



FROM THE DEPARTMENT CHAIR

A letter from George Z. Voyiadjis



Welcome to another edition of the Department of Civil and Environmental Engineering newsletter. In this issue we share with you department highlights in research and education.

First, I am excited to announce that the LSU chapter of Chi Epsilon is once again active. With the recent induction of new members and election of officers, we look forward to reporting their progress. As always, we are pleased to share with you highlights from the ASCE student chapter. Always active, the chapter is now gearing up for the Deep South Regional Competition where the steel bridge and concrete canoe teams will compete with their peers.

This issue also features one of our most recent faculty hires: Dr. Aly Mousaad Aly and his research in the area of hurricane engineering. Dr. Aly and the department are working to establish a state-of-the-

art hurricane testing facility here on campus that will surpass simple wind tunnel testing to include testing under realistic hurricane wind, rain, and wave loading conditions.

In addition to student and faculty highlights, this issue also contains an address from the chair of the External Advisory Board of the Department of Civil and Environmental Engineering, John Graves. Graves, Principal of Evans-Graves Engineers, Inc., is a long standing member of our board, as well as a CEE Hall of Distinction inductee.

In closing, myself and the department would like to wish you and your family a wonderful holiday season.

Sincerely,

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

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 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

In This Issue





Current Officers:

President - Brittany Alexander

Vice President - Adam Catanzaro

Secretary - James Parker

Treasurer - Robert Davis

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Fundraising Chair - Alicia Fortier

Meeting Coordinator - Emily Weigand

Webmaster - Mitchell Everhardt

Faculty Advisor - Dr. Michele Barbato

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

If you or your company are interested in sharing your expertise with the chapter and/or sponsoring the chapter at regionals, please contact the chapter.

Students are also encouraged to join the chapter's Facebook group (ASCE at LSU) to receive updates from the group, including information on upcoming meetings and events.

ASCE Student Chapter News

This semester, the ASCE student chapter at LSU had the honor of a wide variety of guest speakers attending their monthly meetings. Matthew Blackwell of BASF joined the students in early September to speak about BASF and chemical plants in general. Thomas Montz of Arcadis spoke to the group about traffic engineering. In October, Ben McArdle of CDI discussed consulting for petro-chemical companies as well as highlighting the design process of a typical job from the perspective of a civil engineer. A group of recent graduates also visited the chapter, giving students a real-world perspective on preparing to enter the engineering job force, as well as a window into the daily tasks of a new engineer.

Keeping with their tradition of service to the community, the chapter volunteered at the BREC Bluebonnet Swamp's "Haunted Hikes." ASCE members painted faces of the kids that attended, helped with crafts, and were along the trail teaching the kids about the animals at each stop.

The chapter also took a tour of the South Stadium Expansion of Tiger Stadium. The event was hosted by the ASCE of Baton Rouge branch. Students had lunch as well as a detailed presentation of the new design and construction of the expansion. After the presentation, the chapter got to go visit the current progress from top of the east ramp of the Tiger Stadium.

As the semester comes to a close, members of the Steel Bridge and Concrete Canoe are actively preparing for the 2014 ASCE Deep South Conference, to be hosted by Christian Brothers University on March 27-29th in Memphis, TN.



Civil Engineering Professors Help Secure \$4M NSF Grant Funding for a New Supercomputer at LSU



Dr. Q. Jim Chen, CSRS Distinguished Professor in Coastal Engineering, and Dr. Frank Tsai, Associate Professor in the Department of Civil and Environmental Engineering (CEE) have joined a multi-disciplinary team led by the Center for Computation and Technology (CCT) and were awarded a nearly \$4M award from the National Science Foundation (NSF) for the acquisition of a new supercomputer at LSU. Chen serves as a Co-Principal Investigator (Co-PI) of the NSF grant and Tsai as a Senior Investigator (SI). The new supercomputer, which is faster and more powerful than any existing High Performance Computing (HPC) systems in Louisiana, will not only benefit the researchers in coastal modeling, storm surge and ocean wave predictions, and salt water intrusion and ground water simulations, but also provide all computation-oriented researchers across LSU campus with a state-of-the-art cyber infrastructure. It is expected that the new supercomputer at LSU will enable innovation and discovery in coastal engineering, water resources engineering and beyond.

Moe Receives Marvin Rex Professorship



William Moe, PhD, PE, professor in the Department of Civil and Environmental Engineering, received the Marvin Rex Clemmons Professorship. Moe received his PhD in 1999 from the University of Notre Dame. His areas of specialization include treatment of gas-phase contaminants in biofilters, anaerobic processes for treatment of water and soil contaminated by chlorinated organic compounds, engineering implications of microbial physiology, molecular tools for characterizing microbial populations, industrial waste treatment and the application of Sequencing Batch Reactors.

CEE At A Glance

Department Chair
Dr. George Z. Voyiadjis

CE Undergraduate Coordinator
Dr. Sherif Ishak

EVEG Undergraduate Coordinator
Dr. John Pardue

Graduate Programs Coordinator
Dr. Ayman Okeil

Undergraduate Programs

- BS in Civil Engineering
- BS in Environmental Engineering

Graduate Programs

- MS in Civil Engineering
- MS in Coastal and Ecological Engineering
- PhD in Civil Engineering

Degrees Awarded 2012-2013

- 108 Baccalaureate
- 29 Graduate

Fall 2013 Enrollment

- 462 Undergraduate
- 111 Graduate

Visit us online www.cee.lsu.edu



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Click "like" and add us to your interest list to receive news and updates from the Department!

Faculty Highlights

Plates and Shells” in August 2005. He is currently a research engineer for the Applied Sciences Division of Weidlinger Associates, Inc., in New York.
ABOUT THE POLISH ACADEMY OF SCIENCES

The Polish Academy of Sciences (PAS) is Poland’s leading scientific and research institution. Founded in 1952, its roots stretch back to the enlightenment period. PAS is the successor institution to the Warsaw Society of Friends of Learning, founded in 1800 by Stanislaw Staszic (1755-1826) and other notable scholars from the era. Today’s Academy is a national

institution continuing and cultivating the finest traditions of Poland’s scientific organizations, operating on the legal foundation provided by the Act on the Polish Academy of Sciences dated April 30, 2010. The Academy supports the development, integration, and promotion of science, and contributes to the advancement of education and the enrichment of Poland’s culture.

Article by Laura Stuart, LSU College of Engineering, lauras@lsu.edu, 225-578-8408

Coastal Engineering Professor Received the First Applied Research Grant from CPRA

Dr. Q. Jim Chen, CSRS Distinguished Professor in Coastal Engineering, is one of the two winners in the competition for research grants from the new Applied Research Program sponsored by the Coastal Protection and Restoration Authority (CPRA). According to the Water Institute of the Gulf, CPRA received 25 proposals requesting over \$2.3 million of funding in total. Only two proposals were selected for funding this year. The title of Chen’s proposal is “Optimizing the Design of Shoreline Protection to Reduce Marsh Edge Erosion for Louisiana Coastal Protection and Restoration. The long-term goal of Chen’s study is to improve the planning, design and implementation of the Coastal Master Plan shoreline protection projects through applied research that integrates field observations, computer modeling and coastal engineering knowledge. It is expected that results from the study “will likely benefit many aspects of Master Plan project implementation.”



Driving Simulator Featured on the Weather Channel

“You know, on a great sunny day, it’s easy to be a great driver; but what happens when you have the rain, the sleet, and the snow? Well, here in this building at the Louisiana State University, they will answer that question . . .”

These were the introductory words of the Weather Channel’s Reynolds Wolf as he climbed down from his vehicle and walked towards the Patrick F. Taylor (PFT) building to participate in an experiment that tested a driver’s performance under different weather conditions. The experiment was undertaken with the LSU Driving Simulator which is housed in the PFT building. It consists of a full-sized passenger car modeled after a Ford Focus automobile, combined with a series of cameras, projectors and screens to provide a high fidelity virtual environment so that the driving process almost mirrors the realistic driving task of an actual vehicle. The experiment was administered by Dr. Sherif Ishak and Julius Codjoe, a graduate student of the CEE department. At the end, Reynolds Wolf’s tip on how to drive better in different types of weather was to have better visibility, pay attention to the roadway, and slow down.

For those who missed the opportunity to view the live feature aired by The Weather Channel on four different time slots on September 17, 2013, under the caption “Driving in All Types of Weather” the full video can be accessed at <http://www.weather.com/video/reynolds-wolf-tries-lsu-driving-test-38926>

Student Highlights



Chi Epsilon Initiates New Members and Officers

The LSU chapter of Chi Epsilon, a national civil engineering honor society, recently held its initiation for new members and officers. The chapter would like to thank faculty advisor Dr. Frank Tsai, as well as former CEE faculty member Dr. Olin Dart and Dr. Brian Wolshon, for their dedication to activating the chapter once again.

New members:

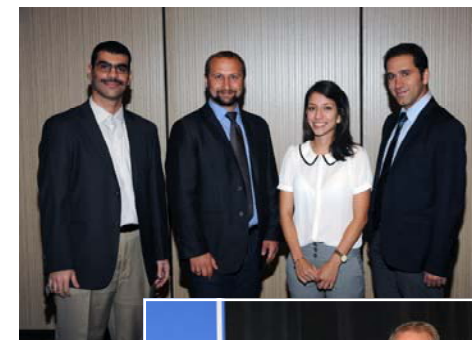
Jessica Alexander
Fabiola Campoblanco
Thomas Everett
Philip Goppelt
Laura Iverson
Pollard Lawson
Justin Richard
Christopher Rowan

New officers:

President: Fabiola Campoblanco
Vice President: Christopher Rowan
Secretary-Treasurer: Laura Iverson
Associate Editor of the Transit: Pollard Lawson
Marshal: Justin Richard

If you are interested in joining Chi Epsilon, please contact Dr. Frank Tsai (ftsai@lsu.edu) for more information.

Fabiola Campoblanco (BCE) Competes in the 2013 International Highway Engineering Exchange Program



Ms. Fabiola Campoblanco, an undergraduate CEE student, was selected to compete as the 2013 IHEEP (International Highway Engineering Exchange Program) Area 2 Louisiana representative in the student competition. The 2013 conference was held in Overland Park, Kansas in September. Area 2 includes Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia.

At the IHEEP conference Campoblanco made a presentation on Infrastructure Sustainability: The Use of Recycled Asphalt Shingles in Flexible Pavement under the supervision of Dr. Louay Mohammad. She placed second in this competition among other master’s degree and doctorate candidates.



The Highway Engineering Exchange Program (HEEP) is an international organization which promotes the exchange of information relating to highway and bridge engineering, among its members. Specifically addressed is the use of computers in the engineering process. More information about HEEP can be found at www.heepweb.org

TRENT KEY (PCE) RECIPIENT OF AN NSF GRAD RESEARCH FELLOWSHIP

Trent Key, a CEE graduate student, is a recipient of a 2013 NSF Graduate Research Fellowship. NSF's Graduate Research Fellowship Program is a merit-based fellowship that helps ensure the vitality of the human resource base of science and engineering in the United States and reinforce its diversity. The fellowship recognizes and supports outstanding graduate students in the fields of science, technology, engineering and mathematics who are pursuing research-based master's and doctoral degrees at accredited U.S. institutions.

Key graduated Summa Cum Laude with a Bachelor of Science in Environmental Engineering in December 2011 from LSU. He has been in graduate school at LSU for a year, pursuing a PhD in civil engineering. Key works closely with Dr. William Moe, Marvin Rex Clemmons professor in CEE, researching isolation and characterization of novel dehalogenating bacterial species for use in bioremediation efforts of contaminated waste sites.

"My short-term and long-term plans include finishing my PhD in civil engineering with an emphasis in environmental engineering and progressing in my field, whether in academia or in industrial practices, while promoting and encouraging diversity in engineering and science, which played a large role in my academic career and success," Key said. "Receiving this fellowship has given me a great platform, as well as the means, to continue towards these short-term and long-term plans."

ALYSE ALDRIDGE (BCE) RECEIVES T&DI SCHOLARSHIP

Alyse Aldridge, a senior CEE undergraduate student is the recipient of the 2013-2014 ASCE Transportation and Development Institute (T&DI) Scholarship Louisiana Chapter. "This scholarship is funded by the Louisiana Chapter of ASCE T&DI to increase awareness and promote the transportation engineering profession among undergraduate students enrolled in civil engineering or construction management curriculum" says Dr. Louay Mohammad, Irma-Louise Rush Stewart Professor of CEE and member of the ASCE T&DI Executive Committee.

KYLE PARKER (PCE) PLACES 2ND IN STUDENT POSTER COMPETITION

In June 2013, LSU graduate student Kyle Parker placed second in a student poster competition. Kyle's poster was presented at the Northern Gulf Coastal Hazards Collaboratory (NG-CHC) annual meeting. The poster presented and explained how a storm surge model could be run on supercomputers utilizing the web portal "SIMULOCEAN". This web-based portal allows users without any prior supercomputing experience the ability to use and benefit from advanced computing. The NG-CHC awarded Kyle for placing in the competition with a sponsorship to allow him to travel and attend a future technical conference to present his poster. Kyle completed his dual undergrad in California majoring in Civil and Mechanical Engineering. He came to LSU to study with Dr. Q. Jim Chen, CSRS Distinguished Professor in Coastal Engineering in the Civil and Environmental Engineering Department. Currently he is completing research in Terrebonne Bay for his Master's in Coastal and Ecological Engineering and will continue at LSU toward a PhD in Civil Engineering.



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VOYIADJIS INDUCTED INTO THE POLISH ACADEMY OF SCIENCES



George Z. Voyiadjis, chair of LSU College of Engineering's Department of Civil and Environmental Engineering, has been inducted into the prestigious Polish Academy of Sciences.

The General Assembly of the Polish Academy of Sciences elected Voyiadjis, who also serves as a Boyd Professor and the Bingham C. Stewart Distinguished Professor of Engineering at LSU, as a foreign member for his leading position in science and his significant contribution to the development of cooperation with Poland. President of the Polish Academy of Sciences Professor Michal Kleiber inducted Voyiadjis during the 20th International Conference on Computer Methods in Mechanics Conference on August 28, 2013.

"I am humbled by this great honor. It is very fulfilling to be acknowledged as a foreign member of the Polish Academy," said Voyiadjis. "It was in Poland in 1904 that M. T. Huber, one of the first pioneers in the theory of plasticity, laid the foundations for the mechanics of plasticity. This is one of the areas, along with Damage Mechanics, in which I have been greatly engaged in the last forty years. Also, my late doctoral advisor in the 1970's at Columbia University, Professor M. P. Bieniek, was a Polish native and played a significant part in my early studies in plasticity."

The Polish Academy of Sciences is a state scientific institution founded in 1952. Its key tasks include conducting scientific research and research and development work; supporting the professional development of individuals during the early stages of their scientific careers; providing education at PhD, post-doc and other levels; formulating ethical principals in science; putting forward opinions and proposing agendas concerning scientific-related issues and the practical application of research results; drawing opinions, expert reports, and forecasts addressing key issues of planning and policy making; expressing opinions on normative acts

that pertain to science, its applications, and education; working together with universities, research institutions, and scientific associations; and pursuing international scientific cooperation projects by setting up research consortiums and conducting research with international partners.

"This is a wonderful recognition for Dr. Voyiadjis and the LSU College of Engineering," said Dean Richard Koubek. "Our faculty members and their accomplishments are a key factor in achieving the college's goals for 2015," he continued. "I congratulate Dr. Voyiadjis on this outstanding achievement."

Voyiadjis worked closely with researchers at Poznan University and the Polish Academy of Sciences, from 2004 to 2009, as the head U.S. researcher on a joint National Science Foundation grant. The project focused on investigating fracture and particularly localized fracture phenomena in thermo-elasto-viscoplastic flow processes under dynamic loadings in modern engineering materials. The main focus was to investigate the information of material behavior provided by the computational solutions of mesoscale problems.

In addition to serving as the research lead on the joint NSF project, Voyiadjis has also hosted nine professors from the Poznan University of Technology and the Institute of Fundamental Technological Research and two PhD students from Poland at LSU.

The PhD students receiving degrees from LSU were Adam Lodygowski and Pawel Woelke. Lodygowski received the 2010 Distinguished Dissertation Award at LSU for Science, Technology, Engineering and Mathematics for his dissertation titled "Friction and Wear at Elevated Temperatures." He is currently an assistant professor of civil and environmental engineering at the Poznan University of Technology. Woelke's presented his dissertation "Computational Model for Electro-Plastic and Damage Analysis of

WILLSON HELPING LEAD INTERNATIONAL DESIGN COMPETITION: "CHANGING COURSE"

Dr. Clint Willson, CEE Professor and Director of the Engineering Design and Innovation Program of The Water Institute of the Gulf, is serving on the Leadership Team and as chair of the Technical Team for the Changing Course international design competition. This competition seeks to build on Louisiana's 2012 Comprehensive Coastal Master Plan to redesign a "more sustainable Lower Mississippi River Delta, bringing teams together from around the world to create innovative visions for one of America's greatest natural resources"

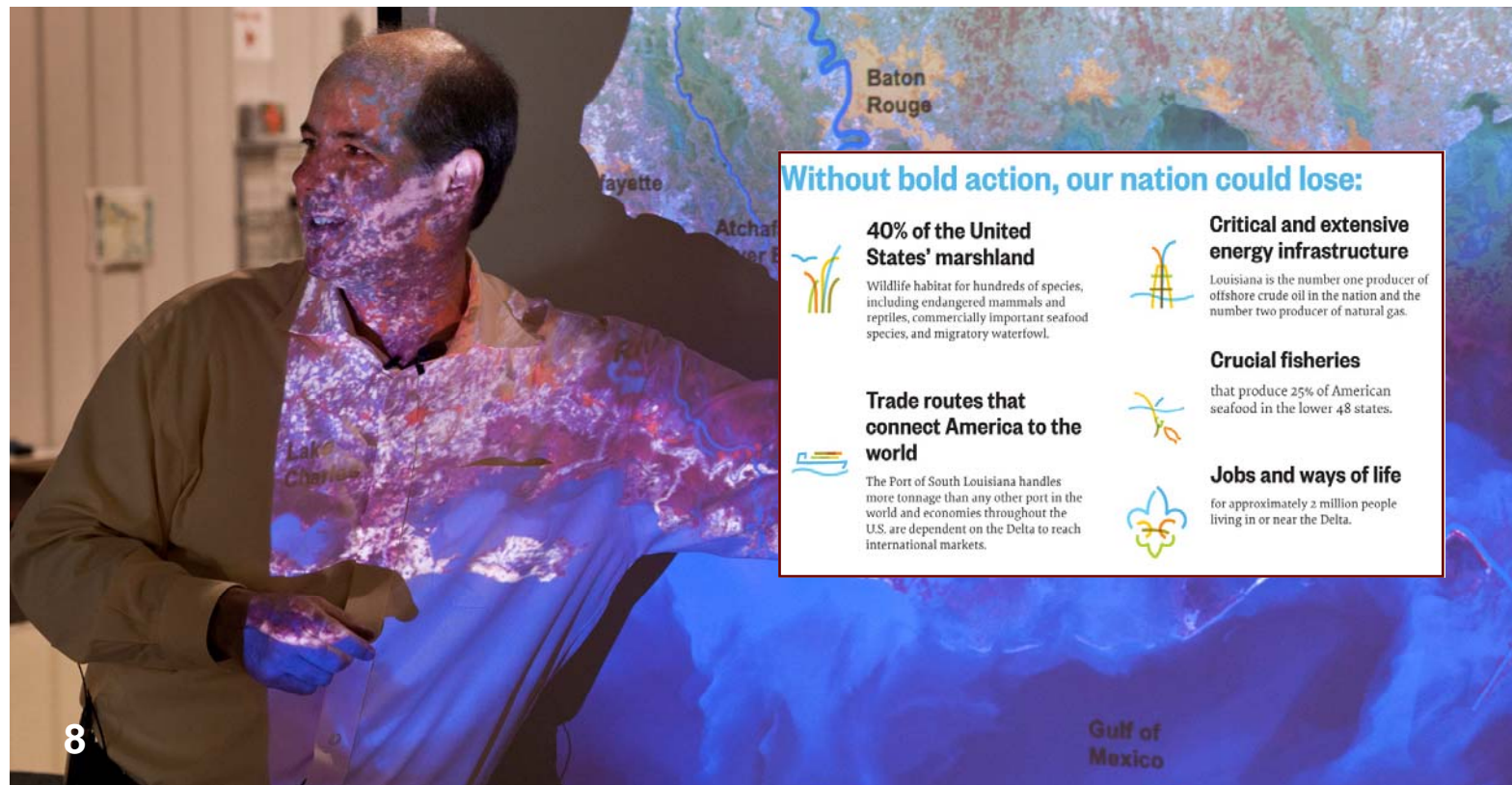
The great Mississippi River, which captures and transports a large percentage of the water and sediment from the United States, built the land that is coastal Louisiana. Over time gradual, natural changes in course of the mighty Mississippi took place, leaving behind rich sediment on which the state (and much of its economy) was built. However, over the past 200 years human interference aimed at controlling this great river have resulted in as much loss for the state and the people who call it home as it has benefits. While countless homes have been saved from protection levees built and the economy has been built on reliable river navigation, these efforts have also had detrimental

consequences. Our coastal wetlands are being lost at an alarming rate and in many coastal areas land is sinking. Each time a hurricane hits coast Louisiana, the state is reminded of the great importance of healthy wetlands to protect its inhabitants from storm surge and waves.

The loss of land Louisiana has and will face over the next hundred years is catastrophic, warranting immediate attention and significant resources. Changing Course is an independent effort led by local and national leaders, with the support and participation of the State of Louisiana and U.S. Army Corps of Engineers (USACE). The competition will bring together prominent engineers, scientists, planners, and designers to address these issues and bring innovative ideas and solutions to the table in time to inform Louisiana's next coastal Master Plan in 2017.



For more information about this competition and to learn more about issues facing the Mississippi Delta, visit <http://changingcourse.us>



Without bold action, our nation could lose:

- 40% of the United States' marshland**
Wildlife habitat for hundreds of species, including endangered mammals and reptiles, commercially important seafood species, and migratory waterfowl.
- Trade routes that connect America to the world**
The Port of South Louisiana handles more tonnage than any other port in the world and economies throughout the U.S. are dependent on the Delta to reach international markets.
- Critical and extensive energy infrastructure**
Louisiana is the number one producer of offshore crude oil in the nation and the number two producer of natural gas.
- Crucial fisheries**
that produce 25% of American seafood in the lower 48 states.
- Jobs and ways of life**
for approximately 2 million people living in or near the Delta.

LETTER FROM THE EXTERNAL ADVISORY BOARD CHAIR



By John A. Graves
Chair of the CEE EAB

By every stated account of upcoming business activity for the next five plus years an unprecedented boom in industrial expansion is predicted. Recent forums have even placed the direct monetary value at or near the \$100 billion figure. While much of the projected activity will be located in the Mississippi River corridor in the southern part of the state, significant activity is forecast over a large geographic area which will directly and indirectly affect many sectors of our state's economy. Leading the parade in many ways will be the engineering and technical resources of the state.

I attended LSU in the 1960's, a period which is generally regarded as the only comparable to what is expected in the next 5-10 years for industrial growth and expansion. My perceptions and memories of that time generally were a strong demand for professional services, goods and construction capacity, closely followed by housing, commercial and related ancillary service and supply companies. Life was good then in many ways especially for the LSU Civil Engineering graduate.

The LSU Department of Civil and Environmental Engineering (CEE) can and should lead our state's efforts to guide an orderly implementation of the impending economic development. Virtually every aspect of pre-engineering and due diligence for such projects are CEE specialties, including:

- Property & Topographic surveys
- Utilities availability
- Infrastructure & Traffic Impacts
- Regulatory Compliance & Permits
- Rail
- Wastewater Treatment
- Flood Plain

Construction plans for implemented projects include plans for roadways, paving, drainage, utilities, rail, structural, environmental permitting, flood protections, and marine structures to name a few, and all CEE

related. Secondary and indirect stimulus will be felt in yet other industries including housing for both temporary construction workers and permanent housing.

Let's talk, what can we all do to take advantage of this unique opportunity? A first step could be to involve certain stakeholders with our initiatives. Obvious participants should be pertinent LSU alumni, students, CEE consulting community and state/regional contractors. This is only the beginning, we can make it happen to benefit our state and LSU CEE.

CEE External Advisory Board

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GEC, Inc.

Wilfred Barry
SJB Group, Inc.

Dr. Jim Coleman
LSU Coastal Studies Institute

Ron Crum
URS Corporation

Larry East
Albemarle Corporation

Craig Gardner
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John Graves
Evans-Graves Engineers, Inc.

Lloyd Guillory
Exxon Mobil

Dr. Kam Movassaghi
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Ronald Rodi
CSRS

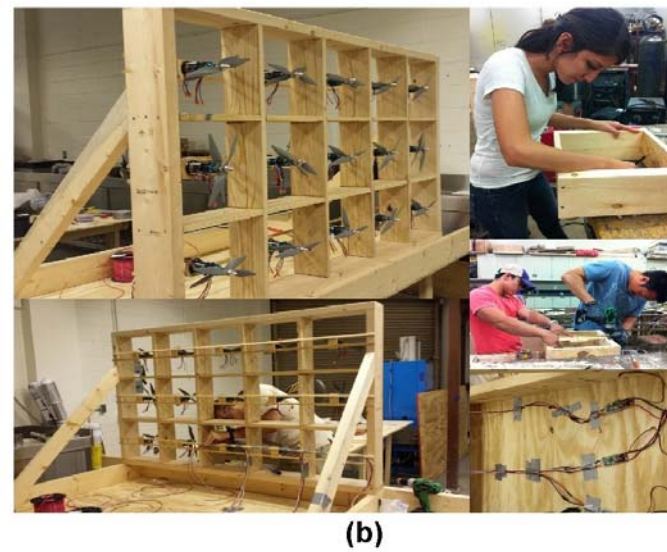
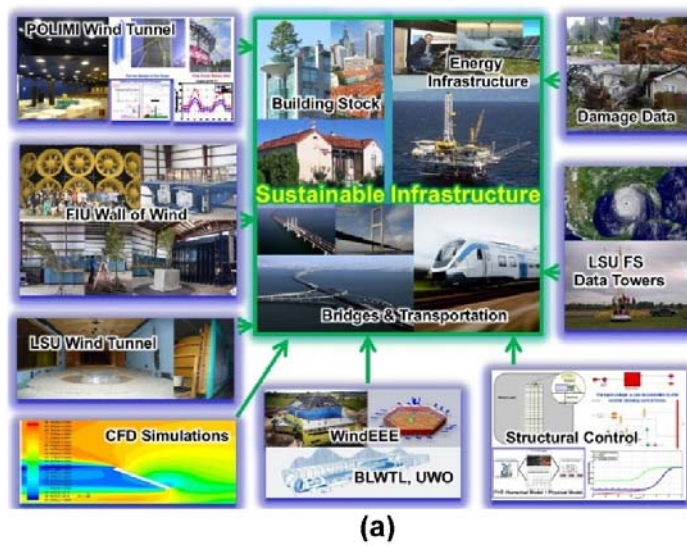
Ann Forte Trappey
Forte and Tablada, Inc.

TESTING UNDER REALISTIC HURRICANE WIND, RAIN, AND WAVES FOR A MORE RESILIENT COMMUNITY

Hurricanes bring extreme weather conditions with high-intensity winds, heavy wind-driven rain, coastal flooding and wave action. These weather conditions, coupled with aging and vulnerable infrastructure, pose the potential for life and economic losses. The ability to mitigate these losses in existing and new infrastructure requires a complete understanding of these complex stressors from experimental and computational perspectives. The interaction of hurricanes with different systems urges the need for a comprehensive integrated model for the characterization of loading, and the analysis and investigation of proper mitigation techniques. Nevertheless, most of the research in the field of wind engineering was carried out in wind tunnels under dry wind, even wind-driven rain is a recently addressed topic with more research required to compensate the less than comprehensive data in the literature. There is a lack of a comprehensive testing methodology that can allow building infrastructure to survive the extreme conditions associated with hurricanes. Developing comprehensive testing capabilities with protocols for testing under wind, rain and waves is a first step towards the characterization of the complex hurricane loading on the infrastructure and the built environment at large.

Using a small-scale wind, rain and wave (WRW) testing facility that is now under construction at LSU, a typical hurricane wind field will be created. In addition, waves will be generated and calibrated for coastal structural testing. A larger testing facility is planned for aerodynamic and hydrodynamic testing. The testing will allow for aerodynamic and hydrodynamic mitigation through the use of shape modification, retrofitting strategies and/or damping enhancement to mitigate potential damage to coastal and inland infrastructure.

The LSU's innovative hurricane facility will be concerned with the study of the impact of hurricane wind, rain and waves on energy infrastructure (power transmission lines and towers, green energy infrastructure, inland and offshore wind turbines, solar panels/collectors, oil platforms) and the built environment at large (low-rise buildings, coastal bridges, building envelope, etc.), with an objective to build the more resilient community. The facility represents a modern transition from traditional wind tunnel testing to large and full-scale testing under realistic hurricane wind, rain and wave loading. This will permit to examine the performance of large and full-scale infrastructure built from true materials to ascertain both security and economic construction.



LSU hurricane testing: (a) Dr. Aly's expertise and long-term multi-scale multi-physics research goals in wind engineering; (b) Small-scale WRW testing facility in construction



Location of the anticipated large scale WRW testing facility on LSU property

Located in a hurricane vulnerable region, Louisiana (as well as the southern part of the U.S.) will benefit the most from this research facility. The research activities will be beneficial for graduate and undergraduate students by providing an opportunity to learn and to get involved in real world applications (project based learning). This is a multidisciplinary research center where researchers and students from structural, coastal, mechanical, computer, agricultural and marine engineering will find a fertile environment for innovations that brings science into practice. The physics involved in the field of wind, rain and waves are challenging and a lot is to be done to further the understanding of the phenomena. The data produced from the research activities will be used to improve design codes, and to help the government and the insurance companies to improve their policies. The facility will be used for outreach activities, for both the public and high school students with the objective to improve the awareness of our society about hurricanes and their impact and the best solutions to reduce the hurricane related losses. It is envisaged that using proper testing protocols, and incorporating real-time data, a decision making tool for resilient and sustainable energy infrastructure can be developed. This will lead Louisiana and the U.S. to sustainable solutions that can improve the performance of the infrastructure under complex hurricane loads, reduce structures' life cycle costs and increase efficiency in design. The facility will be attractive for funding and support from the private sector and the government which will enhance the role of the university as the economic engine for the development in Louisiana.



Dr. Aly Mousaad Aly, assistant professor in the LSU Department of Civil and Environmental Engineering, has strong national and international experience in wind/hurricane engineering. Nationally, he has worked at the International Hurricane Research Center (Florida International University) on hurricane simulation and wind/structural engineering.

Internationally, Dr. Aly worked at the large wind tunnel testing facility of the Politecnico di Milano (Italy) for four years. In addition, he has worked at the wind engineering laboratories of Western University (Ontario, Canada) as well as on structural mitigation and teaching of mechanical and control courses at Alexandria University and Pharos University. The expertise gained from this work and scientific records will enable to successfully achieve the goal of building a state-of-the-art hurricane testing facility for Louisiana and the U.S.



Florida International University's Wall of Wind