scholarship
Cody Estopinal
Kyleigh Ardoin

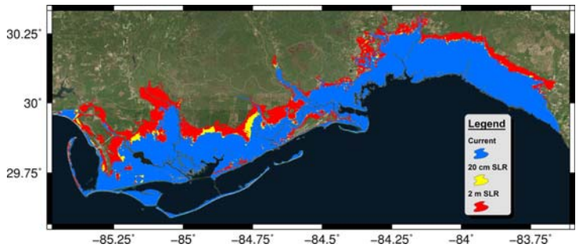
William J. Crawford Memorial Scholarship
Kristen Alevizon
Aaron Bennett
Merrick Patton

The Department of Civil and Environmental Engineering would like to congratulate spring PhD graduates Sam Cooper Jr. (58) and Sam Cooper III (30), father and son. Both worked with advisor Dr. Louay Mohammad, Irma-Louise Rush Steward Professor, at the Louisiana Transportation Research Center (LTRC) here on the LSU campus. Sam Jr. is a section leader at LTRC in charge of technology transfer and training. Sam III works as an asphalt research engineer.

Sam Jr.'s research focused on sustainability — specifically, on repurposing asphalt shingles by mixing them with road-building materials while making sure the material's quality is unaffected. Sam III looked at how factors in mixture design practices affect the production of the material used to build roads.

to the built and natural environment. For example, by considering the coastal dynamics of sea level rise, their research documents and demonstrates how to assess impacts to salt marshes and coastal morphology (as displayed in the graphic below), to incorporate the related human population changes, and project, for example, alterations to the 100-year flood plain (see contour plot below). Approximately 20 manuscripts that stem from the EESLR-NGOM project will be published spring 2016 in a special collection of the American Geophysical Union *Earth's Future* journal.





Dr. Hagen has a P.E. with the State of Florida, and is a Diplomate of both Coastal and Water Resources Engineering. He is a past member of the Board of Governors for the ASCE/Coasts, Oceans, Ports and Rivers Institute and presently serves on the predictive modeling technical advisory group for the 2017 Louisiana Coastal Master Plan. In 2012, Dr. Hagen hosted the Tenth International Conference on Hydroscience & Engineering and was honored with an Outstanding Achievement Award for Advancement of the State-of-the-Art in Hydroscience & Engineering. In 2014, he was elected a Fellow of the American Society of Civil Engineers.

TEDxLSU: DR. BRIAN WOLSHON

Dr. Brian Wolshon, Edward A. Karen Wax Schmitt Professor in CEE, recently gave a talk for TEDxLSU 2015, its theme being "connections." In his TEDx talk, presented on February 28, Dr. Wolshon explained the difference between what the average driver sees when they're sitting in traffic and what that traffic engineer sees.

TED talks began in 1984 and this year was the 3rd year for TEDxLSU. These brief talks, held across the world, and shared as videos online for all to see, focus on technology, entertainment and design.

To watch Dr. Wolshon's talk, visit **http://tedxtalks.ted.com/video/Traffic-Solutions-30-seconds-at**

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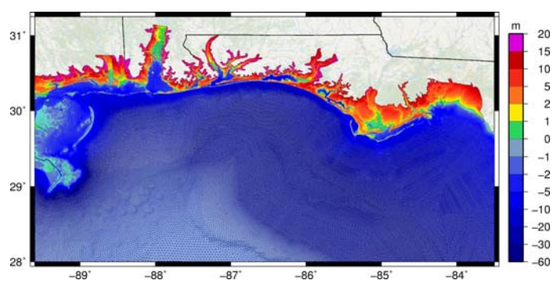
NEW FACULTY RESEARCH HIGHLIGHT: DR. SCOTT C. HAGEN

On January 8, 2015, Scott C. Hagen joined the faculty of the Department of Civil and Environmental Engineering at Louisiana State University where he was named the John P. Laborde Endowed Chair for Sea Grant Research and Technology Transfer. He also has an appointment with the LSU Center for Computation and Technology, and is a fellow of the LSU Coastal Studies Institute. Dr. Hagen spent the previous 17 years at the University of Central Florida where he established the internationally-recognized Coastal Hydroscience Analysis, Modeling and Predictive Simulations(CHAMPS) Lab.

Dr. Hagen will continue to build on his research program in coastal hydroscience and engineering, focusing on massively parallel, high performance computational modeling of ocean, coastal, and inland astronomical and meteorological (i.e., wind and pressure variations) tides and flows. His advances in DEM (digital elevation model) development and unstructured mesh generation have received global attention and are broadly applied. Dr. Hagen and his team have developed numerous hindcast, nowcast and forecast tide and storm surge models that span from the deep ocean through coastal land margins (see below for an example in the northern Gulf of Mexico that is inclusive of the coastal floodplains of Mississippi, Alabama, and the Florida panhandle). His more recent efforts expand into transport and biogeophysical modeling, with emphasis on the coastal dynamics of global climate change in general and sea level rise in particular.



Dr. Hagen trains and mentors students to conduct scientific research, to benefit society through environmental communication and outreach. For example, he has led teams that include graduate students working in conjunction with industry and government counterparts to develop coastal inundation models in direct support of FEMA flood plain mapping. These flood insurance studies have been implemented for the Florida panhandle, the Alabama coastal areas, and the east Florida/Georgia coastal flood plains. Presently, Dr. Hagen and his students are contributing to the south Florida coastal inundation model development.

Dr. Hagen has cultivated his research program to establish synergistic activities and pursue interdisciplinary approaches. He will begin his tenure at LSU as a co-PI on an NSF Coastal SEES grant that will explore the co-evolution of deltaic landscapes and human system response by focusing on changes in coastal flood risks due to human manipulations of sediment delivery. For the past five years, Dr. Hagen has served as the scientific PI on a multi-institutional, multi-disciplinary (including faculty representing biology, civil/coastal/environmental engineering, and the social sciences) project that leverages his two decades of experience with tide, wind-wave and hurricane surge modeling. This “Ecological Effects of Sea Level Rise in the northern Gulf of Mexico” (EESLR-NGOM) study was funded at nearly $3M by NOAA’s Center for Sponsored Coastal Ocean Research and is providing outputs and outcomes that are offering immediate benefits to stakeholders throughout the region as well as provide long-term positive impacts. The key stakeholders in this region (spanning Mississippi, Alabama and the Florida panhandle) include coastal resource managers, decision makers, the three National Estuarine Research Reserves, and consulting agencies. This project has also served as the foundation for the northern Gulf of Mexico Sentinel Site program and will enable assessment of numerous actions considered by the RESTORE Act and related programs.

When the EESLR-NGOM project began, the vast majority of sea level rise related research took a bathtub modeling approach (i.e., elevate the water surface, inundate the present-day DEM, and assess impacts to the variables of interest). While that simplified approach provided much-needed preliminary insights, Dr. Hagen and his interdisciplinary team of colleagues and students have advanced the paradigm to model biogeophysical processes with time-dependent changes

4TH ANNUAL CEE GRADUATE STUDENT RESEARCH CONFERENCE

On March 27, 2015, the Department of Civil and Environmental Engineering (CEE) held the 4th annual CEE Graduate Student Research Conference to showcase the research work being performed by graduate students in the department. Held in Patrick F. Taylor Hall, participants displayed research posters to conference guests and judges. The conference also featured guest speaker Dr. Gus Kousoulas, Office of Research & Economic Development (ORED) Associate Vice Chancellor.

Pictured Above: Dr. Ayman Okeil (CEE Graduate Program Coordinator), Dr. Gus Kousoulas (ORED Associate Vice Chancellor) and Dr. George Z. Voyiadjis (CEE Dept. Chair)

Judging for the conference was conducted by a panel comprised of faculty and students from each research concentration area. Each was reviewed for technical content, delivery of the poster presentation, and design and clarity. Results were tallied and the following winners were announced:

Mohammadreza Yaghoobi (1st Place: $600)
Large Scale Atomistic Simulation of Size Effects During Nanoindentation
Advisor: Dr. George Z. Voyiadjis

Matthew Bilskie (Tied for 2nd Place: $300)
Assessment of Coastal Flood Risk in a Changing Climate Along the Northern Gulf of Mexico
Advisor: Dr. Scott Hagen

Shadi Hanandeh (Tied for 2nd Place: $300)
Performance of Reinforced/Stabilized Paved and Unpaved Test Sections Built over Weak Soft Soil Under Full-Scale Moving Wheel Loads
Advisor: Dr. Murad Abu-Farsakh

Honorable Mention
Moinul Mahdi (Transportation)
Agnimitro Chakrabarti (Water/Coastal)
Jonathan Barnett (Environmental)
Firouz Rosti (Geotech)
Yasser Bigdeli (Structures)

2015 CEE STUDENT AWARDS

Rebecca LaPorte
Civil Engineering Academic Award
Awarded for academic excellence

Alicia Fortier
Civil Engineering Leadership Award
Awarded for leadership and service

Kyle Kessler
Civil Engineering Faculty Award for Leadership
Awarded by the faculty for academic excellence and leadership

Merrick T. Patton
Environmental Engineering Academic Award
Awarded to the senior with the highest GPA in the program

Kelsey Bopp
Environmental Engineering Faculty Leadership Award
Awarded by the faculty to the senior who has excelled in both academics and leadership

Matthew Decell
Environmental Engineering Student Award
Awarded to the senior who has excelled in the program, voted by the environmental engineering students

Samuel Cooper, III
Graduate Student of the Year Award

Kimberly Koehl , LSU senior civil engineering student, was selected to compete at the 56th Annual IHEEP Conference (International Highway Engineering Exchange Program) as an Area 2 Louisiana representative in the student competition. Area 2 includes Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia. At the IHEEP conference (held in New Orleans, September 28-October 2, 2014), Ms. Koehl made a presentation on The Impact of Recycling Agents on the Design of Asphalt Mixtures Containing Roofing Shingles under the Supervision of Dr. Louay Mohammad. She was awarded second place at this competition among other master and doctorate degree candidates.

Dr. Julius Codjoe, a recent Ph.D. graduate in CEE, was recently honored with the US Department of Transportation 2014 Student of the Year Award. Students of the year are selected based on their accomplishments in such areas as technical merit and research, academic performance, professionalism, and leadership. Dr. Codjoe was nominated by the Louisiana Transportation Research Center, under the directorship of Harold "Skip" Paul, for his outstanding accomplishments in these areas.

Each year, the US Department of Transportation honors the most outstanding student from each participating University Transportation Center (UTC) for his/her achievements, and promising outlook for future contributions to the transportation field. Dr. Codjoe was the award recipient of the National Center for Intermodal Transportation for Economic Competitiveness (NCITEC), the UTC branch governing Louisiana State University, Mississippi State University, University of Denver, University of Mississippi, and Hampton University.

Dr. Codjoe is now a Research Associate at LSU, assisting Dr. Sherif Ishak in managing on-going funded research projects within the Department of Civil and Environmental Engineering. Their research includes studying driving behavior of distracted drivers using naturalistic and driving simulator data, establishing an intelligent transportation systems (ITS) laboratory, exploring ITS applications in using existing video detection cameras for traffic counting, development of an optimal ramp metering control strategy for the I-12, and development of a virtual test-bed for connected vehicles research.

LSU ACQUIRES ITS FIRST STRONG FLOOR FOR LARGE-SCALE STRUCTURAL TESTING

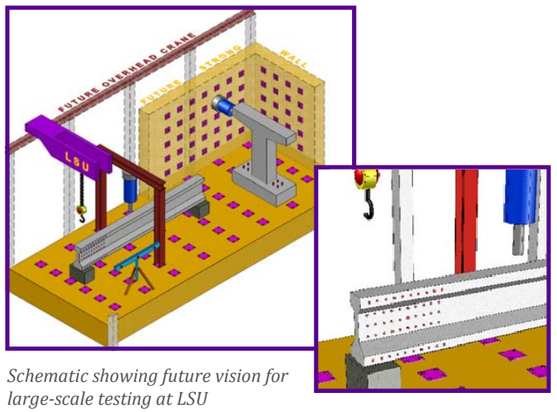
Structural testing facilities in the Department of Civil and Environmental Engineering have just received a major addition. A strong floor was added to the existing Structural Engineering Laboratory in the Engineering Lab Annex Building (ELAB). The enhancement project, which was sponsored by the Louisiana Board of Regents with Drs. George Voyiadjis and Ayman Okeil as PIs, was completed in April 2015. Large-scale testing of actual infrastructure components eliminates many of the challenges that down-scaled specimens introduce. Loading large-scale specimen, such as bridge girders, requires special facilities that are capable of accommodating the size of such specimens, and more importantly, can exert the large loads capable of bringing them to failure.

Heavy steel reinforcement in 4-ft thick strong floor

The new strong floor has a footprint of 20 ft x 50 ft and a thickness equal to 4 ft. It is equipped with 48 anchorage points, each capable of resisting an uplift force equal to 50-kips. By engaging multiple anchorage points, loads in the order of hundreds of thousands of pounds can be applied. Such capacity will allow testing large-scale specimens such as bridge components.

Completed strong floor showing 50-kip anchorage points

The strong floor complements existing test facilities including 550-kip MTS load frame and 100-kip Instron hydraulic jack in addition to multiple smaller testing systems. The structural engineering faculty will continue to develop this facility to further enhance its capabilities. These enhancements include adding a strong wall for exerting lateral loads in orthogonal directions, an overhead crane, and state-of-the-art testing equipment. The shown schematic illustrates the completed strong floor and future overhead crane and strong wall additions. It also shows how specimens can be loaded in various directions while their response is measured using state-of-the-art non-contact measurement system. Once completed, multi-axial testing for research and product certification of large-scale components will be possible.



Schematic showing future vision for large-scale testing at LSU

For more information about the Structural Testing and Material Characterization Laboratory, contact Dr. Ayman Okeil (*aokeil@lsu.edu*).

involved with the Baton Rouge Growth Coalition, serving as a Board Member since 2012. He is an active member of the American Society of Civil Engineers, the Louisiana Engineering Society, and former Chairman of the Louisiana Society of Professional Land Surveyors.

Mr. Songy has been leading studies on the emerging issues and opportunities facing Louisiana, as we begin to experience rapid growth associated with industrial expansion. He was invited as a distinguished panel speaker for the Connect Policy Forum (May 2014) and the Louisiana Smart Growth Summit (November 2014), as well as featured in the Business and Industry Connection (BIC) Alliance Magazine in February 2015.

CEE Hall of Distinction Members

2001 Charter Members
Ara Arman
Dr. Elvin Dantin*
L. Lane Grigsby
Dr. Chester P. Siess*
Bingham C. Stewart*

2002
Verdi Adam
Dr. Dipak Roy*
Wm. Clifford Smith

2003
Dr. James M. Coleman
Ann Forte Trappey

2004
Dr. George Munfakh
Dr. Kam K. Movassaghi

2005
Dr. Kenneth L. McManis
Larry A. McKee

2006
John "Jack" Donahue, Jr.
Ronald "Ron" Rodi

2007
Dr. J. Tinsley Oden
Recep Yilmaz

2008
Robert A. "Bob" Deason
Frank J. Germano*

2009
John A. Graves
Dr. Mehmet T. Tümay

2010
Dr. Shahram Sarkani
Sherri Hammond LeBas

2011
Dr. Song-Kai Yan*
Dr. Rodolfo J. Aguilar

2012
Lloyd Guillory
Dr. Taehyo Park

2013
Paul Fossier, Jr.
Dr. Anand Puppala

2014
William E. Rushing, Jr.
Dr. Pradeep Kurup

2015
Ronnie Hebert
Michael Songy

** Deceased*

2015 CEE FACULTY AND STAFF AWARDS

Dr. Sherif Ishak
Research Achievement Award

Dr. Suresh Moorthy
Educational Achievement Award

Dr. Chester Wilmot
Career Service Award

Grace Mason
Staff Service Contribution Award

CEE HALL OF DISTINCTION BANQUET 2015

On May 4, 2015 at the Lod Cook Alumni Center, the LSU Department of Civil and Environmental Engineering (CEE) held its annual Hall of Distinction banquet to honor three new inductees: Dr. Pradeep Kurup (Univ. of Massachusetts Lowell), Ronnie Hebert (ETC) and Michael Songy (CSRS). 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, as well as faculty, staff and students.

2014

DR. PRADEEP KURUP

Dr. Pradeep Kurup is a Professor in the Department of Civil and Environmental Engineering (CEE) at the University of Massachusetts Lowell (UMass Lowell). He was recently recognized as Distinguished University Professor, the highest accolade bestowed on a UMass Lowell faculty member, for his exemplary teaching, for nationally and internationally acclaimed research and for outstanding service to the university community and his profession. He was also awarded the CEE Department's Teaching Excellence Award in 2002.

Pictured Above: Dr. George Z. Voyiadjis (CEE Dept. Chair), Dr. Pradeep Kurup (2014 Inductee) and Dr. Mehmet Tumay (CEE Emeritus Professor, CEE Hall of Distinction Member)

Dr. Pradeep Kurup graduated in 1985, with a B. Tech. in Civil Engineering from the University of Kerala, India. He received his M. Tech. in Civil Engineering from the Indian Institute of Technology, Madras (1987). He holds a Ph.D. in Civil Engineering (1993) from Louisiana State University (LSU). Subsequent to his doctoral research he worked as a post-doctoral researcher in the Department of Civil Engineering at LSU. In 1994 he joined Louisiana Transportation Research Center (LTRC/LSU) as a Research Associate IV. He was soon promoted to Research Associate V, and nominated to the Graduate Faculty in the Department of Civil Engineering at LSU (1996). In 1997, Dr. Kurup joined the Department of Civil and Environmental Engineering at UMass Lowell as an Assistant Professor. He was tenured and promoted to an Associate Professor in 2001, and subsequently promoted to a Full Professor in 2005.

An expert in geotechnical engineering, Dr. Kurup's research has earned him respect around the world. He is a recipient of the prestigious NSF CAREER Award (1999), and was also awarded the Civil Engineering Research Foundation (CERF) Career Development Award by the ASCE. He has been successful in obtaining research funds from Federal agencies totaling more than $3.5 million. His scholarly work has covered a range of areas including, minimally invasive determination of engineering soil properties, evaluation of earthquake liquefaction potential, in-situ interpretation of contaminated sediments, and development of novel sensing systems for direct push technologies. Dr. Kurup has developed novel testing devices, equipment, and interpretation methods that provide real-world solutions to industry and various agencies in the United States, including the Federal Highway Administration, Department of Defense, and the Environmental Protection Agency (EPA). Among his research projects funded by the NSF is the development of a novel electronic "nose" that can detect subsurface volatile organic compounds, and a novel electronic "tongue" that can detect and identify traces of toxic heavy metals such as arsenic, mercury, lead, and cadmium in soil and groundwater. These technologies have attracted the attention of the U.S. Environmental Protection Agency. He has two pending patents with the USPTO and PCT.

Dr. Kurup has authored/co-authored over sixty papers in peer reviewed journals and conference proceedings that are recognized for their rigorous publication standards. His publications are regarded highly worldwide have been cited in top refereed journals (such as the American Society for Testing and Materials, ASCE Journal of Geotechnical and Geoenvironmental Engineering, Sensors and Actuators, International Journal for Numerical and Analytical Methods in Geomechanics, Computers and Geotechnics, etc.), and in several conference proceedings. He has delivered more than thirty-five presentations (including keynote lectures, and a centenary seminar) at universities, symposiums, national meetings, and international conferences (in Japan, France, United Kingdom, Turkey, Malaysia, Canada and India).

His service activities are very broad. He currently serves in the Geoenvironmental Engineering Committee of the Geo-Institute, American Society of Civil Engineering. He served as Associate Editor for the International Journal of Geotechnical Earthquake Engineering (IJGEE). He is a member of several professional societies, and has organized and chaired sessions at meetings and conferences. He has served on several technical committees of the American Society for Testing and Materials - Soil and Rock (D18.02, D18.05, and D18.11). He has served on two National Transportation Research Board (TRB) Committees (AFS50: Applications of Nontraditional Computing Tools Including Neural Nets, and AFP30: Soil and Rock Properties). He is a member in several professional societies, and has organized and chaired sessions at meetings and conferences. He has served on several NSF review panels, and has reviewed research proposals for the U.S. Civilian Research & Development Foundation, and papers for numerous professional journals. Along with Presidential award recipients (PECASE), NSF-CAREER award recipients, Nobel Laureates, Medal of Science & Medal of Technology recipients; Dr. Kurup was invited by NSF and its 50th Anniversary partners to participate in the “Scientists and Engineers in the Schools Program” to visit local middle schools and serve as a role model.

2015

RONNIE HEBERT

Ronald R.E. Hebert (“Ronnie”), President and CEO of Environmental Technical Sales, Inc. (ETEC), received his B.S. in Civil Engineering from Louisiana State University in 1969. In 1996, Ronnie founded ETEC, a company specializing in the water, wastewater, sludge, and drainage industries. ETEC’s main headquarters is located in Baton Rouge, Louisiana, with other locations in Jackson, Mississippi, Little Rock, Arkansas and Memphis, Tennessee. With over 46 years of experience in this field and in all aspects of engineering, from conception and design, project management, financing, construction, to operations and maintenance, Ronnie has been involved in thousands or projects valued in the billions of dollars. As President and CEO, Ronnie is responsible for all aspects of ETEC’S representation of over 100 national manufacturers.

Pictured Above: Ronald Rodi (CEE Hall of Distinction Member), Ronnie Hebert (2015 Inductee) and Dr. George Z. Voyiadjis (CEE Dept. Chair)

Ronnie grew up in an “engineering” environment. His father, the late Roy A. Hebert (PE, PLS) was an LSU alumnus as well and co-founder of Hebert Brothers Engineers, General Contractors (their Louisiana contractor’s License was No.4!). In 1964, Ronnie graduated from St. John High School in Plaquemine, Louisiana. He served in the United States Army as Captain and as Company Commander of Company A, Louisiana Army National Guard 769th Engineer Battalion located in Plaquemine, Louisiana. After graduating from LSU in 1969, he completed the United

States Army Engineer School in Fort Belvoir, Virginia. Ronnie is a registered Professional Engineer in both Civil and Environmental Engineering. Associations include membership in the American Society of Civil Engineers (Life Member), the Louisiana Engineering Society, The National Society of Professional Engineers, Chi Epsilon and other local organizations. He has personally been a generous supporter of many charities within the community, including the Louisiana Engineering Foundation Math Counts, Louisiana Sheriff’s Association, St. Vincent de Pail’s Uniforms for Kids, Boys Town and the World War II Museum in New Orleans. In addition to his personal philanthropy, ETEC recently made a donation towards the refurbishing of the LSU Hydraulics Laboratory, which upon completion will be named Environmental Technical Sales (ETEC) Hydraulics Laboratory. ETEC has also established scholarship funds for engineering students.

Ronnie is married to Debbie Dupont Hebert, who is also an LSU alumnus. They are the proud parents of three children: Daniel Roy Hebert, David Gerald Hebert (deceased) and Cinclare Hebert Sessums. They are also grandparents of five wonderful grandchildren: Joseph Roy Hebert (a freshman at LSU in Engineering), John Daniel Roy Hebert, Anna Kern Hebert, Elizabeth Cinclare Sessums and John Brady Sessums Jr.

2015

MICHAEL B. SONGY

Michael Songy, a founding Principal and CEO at CSRS, Inc., earned his B.S. in Civil Engineering from Louisiana State University in 1979. He has more than three decades of industry leadership and client service experience on large-scale infrastructure and capital improvement programs throughout Louisiana. Mr. Songy has a well-deserved reputation in the industry as a skilled, strategic leader who understands the needs of public-sector owners and private-sector contractors. Under Mr. Songy’s leadership as CEO, CSRS is committed to continue helping its clients deliver programs successfully within today’s challenging economic and legislative climates and was recently recognized by the Greater Baton Rouge Business Report as the 2014 “Company of the Year” with 100 or more employees.

Pictured Above: Sherri LaBas (Secretary of LA DOTD and CEE Hall of Distinction Member), Michael Songy (2015 Inductee) and Dr. George Z. Voyiadjis (CEE Dept. Chair)

Since founding CSRS, Mr. Songy has been responsible for the overall direction of professional services provided to clients, including commitment to budget, schedule, quality, innovation and client satisfaction. Mr. Songy's consulting assignments has varied widely and includes transportation planning and management of capital improvement programs – such as the East Baton Rouge City-Parish Green Light Plan and the Department of Transportation and Development ARRA Program, feasibility analyses for land development strategies, engineering and storm water management, and impact assessments for local governing authorities.

Mr. Songy also served as Board Chairman for the Baton Rouge Area Chamber from 2014-2015 and has served as a Board Member of the Chamber since 2011. Mr. Songy is also extensively